



**Reservoirs Act 1975  
2021 Annual Supervising  
Engineer's Statement under  
Section 12(2) and Section  
12(2A)**

Poynton Lake

11 November 2021



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# **Reservoirs Act 1975 2021 Annual Supervising Engineer's Statement under Section 12(2) and Section 12(2A)**

Poynton Lake

11 November 2021



# Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	20 Oct 2021	██████	██████	██████	For Issue to Client
B	4 Nov 2021	██████	██████	██████	Issued to Enforcement Authority
C	10 Nov 2021	██████		██████	Corrected Undertaker Clarified

**Information class: Standard**

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# 1 General Details

## 1.1 Name of Reservoir

Name: Poynton Lake

Dam category: B

The reservoir has been given a high-risk designation under the Reservoirs Act 1975 (as amended by the Flood and Water Management Act 2010).

## 1.2 National Grid Reference

O.S. NGR: SJ 923845

## 1.3 Name and Address of Undertakers

Name: [REDACTED]

Address: Cheshire East Council  
Estate Services/Facilities Management  
Municipal Buildings  
Earle Street  
Crewe  
Cheshire  
CW1 2BJ

Office tel: [REDACTED]

Mobile tel: [REDACTED]

Email: [REDACTED]

Operation Contact: [REDACTED]

Contact Address: As above

Office tel: [REDACTED]

Mobile tel: [REDACTED]

Email: [REDACTED]

## 1.4 Name and Address of Supervising Engineer

Name: [REDACTED]

Company: Mott MacDonald

Address: [REDACTED]



[REDACTED]  
[REDACTED]

Office tel: [REDACTED]  
Mobile tel: [REDACTED]  
Email: [REDACTED]

### 1.5 Alternative Supervising Engineer contact details

Name: [REDACTED]  
Company: Mott MacDonald Ltd  
Office tel: [REDACTED]  
Mobile tel: [REDACTED]  
Email: [REDACTED]

If neither the Supervising Engineer nor Alternative Supervising Engineer is available in an emergency, contact [REDACTED] of Mott MacDonald as follows:

Office: [REDACTED]  
Mobile: [REDACTED]  
Email: [REDACTED]

### 1.6 Name of last Inspecting Engineer or Construction Engineer

Name: [REDACTED] (Inspecting Engineer)  
Company: Mott MacDonald  
Address: [REDACTED]  
[REDACTED]  
[REDACTED]  
Office tel: [REDACTED]  
Mobile tel: [REDACTED]  
Email: [REDACTED]

## 2 Status and Findings

### 2.1 Construction Engineer's Requirements in relation to sections 6(2) to 6(4)

These sections do not apply as the reservoir has been in service for some years with the Construction Engineer's recommendations having been superseded by those in a subsequent inspection under Section 10 of the Reservoirs Act 1975.

### 2.2 Statement under section 12(2A) on the directions given for maintenance of the reservoir under Section 10(3)(b)

The Inspecting Engineer recommended the following Recommendations to be taken in Respect of Maintenance under Section 10(3)(b):

*'I recommend that a new Prescribed Form of Record (PFoR) shall be obtained and that all relevant details of the reservoir shall be entered into the Record including water level readings that shall be recorded each month and entered into Part 1 of the PFoR. The completed PFoR shall be kept in a safe place so that all future records can be maintained.'*

The Supervising Engineer in September 2019 was instructed by the Undertaker to draft an Electronic Prescribed Form of Record and was duly prepared and submitted to the Undertaker on the 26th September 2019. It contains monthly water level records from January 2016 through to the present date. The Undertaker has advised that the PFoR is held and maintained by the Council's Statutory Compliance team with the monthly monitoring undertaken by the Park Rangers team as at present.

The following recommendations (Table 1) were also identified by the Inspecting Engineer in respect of maintenance in the last Section 10 Inspection Report, but not under Section 10(3)(b):

The colour of the table cell indicates the following:

- Green – no further action currently required
- Yellow – action required within next 12 months
- Red – action urgently required

**Table 1: Recommendations as to Measures to be taken in Respect of Maintenance**

No.	Recommendation by last Inspecting Engineer	Status
1.	An assessment of the condition of the revetment boards along the upstream face should be carried out to identify those parts that are in need of repair or replacement. These localised repairs should then be implemented.	During this visit the upstream face was assessed. Where the boards end there is evidence of some erosion, but at this time there are no areas requiring attention. This will be reviewed at the next visit.
2.	Any fallen or leaning trees that are threatening the integrity of the upstream face should be removed. When the roots and stumps have been cleared away, the upstream face should be reinstated to the correct line and new revetment boards should be installed to provide erosion protection.	There were no trees in imminent danger of fallen over.  The proposed works to enable part of the embankment to be safely overtopped requires the removal of all the upstream trees over the 400m section.

