Meeting Notes

Meeting Title	Poynton Pool Spillway Improvement Scheme		
Meeting purpose	Poynton T.C. requested a meeting to discuss the risk elements of the Poynton Pool Project and the conclusions of the report that was prepared by Professor David Ball.		
Venue	Macclesfield Old Town Hall - Silk Room		
Date	Monday 13/11/23	**Time**	12:00 – 14:00
Attendee			
David Rutley MP	Member of Parliament for Macclesfield (via Microsoft Teams).		
Cllr Mike Sewart	CEC Member for Poynton West & Adlington and Poynton Town Councillor		
Cllr Hayley Whittaker	CEC Member for Poynton East & Pott Shrigley and Poynton Town Councillor		
Haf Barlow	Poynton Town Council representative - Town Clerk		
Prof. David Ball	Professor of Risk Management (Expert commissioned by PTC)		
Tony Deakin	FCRM Manager – Environment Agency		
Glyn Thomas	Friends of Poynton Pool representative		
Beth Sharp	Senior Caseworker for David Rutley MP (via Microsoft Teams).		
Harry McWilliams	Senior Parliamentary Assistant (via Microsoft Teams).		
Andy Kehoe	CEC – Head of Estates (*Undertaker for Pool*)		
Debra Wrench	CEC – Property Projects Manager (Estates)		
Alan Brown	Jacobs – All Reservoir Panel Engineer (*Technical Expert*)		
Jon Berry	CEH – Poynton Pool Spillway Improvement Project Manager		
Apologies			
Phil Windsor	Property Operations Advisor, Facilities Management (*Pool maintenance and management responsible officer*)		

Item	Notes	Actions
1	Andy Kehoe welcomed everyone to the meeting and set out the meeting Agenda.	
2	Round the table introductions.	
3	Alan Brown gave an executive summary presentation to detail the background of the scheme, current legislation & the work undertaken to date, including the risk elements of the scheme.	

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4	Tony Deakin discussed the following key points, relating to the scheme: • The EA consider public safety to be the number 1 priority. • Alan Brown was not involved int the initial pool inspection and is therefore independent. It was Martin Airey from Mott McDonald who was the Inspecting Engineer. • The Section 10 report is a unique document in that, once written, it stands for 40 days, at which point it becomes a legal document. At this point, the only way to change the report is to call for a completely new inspection. • The EA is the Regulator for the Pool. Their main role, as Regulator, is to work with the Owner to ensure that concerns with regards to public safety are addressed and to offer advice and guidance to facilitate this. • There are 2 powers available to the EA – Section 15, which is a statutory power to make certain that recommended works are undertaken, meaning that the EA can serve notice should this not happen or step in, in certain situations & take control of getting the recommended works undertaken and then recharge the Owners. The second power available to the EA is Section 16, which is an emergency power and allows the EA to step in in an emergency capacity to make the reservoir safe. One way to do that would be to completely empty the reservoir.	
5	David Rutley MP thanked Alan for his informative presentation, and had the following comments to make: • The requirement for mitigation works at the reservoir have been determined by the risks of a dam breach occurring. There is a need to ensure that the risk has been calculated accurately and correctly to determine that the correct risk threshold has been applied. • The main concerns of the project relate to the impact on the loss of existing trees for which there is very strong local concern. There is a need to look to reduce the impact on trees. • It is pleasing that the meeting is taking place to discuss these key concerns in detail, and he looks forward to hearing the outcomes of the meeting.	
6	Haf Barlow discussed several key issues and concerns: • The Section 10 report, Flood Study and drawdown plan were compiled in the interests of safety and documented that the pool did not meet current safety standards. • The Summary Options report looked at proportionality. Are there any proposals or options that are disproportionate? ***Alan Brown responded*** *that Option 2 – to raise the dam and put in a new culvert was deemed to be disproportionate.*	
7	Haf Barlow questioned whether the costs associated with undertaking the works were proportionate? ***Alan Brown responded*** *that the reservoir had failed both of the key tests given in guidance to panel engineers relating to dam maintenance, and spillway capacity and in his opinion the proposals*	