No.	Recommendation by last Inspecting Engineer	Status
3.	The trees on all parts of the embankment should be managed and checked on a regular basis. Any trees that become unhealthy and which may be in danger of toppling should be removed. If the tree canopy becomes too dense then I recommend that careful pollarding of the trees should be carried out to reduce the height of the trees and to let more light through to the ground beneath.	There has been ongoing tree maintenance and an annual tree survey is now undertaken.
4.	On the downstream face of the embankment regular ground clearance activities shall be carried out to minimise the spread of the undergrowth and to expose the dam surface in the areas between the large trees.	The Supervising Engineer met with the park rangers and advised on the expected level of clearance. This will now be implemented along the critical over-toppable section.
5.	A detailed inspection of the masonry wall that retains the embankment toe shall be carried out to identify those parts of the wall that are showing signs of distress with missing stones, open joints and bulging of the surface. Localised repair work shall then be carried out to those parts that have suffered damage to fill the gaps and to reinstate the wall to the correct profile.	The entire length of the masonry retaining wall was inspected and found generally to be in fair condition. The Undertaker has undertaken a structural survey of the wall and will be carrying out its recommendations.
6.	The disused Council Yard area at the downstream side of the dam shall be tidied up to facilitate access to this part of the dam and in order that any repairs to the wall within the yard can be carried out.	The depot area which had been sold to ██████████ is again up for sale. It is unclear where the land ownership boundary is, and it is recommended that this is confirmed.  The area was inspected and noted to be heavily overgrown preventing a full inspection of the masonry wall where the embankment is at its narrowest.  Cheshire East is advised to contact the owner and advise them of their obligations.
7.	The undertakers should enter into ██████████ of the A523 to agree appropriate access arrangements for Council personnel so that regular surveillance and inspection of the downstream toe and the route of the overflow pipe can be carried out.	The council has been in contact ██████████ regarding some drainage issues. It is the intention of the Undertaker to replace one or both of the pipes.

### 2.3 Matters to be watched by the Supervising Engineer under Section 7(5) or 10(4)

The following specific matters (Table 2) were identified by the Inspecting Engineer for the guidance of the Supervising Engineer in the last Section 10 Inspection Report:

The colour of the table cell indicates the following:

- Green – no further action currently required
- Yellow – action required within next 12 months
- Red – action urgently required

**Table 2: Matters to be watched by the Supervising Engineer**

No.	Recommendation by last Inspecting Engineer	Status
1.	The Supervising Engineer shall visit the reservoir at least once per year. This should be altered to coincide with different seasons to assess the performance of the embankment.	Visits to the site have been undertaken on the 20th October 2021, previous visit being the 20th October 2020.
2.	The Supervising Engineer should assess the conditions on the downstream side of the embankment and should check the conditions for any signs of movement, leakage or untoward behaviour	The downstream side of the embankment was inspected and no signs of leakage. No new movement appeared evident.
3.	The inspection shall include a full walk over survey across the downstream toe of the embankment and along the masonry retaining wall to check for signs of deformation or water egress.	The downstream masonry wall was visually inspected, and no signs of further movement or water egress were noted.

No.	Recommendation by last Inspecting Engineer	Status
4.	Provided that suitable access can be arranged they should also check conditions along the downstream toe of the embankment at its highest section.	No formal access was granted – but, from the roadside, nothing detrimental was evident. However, it will be necessary to access the area to examine it properly and this should be arranged as soon as practicable and before next year's annual supervision visit.
5.	Observe the condition of the upstream face to check for signs of erosion damage or movement arising from the instability of the trees and assess the on-going erosion protection that is afforded by the timber revetment boards.	The upstream face appeared in reasonable condition – although at the ends of the timber revetment boards there was some evidence of erosion although no worse than the previous visits – this shall continue to be checked. The trees along the upstream face are providing good protection – although their health is to be kept monitored.
6.	If there is an extreme flood event such that the overflow pipe is required to operate with an unusually high discharge, then it is recommended that the Supervising Engineer should inspect the works after the flood to evaluate the condition and performance of the overflow	No extreme event has occurred since the appointment of the Supervising Engineer. The overflow was clear at the time of the visit.

## 2.4 Records, monitoring and supervision by the Undertaker under Section 11

The keeping of records under Section 11 of the Reservoirs Act 1975, as directed by the last Inspecting Engineer in his Section 10 Inspection Report, and their status are as given below (Table 3):

The colour of the table cell indicates the following:

- Green – no further action currently required
- Yellow – action required within next 12 months
- Red – action urgently required

**Table 3: Records Prescribed by the last Inspecting Engineer**

No.	Direction by last Inspecting Engineer	Status
1	A prescribed form of recorded to be commenced within 3 months of the Inspection Report (previous PFoR has been lost)	The PFoR has been created in an electronic format following the revised prescribed format.
2	The reservoir water levels to be recorded monthly	The PFoR was updated by the SE on the 4 November 2022. It now contains monthly water records from with the latest being for October 2021. The Undertaker's Statutory Compliance team is to hold and maintain the PFoR

The electronic PFoR was reviewed and the following updates are recommended: -

- Part 4 will need to be populated with key information taken from the emergency drawdown plan once drafted.
- Update Part 9 with the dates of the emergency plan and the flood study.

## 2.5 Inspection under Section 10(2)

### 2.5.1 Date of last Section 10 Report and Section 10(5) Certificate

The last inspection under Section 10 of the Reservoirs Act was carried out by [REDACTED] on 11th July 2016. The final report and certificate were issued on 23rd August 2016.

### 2.5.2 Description and status of any measures to be taken in the Interests of Safety under Section 10(6)

The inspecting engineer in 2016 made two recommendations in the interests of safety (MloS) which are repeated below (Table 4):

The colour of the table cell indicates the following:

- Green – no further action currently required
- Yellow – action required within next 12 months
- Red – action urgently required

**Table 4: Matters in the Interests of Safety Recommended by the last Inspecting Engineer**

No.	Direction by last Inspecting Engineer	Status
1	An Emergency Drawdown Plan shall be prepared for the reservoir to describe the methods to be used and the procedures to be followed to facilitate a lowering of the water in the reservoir by up to 300mm in the first 24 hours of an emergency. Further details of this requirement are given in Section 10.4.	An emergency drawdown plan has been produced outlining the methods via pumps to draw the reservoir down in an emergency. The plan was overseen and signed off by [REDACTED] of Jacobs on 5th December 2019.
2	A Flood Study Assessment shall be prepared for the reservoir. This shall include an estimation of the inflow hydrographs for the Design Flood and the Safety Check Flood, the hydraulic characteristics of the inlet works to the reservoir (direct and indirect catchments), discharge characteristics of the overflow weir and outlet pipe, and flood routing to determine flood surcharge levels. The study should also incorporate an estimate of wave heights and the potential for wave over-topping that could occur during the passing of these floods, as well as a topographic survey of the embankment crest.	A flood study has now been completed by Jacobs under the supervision of [REDACTED] who has also signed off the matters in the interest of safety. The flood study has concluded that the overflow is unsatisfactory and that an emergency overflow provision is required. These follow-on works are being overseen by [REDACTED] of Jacobs on 5th December 2019. A solutions report for providing a section of over-toppable embankment has been provided by Jacobs to the council (included in Appendix C) and expected to be complete by December 2022.

### 2.5.3 Date of next scheduled inspection under section 10(2) of the Act

An Inspection under Section 10 was completed on 11th July 2016. The report of that inspection states that the next inspection must be carried out by 11th July 2026.

### 2.5.4 Recommendation under Section 12(3) for an inspection under section 10(2)

No recommendation is made for an inspection at this time.

### 2.6 Directions by the supervising engineer as to the visual inspection by the undertaker under section 12(6)

No directions are given.

## 2.7 Signature of Supervising Engineer and Expiry Date of Five-Year Panel Appointment



Signature of Supervising Engineer:  4 November 2021

Date of expiry of current panel appointment: 4th November 2024

## 3 Site Visit Report – Poynton Lake

### 3.1 Visit Date and Details

- Tuesday 20th October 2020.
- Accompanied by: [REDACTED] of Cheshire East Council along with two park rangers, [REDACTED] and [REDACTED], and [REDACTED] (tree arborist)
- Reservoir Level: 190 mm over the weir.
- Weather: 12°C and with heavy showers.

### 3.2 Water Level, Site Conditions and Scope of Inspection

The reservoir was full at the time of the inspection, with about 190mm depth overflowing the overflow. The area around the gauge board was clear and an accurate level could be taken (Photo 2). As there is no abstraction from the lake, the natural condition is for the outflow via the overflow to balance the run-off from the catchment.

The inlet from the indirect catchment at the southern end, behind Parklands Way, was visited and found to be relatively clear (Photo 11). It was noted that the stoplogs were installed to minimise the flow being diverted to Poynton Lake but there was significant seepage through them. It has been confirmed that Council's Highways team had installed them whilst some drainage works are undertaken and will be removed upon completion of these works in November 2021.