	put forward were proportionate in terms of cost and works involved. However, it should be noted that other Panel Engineers may say that the works do not go far enough and that a full engineering option is required.	
8	Professor David Ball spoke and documented that he had been invited to the meeting to talk about the risk-based approach. ***Alan Brown responded*** *to say that it was the Defra approach that was key in this situation, which draws heavily on HSE guidance.* Prof. Ball documented that he had had a long career and experience working in the Nuclear Industry, Public & Environmental Safety. The issue of proportionality is the key issue here and key to his interests in the proposals and scheme. Prof. Ball had 3 key points to make: • The top-level procedure is an issue. Public consultation has been carried out, however back in the 70's there existed a culture called 'DAD' which stands for 'decide, announce and defend' People realised back during this time that the public needed to be consulted and involved at a much earlier stage. In the present day, and since the 2020's any contentious decisions need to involve the public at a much earlier stage, for reasons such as the public having knowledge on matters that the technical people involved, may not know and the public feeling on limited engagement may result in an adverse reaction. Prof. Ball said that he believes that on this scheme, the consultation more likely resembles the 'DAD' approach. • The technical process that has been applied by Jacobs uses EA guidance approach to risk management (RARS). Application of the current guidance is very thorough and contains standardised control measures within the risk management process, but importantly omits consideration collateral damage as part of any control measures. e.g. the environmental damage and the loss of amenity as a result of the works. The proportionality of the proposals doesn't appear to have been mentioned or explained at all. The EA process gives information to help make informed decisions – not make the decisions. Given that this process was probably written 10 years ago does it still hold up now? The key issue of public concern on funds, environmental, economic aspects appearing to be again omitted, with the process appearing unchallengeable. Jacobs Engineers' may not be familiar with embedded assumption suggesting some uncertainties may not be fully considered. • At the base level Prof. Ball discussed the 1:250 per year failure rate. How is it possible that this figure has come about when there are so many unknowns, such as the structural make-up of the dam? If this figure is to be accepted then it is deemed to be a high risk, but what does high and low risk really mean? There are 3,500 people within the catchment area. If the dam breached 1 or 2 people die. However, if the dam breaches it is therefore a 1:3500	

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	chance. When multiplied by the 1:250 failure chance then the overall risk is actually 1:1M chance. Out of the 3,500 people within the catchment 35 of those will die each year due to natural causes. (given the 1% death rate per year). Therefore, is anyone really so concerned about 1 or 2 people compared to that number? • A Gross Disproportionate Figure of '5' for the workplace factor of safety currently being used. Prof. Ball mentioned that this is a very important figure and suggests a figure of '1' would be more realistic with the current figure of '5' creating imbalance within the process. Therefore, has the algorithm in the formulaic design process been skewed as a result and impacted the decision-making process? • In summary - A lack of public involvement undermines the perceived legitimacy of the scheme. • All of this points to an over-engineered solution which hugely impacts on a local amenity, and seemingly costs at lot of money for a very small individual risk. There must be a less expensive option available such as a warning/alert system? • Whatever the final decision it must have local public support and backing. Public concerns must be taken into account.	
9	Andy Kehoe mentioned that new legislation could benefit from stipulations into public involvement at an early stage and to try to gain public support. This could be integrated into future revisions of the Reservoirs Act.	
10	Andy Kehoe mentioned that the Council has challenged Alan and the Technical Team in a number of areas – particularly in terms of solutions that have been put forward from members of the public. He said that if he could save all of the money that is to be required to undertake the scheme, then he would absolutely do so.	
11	Alan Brown said that the Summary Options Report details the various options that have been considered and the proportionality of each. The current option being progressed being deemed as the most proportionate of all of them. Alan has produced a separate response to Prof Ball on the technical issues raised.	
12	Haf Barlow said that the Summary Options Report contains 'scare-mongering' text and is biased. She also claimed that the 1:20 chance per year that the dam will start to overflow hasn't been used in any of the other reports? A number of 1 in 50 chance per year events have occurred at the Pool but with no over-topping having been observed.	
13	Cllr Mike Sewart documented that he has lived in Poynton for over 50 years and during even the most severe rainfall events he has walked the reservoir twice daily and not seen any apparent change in the water level of the reservoir. Mike also questioned as to how the integrity of the embankment would hold up once the large number of trees would be taken out? ***Alan Brown responded*** *to say that this would be a very short term issue, concern and risk over a short construction period and that it could be managed effectively during the time of the activity with the contractor and supervisor present on site.*	

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14	Alan Brown discussed that he was responsible for writing the embedded assumptions in RARS and so he is of course fully versed, and so will anyone working on this project as they are supervised by, and reviewed by Alan	
15	Tony Deakin commented that once something is written in law it must be applied and there is no further negotiation.	
16	Prof. Ball asked what does a risk to life mean? ***Tony Deakin responded*** *to say that risk, hazard, consequence can all mean different things to different persons.*	
17	Alan Brown said that the most exposed person lives in the residential properties downstream and opposite the Pool. Alan discussed the mortality graph (Office of National Statistics), and RARS guidance which states that individual risk of 10 deaths in 10,000 people is classed as 'intolerable' (tolerable is classed as less than 1 in 1M people.	
18	Alan Brown discussed the point that warning systems are not effective and should not be used for reservoirs/dams. Storms are often short lived and the warning time would therefore be very limited, and this system would not be reliable over the next 100 years, a typical horizon in reservoir safety evaluation. Alan, as an ARPE would not accept a warning system as a meaningful solution as in general electrical systems are not reliable long term. Alan, as the appointed Panel Engineer, deems a level crest to be a much more reliable approach than a warning system. ***Tony Deakin also responded*** *to say that the Environment Agency, at present, would not accept warning systems for reservoirs. He said that he understands the principle of warning systems, however, it is a much more complex problem.*	
19	Cllr Hayley Whittaker commented that there are a number of small reservoirs with no overflows ever recorded. ***Alan Brown responded*** *to say that Toddbrook reservoir was an example of a small reservoir that nobody ever thought would ever breach and it very nearly did.*	
20	Prof. Ball said that he disagreed with the opinions on warning systems and suggested that their use and effectiveness needs to be investigated and looked into further. ***Alan Brown responded*** *by asking would anyone really be content to ask the Undertaker to accept the implementation of a warning system given that the reservoir fails to meet the accepted standards for reservoir spillway & maintenance of water retaining embankments.*	
21	Haf Barlow raised a concern with the Flood Risk Map and asked for clarification as to what volume has been used for Poynton Pool as the figure quoted by the EA is 130,000cum as the volume, however various reports quote the figure of 176,000cum, which is a 46,000cum difference? ***Alan Brown responded*** *to say that even if a previously quoted volume estimate of 80,000cum (estimated by FOPP) was to be used, it would impact very little in terms of the number of people at risk and the end result would still be the same, as the process is not reliant specifically on*	