The site was found to be in reasonable condition – see Sections 3.5 to 3.9. The annual visit was accompanied by the park rangers and the council's tree arborist to discuss the expected level of management and ground clearance. It was generally agreed that management will try to achieve a general appearance as seen on sections of the embankment (Photo 6).

The council has received options on how to provide a 400m section of over-toppable embankment by the construction of low level walls. It is planned that significant tree clearance along the front face will be undertaken during January and February 2022, with the civil works undertaken during September to November 2022. An outline arrangement has been provided in Appendix C.

The inspection comprised of a walkover of the crest where accessible and the downstream toe of the embankment.

A number of photographs were taken during the inspection to illustrate key points and these are included as Appendix A of this report.

### 3.3 Significant events since previous inspection

No significant events have occurred since the Supervising Engineer was appointed.

### 3.4 Access

There is good vehicular access to the reservoir site. There is a car park at the northern end of the embankment and from this point there is direct pedestrian access on to the path that runs along the crest. The footpath alongside the A523 extends along the full length of the dam and gives

access to the retaining wall and to the downstream face. At several points along its length there are gaps through the wall and steps which connect the footpath with the crest.

In addition, there is vehicle and pedestrian access around the southern end of the lake (South Park Drive and Woodside Lane) via which the inlet works and bifurcation arrangement on the Poynton Brook can be reached. The field to the west of the A523 which includes a part of the downstream face is not owned by the Council requiring an appointment to be made to enter.

### 3.5 Embankments

#### 3.5.1 Upstream Face

The reservoir was full and, consequently, only a small part of the face that stands above the water surface was exposed. As can be seen in Photo 4 to Photo 6, there are considerable amounts of vegetation along the upstream edge that obscured the view. In general, the upstream face of the embankment appeared to be reasonably intact.

Where erosion has taken place, timber revetment boards have been installed to provide protection and reinstate the path width. Where these are present there is evidence of some erosion at either end, but in general these all appeared to be in reasonable condition. The latest visit was undertaken after significant leaf fall and some recent vegetation clearance, it was found that the erosion at the ends of the revetment boards is not significant and similar to previous visits.

It was noted that tree management has been ongoing with a number of trees cut down and sections of the upstream face cleared of saplings. Fortunately, the crest is very wide and there does not appear to be a risk of the entire crest width being damaged by a fallen tree along the upstream face.

As part of the proposed works, the 400m section of over-toppable embankment is to have all the trees along its upstream face removed. It is suggested that reeds be allowed to establish along this section to provide protection to the face of the dam.

#### 3.5.2 Embankment Crest

The crest of the dam comprises two parts; the gravel path that runs along the upstream edge and the broad expanse of grassy/woody area, sometimes at a higher level than the path. The path was in a good state of repair. It has a regular surface of gravel-type material and appeared to be well maintained. There were a few minor humps and bumps in the path but nothing more than might be expected from localised settlement. There were no signs of excessive disturbance, settlement or cracking that might arise from movement of the embankment (Photo 5 and Photo 6).

It is obvious from the water level compared to the path that the embankment does not have an even elevation. This will be addressed as part of the proposed works to enable safe over-topping.

The downstream part of the crest has minimal grass cover and instead is predominantly covered by ivy, low shrub and numerous mature trees. Between the trees, the grass and other soft vegetation should be cut back from time to time as part of normal ground maintenance. One section appears to have had some of the low-lying vegetation removed which has encouraged some grass cover (Photo 6). **I suggest that this is repeated along the entire 400m length of the over-toppable section.** Walking through these areas the ground is uneven but there were no signs of unexpected movement.



**It is recommended that the trees continue to be managed and checked on a regular basis by an arborist.** Any trees that become unhealthy and which may be in danger of toppling should be removed. If the tree canopy becomes too dense then I suggest that careful pollarding of the trees should be carried out to reduce the height of the trees and to let more light through to the ground beneath to encourage healthy grass growth.

### 3.5.3 Downstream Face and Retaining Wall

The downstream face varies; in some places there is a masonry wall at the toe whilst in other parts the face slopes down directly to the path alongside the road. Various views of the face are shown in Photo 7 to Photo 10. As far as could be determined and, taking due account of the curvature of the dam, it appeared that the alignment of the face (both the wall section and the sloping face) was regular and on the whole, has not suffered any serious displacement. As with the grassy parts of the crest, **it is recommended that regular ground clearance activities are carried out to minimise the spread of the undergrowth and in order to expose the dam profile in the areas between the large trees.**

The masonry retaining wall is shown in Photo 7 to Photo 9. The overall alignment was reasonable as it follows the line of the footpath. The wall appears to be stable and there were no indications of imminent collapse, this is despite having mature trees growing directly behind the wall. However, several areas are noted where individual stones have eroded away and where localised bulging is occurring. The Undertaker has recently completed a structural survey of the masonry wall. It has recommended a number of works, including the removal of trees and large vegetation behind the wall. **The Undertaker is advised to implement the recommendations of the masonry wall structural survey.**

Towards the southern end of the dam there is an old and now disused Council Yard that occupies the land between the road and the dam. The yard has now been sold [REDACTED] with unknown intentions for the land. The area continues to be in a state of disrepair (Photo 8) and neglect and this includes the perimeter wall at the east side of the yard that forms a boundary with the face of the embankment. **It is recommended that the Undertaker finds out the new ownership boundary and to confirm if it retains rights to access and maintain the wall. If not, the Undertaker should advise the owner of their responsibilities as a joint Undertaker.**

**The landowner of the old highway's depot needs to be made aware of their duties and that primarily they need to clear vegetation from the top and the surface of the masonry wall through their land.**

The highest section of the dam is towards the northern end and at this point the downstream face continues on the downstream (western) side of the road. This section of the face is shown in Photo 10, and within a field that is owned by [REDACTED]. It was fenced off and there was no access during the visit. The overall alignment appeared to be satisfactory.

There has been some recent dialogue with [REDACTED] regarding issues with the pipes running through the field and a replacement pipe is currently being planned.

The alignment of the 400m length of over-toppable embankment corresponds to where the downstream face is sloped and not retained by a masonry wall (Photo 9). **It is recommended that where the downstream slope is not retained by a masonry wall, then the face is regularly cut to encourage grass growth.**

### **3.6 Overflow / Spillway**

The inlet overflow was inspected, the debris/trash screen has recently been replaced. The screen had some build-up of leaves on the screen, but there was a steady flow passing through the screens and over the weir (Photo 2). This flow was discharging into the chamber and into the downstream pipe without hindrance. The majority of the overflow works are buried and cannot be readily inspected; however, as far as could be seen, the overflow was operating satisfactorily, and the modest spill flow was passing through the pipe system to reach the course of the Poynton Brook at the downstream side.

### **3.7 Outlet Works**

As reported above there are no outlet works at this reservoir and no permanent means by which water can be abstracted from the reservoir. For a small reservoir this is not so unusual and need not be an immediate problem. However, in the case of an emergency there might be a need to lower the water level in the reservoir in order to reduce the hydrostatic load on the embankment.

An emergency drawdown plan has been prepared by Jacobs, the Undertaker's Consultants and outlines the steps to be taken to implement a drawdown through the use of mobile pumps.

### **3.8 Seepage/drainage flows**

There is no formalised drainage to review. There is no history of seepage and therefore no monitoring is set up. During the visit there were no signs of seepage through any part of the embankment structures.

### **3.9 Settlement and movement**

There are no signs of instability within the embankments, such as slips. There are also no signs of differential settlement around the inlet/outlet structure and low-level control structure.

Due to the size of the embankment, the last Inspecting Engineer did not believe it warranted further instrumentation or settlement monitoring.

### **3.10 Instrumentation**

The reservoir water level can be read from a graduated gauge board that is fixed to the upstream side of the inlet structure to the overflow (Photo 2). The area around the gauge board was clear and it could be easily read.

It is recognised that the reservoir remains full or near to full most of the time. Taking this into account the Inspecting Engineer recommended that water levels should be taken and recorded at least once per month. In addition, exceptionally high levels during flood conditions or low levels that might occur during a drought should also be recorded. In accordance with Section 11(1) of the Reservoirs Act, the Undertakers have a legal obligation to monitor the reservoir including the taking and recording of water levels in the Prescribed Form of Record and this contains monthly water level records from January 2016. A peak of 190mm above weir level was recorded from September through to December 2020.

### **3.11 Area Downstream of the dam**

The Supervising Engineer is not aware of any changes to the downstream conditions.

### 3.12 Flood Plan

Ministerial Direction under the Reservoirs Act 1975 (as amended) was issued on 22nd April 2021. This instructed the preparation of Flood Plans (also referred to as On-Site Emergency Flood Plans or Emergency On-Site Plans) for all registered large raised reservoirs in England. This direction applies to both "High Risk" and "Not High Risk" reservoirs.

It is therefore a requirement to remain compliant to prepare a Flood Plan in accordance with Section 12AA of the Act. Production of the plan is required within 12 months of the Ministerial Direction having been issued, i.e. by 21st April 2022. Therefore, it is suggested that this be commenced as soon as possible to avoid the risk of non-compliance with the Act.

In accordance with Section 12AA(2) of the Act, the Flood Plan must be prepared in consultation with the Appointed Engineer. As Poynton Lake is designated "High Risk", the Appointed Engineer is the Supervising Engineer.

Once the Flood Plan has been drafted, the Supervising Engineer will check it meets the legal requirements and any directions provided and, if so, confirm its completeness by signing a certificate under Section 12AA(3) of the Act. The certificate will be issued to the Undertaker, and a copy sent to the Environment Agency.

In accordance with Section 12AA(6), the Flood Plan contents must be regularly checked and reviewed to ensure that all details such as operational arrangements, access provisions and contact details remain correct. Under Section 12AA(7) of the Act, the Supervising Engineer may direct specific revisions to the Flood Plan. A comprehensive review of the plan is required at intervals not exceeding five years from the date of the certificate in consultation with your Supervising Engineer who will re-certify the Flood Plan on completion of the appraisal. It is important that the first Flood Plan be as complete and accurate as possible.

Under Section 12AA(4) of the Act, following its production, the Flood Plan must be tested at the times and in a manner directed by the Supervising Engineer. This is to ensure that those expected to be involved in an emergency response are aware of their roles and responsibilities and the measures to be taken. It is also likely to involve regular testing of the equipment at the reservoir to ensure this remains in operational condition. The Environment Agency guidance issued with the Ministerial Direction provides an indication of the expected testing requirements.

A copy of the Ministerial direction and the associated guidance is provided on the gov.uk website via the following links: -

- Ministerial Direction: <https://www.gov.uk/government/publications/reservoir-on-site-flood-plans-ministerial-direction>
- Guidance Documents: <https://www.gov.uk/government/publications/reservoir-emergencies-on-site-plan>

**An emergency Flood Plan should be prepared by the Undertaker by the 21st April 2022. The Flood Plan needs to be kept up to date and exercised at regular intervals.**

A basic drawdown plan for this reservoir had been developed by Jacobs. The drawdown plan was reviewed and remains valid.

# Appendices

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## A. Photographs

**Photo 1 – General view of the lake at the northern end**



**Photo 2 – Inlet structure with new screen at the upstream end of the overflow pipe**



**Photo 3 – Route of overflow pipe in downstream valley**



**Photo 4 – Leaning trees along upstream face**



**Photo 5 – Broad crest dam south of the overflow**



**Photo 6 – Example of what vegetation management is expected along entire length of overtopping embankment**



**Photo 7 – Masonry retaining wall alongside the A523 (southern end)**



**Photo 8 – Masonry Retaining Wall within the Old Council Depot**





**Photo 9 – Northern section of where masonry wall runs-out and which is over-toppable**



**Photo 10 – Downstream face at the highest section**



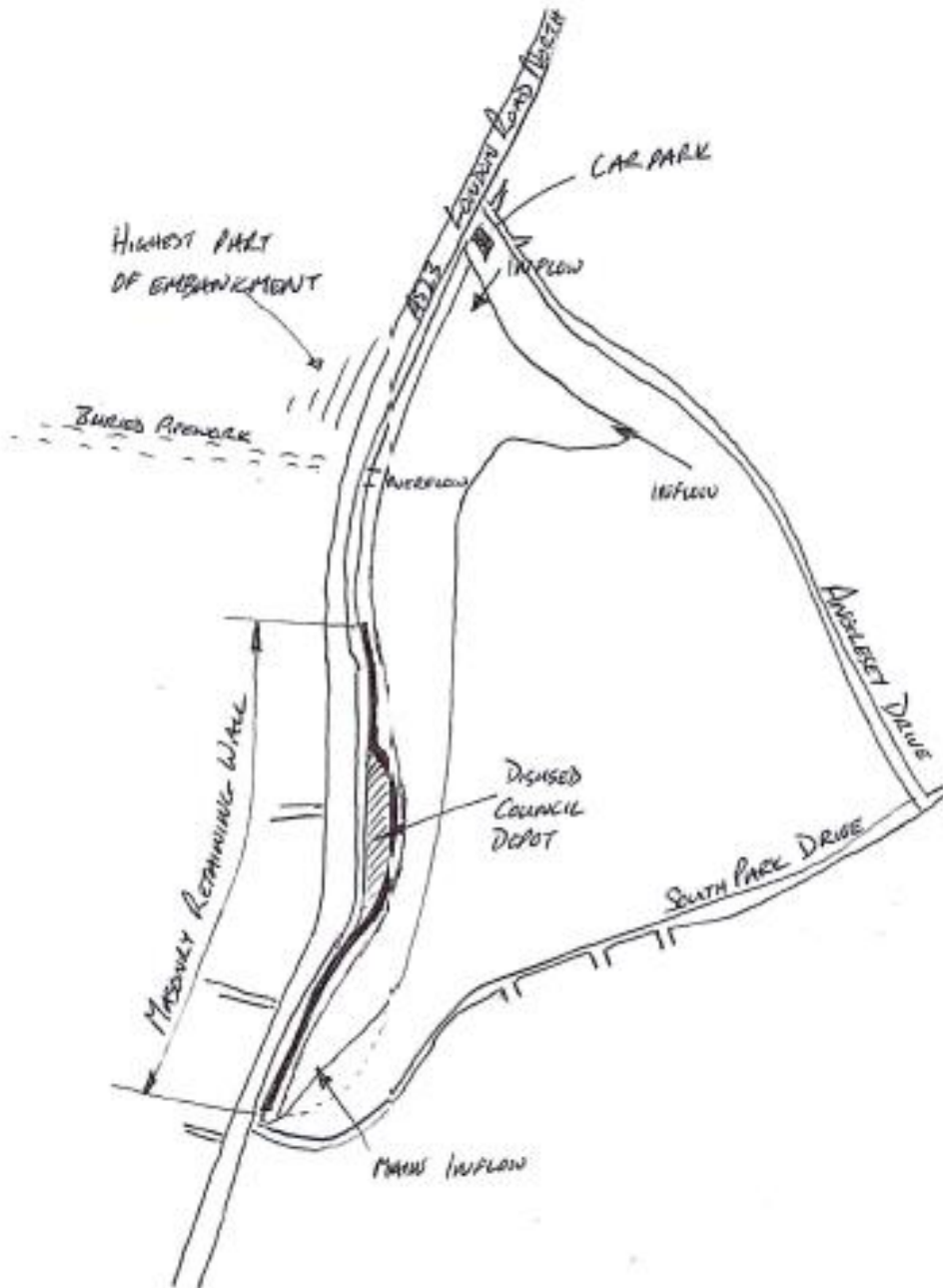
**Photo 11 – Inlet Arrangement – behind Parklands Drive**



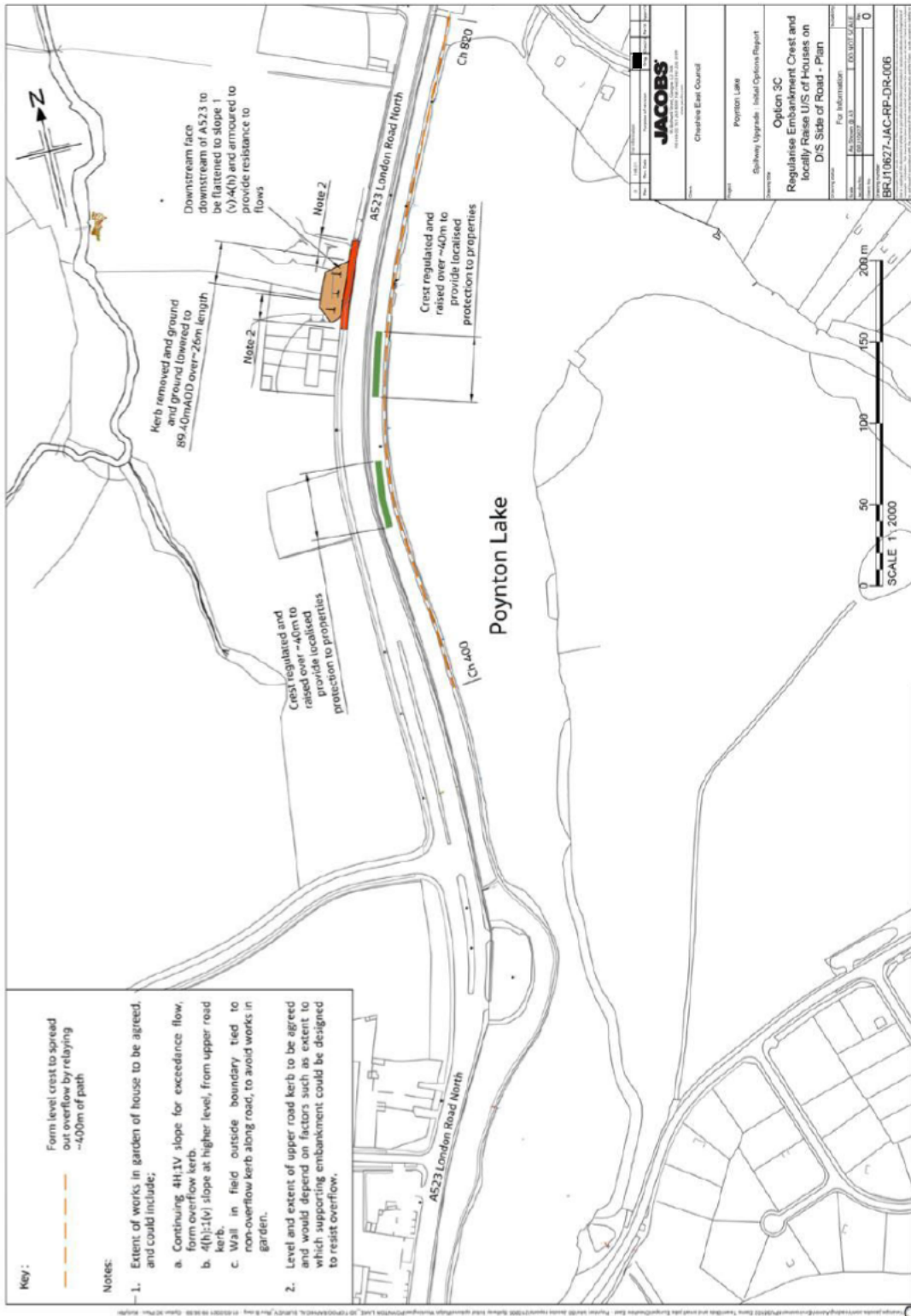
**Photo 12 – Chamber Downstream of Overflow Chamber (2019)**



## B. Site Layout Plan



## **C. Proposed works to enable safe overtopping**



## D. Summary of advisory maintenance actions suggested by the Supervising Engineer

The colour of the cell in Table D.1 indicates the following:

- Green – previously noted, action completed
- Yellow – early action recommended but not immediately required (however issue could deteriorate if left unchecked)
- Red – action urgently required

**Table D.1: Advisory maintenance actions suggested by the Supervising Engineer**

Ref	Description	Planned Action	Closure
1	<b>2.4 Records, monitoring and supervision</b> PFoR to be kept up to date with monthly water level records.	Ongoing	
2	<b>2.4 Records, monitoring and supervision</b> The PFoR is to be updated as detailed under Section 2.4.		
3	<b>2.5.2 Matters in the Interests of Safety</b> Following the completion of the Flood Study in 2019, the QCE made a recommendation of follow-on works to address a deficiency in the provision of overflow capacity. The QCE recommended that an agreed solution should be prepared within 18 months of the 10(6) certificate (issued 5th December 2019) and physical works completed within 4 years.	The Undertaker has appointed Jacobs to undertake this work and [REDACTED] has been appointed by the Undertaker as the QCE to supervise work.  A proposal for works has been provided and generally agreed and it is expected that this will take place during September to November 2022. An overview plan has been provided and copied into Appendix C.	
4	<b>3.5.1 to 3.5.3 Embankment</b> It is recommended that a more robust approach to vegetation management needs to be applied to open up the surface of the embankment. This includes: - <ul style="list-style-type: none"> <li>● the removal unhealthy trees,</li> <li>● remove trees and large vegetation from behind the masonry wall,</li> <li>● and the clearance of saplings, scrub and shrubs from the embankment surface and to encourage grass growth.</li> </ul> A good example of what is desired is found on the embankment to the south of the old depot area (Photo 6).	The annual visit took place with the park rangers and the council's arborist. An agreed management approach has been developed for the 400m section of over-topple embankment.	
5	<b>3.5.3 Downstream Face and Retaining Wall</b> The Undertaker is advised to implement the recommendations as outlined in the structural assessment of the masonry wall.	The downstream wall was in a stable condition and continues with vegetation management.	October 2020
6	<b>3.5.3 Downstream Face and Retaining Wall</b> The Undertaker is to enquire regarding the landownership boundary of the previous highways depot area as sold by the council and whether the wall is included or not.	The landowner needs to be made aware of the duties and that primarily they need to clear vegetation from the top and the surface of the masonry wall through their land.	

Ref	Description	Planned Action	Closure
	There is the potential that the new owners can be considered joint undertakers if their ownership includes the masonry wall and will therefore have obligations to maintain the structure. If not, a right of access by the Undertaker needs to be agreed		
7	<b>3.5.3 Downstream Face and Retaining Wall</b> It is recommended that where the downstream slope is not retained by a masonry wall, then the face is regularly cut to encourage grass growth.	The annual visit took place with the park rangers and the council's arborist. An agreed management approach has been developed for the 400m section of over-toppable embankment.	
8	<b>3.12 Flood plan</b> An emergency Flood Plan should be prepared by the Undertaker by the 21st April 2022. The Flood Plan needs to be kept up to date and exercised at regular intervals.	The Undertaker has commenced with the flood plan and is in discussion with stakeholders to confirm arrangements.	