	capacity/volume figures. Panel Engineers take into account a number of different criteria, variables and risk factors, for which reservoir capacity is but one. Alan believes that the two key criteria are that 3,500 people are at risk and that the reservoir embankment fails completely in terms of the standards expected for spillway capacity and embankment maintenance. Alan mentioned that he also expects future Inspecting Engineers to have a much stricter and stringent approach, in general, going forward.	
22	Glyn Thomas raised the point that the loss of amenity hasn't been more prevalent in discussions and considerations.	
23	Alan Brown noted that there are also no explicit considerations as to critical infrastructure downstream, for example, Sub-stations, water treatment works etc. which would be impacted if the dam failed and released the reservoir.	
24	Haf Barlow enquired as to whether the EA would consider accepting correct reservoir capacity data following on from re-mapping work? ***Tony Deakin responded*** *to say that the EA would always look at that and they are happy to look at any data supplied by Poynton T.C. should they wish to share their data. Tony, however, said that he agreed with Alan Brown in that it is not going to show any significant changes to the end conclusion as to the need for works to improve spillway resilience at Poynton pool.*	
25	Haf Barlow said that the Council is about to spend £1.5M on this project, therefore the Council should want to ensure that figures are correct and consistent and that they are fully assured. Presently there are too many uncertainties & unknown factors. As a result, members of the public, simply cannot grasp the impact versus the risk.	
26	Tony Deakin discussed previous reservoir breaches in Libya where the actual distance of impact from the reservoir was much bigger than predicted. This is something called the 'zone of destruction' and when a reservoir fails the level of destruction can be huge. ***Alan Brown added*** *that reservoir breaches are rare events but it is more about taking sensible precautions. If 2 people were to die as a result of the reservoir breach then members of the public will be quick to blame Cheshire East Council for not maintaining the dam to the correct and appropriate standards.*	
27	Tony Deakin documented that 6-7 incidents occur in England, on average, per year. Weather plays the biggest part in these incidents. Most incidents are small and manageable. However, an important point to make is that just because such an event has never happened, doesn't mean that it won't ever happen.	
28	Cllr Hayley Whittaker documented that residents feel that the mitigation measures are too extreme.	
29	Glyn Thomas documented that there appears to be too many uncertainties still. ***Tony Deakin responded*** *to say that the Reservoirs Act is very simplistic*	

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	and that dams/reservoirs are very expensive to own and operate. There are two key rules of law that are applied. The first being, does the reservoir hold more than 25,000cum? In Poynton Pool's case the answer is - yes. Secondly, is there more than 1 life at risk? In Poynton Pool's case the answer is again - yes. Therefore, the reservoir ***must be managed*** *accordingly.*	
30	Tony Deakin said that Engineers are responsible for identifying a fault, for example 'a crack in a wall before the wall were to collapse'. ***Cllr Mike Sewart countered*** *that there is no crack at present – just the risk that there might be a crack and that it is for this very reason why it is so very difficult for members of the public to perceive and understand.*	
31	Andy Kehoe said that he agreed that the idea of engaging the public at a much earlier stage in the process sounds very beneficial and the hope would be that future changes to the Reservoirs Act 1975 would incorporate such a change**.** The EA appointed Supervising Panel Engineer would have the final say in relation to application of any actions / enforcement under the current Reservoirs Act and that written Law must be applied.	
32	Tony Deakin reiterated that for any new reservoirs, there must not be any consideration at all to planting trees on the dam embankment. ***Glyn Thomas responded*** *to say that the issue of trees as an amenity at Poynton Pool cannot and should not be ignored.*	
33	**(AOB) Final thoughts and comments were taken from attendees:** • Alan Brown noted that OFFWAT and water companies would not consider risk-based solutions. They would simply go for full engineering options. • Tony Deakin said that by 2026/27 new legislation may be in place. • Andy Kehoe said that Alan Brown's presentation slides in response to Prof. Ball's report, would be issued. • Andy Kehoe reaffirmed that on-going consultation would be available via the statutory routes and the recently submitted planning application. Details of the planning submission reference / validation process would be shared when available. • Haf Barlow asked that the Summary Options Report be looked at again from a point of view of some of the 'scare-mongering' text that is used. Haf also asked that the 1:20 statistic be checked to see where it derives from as it does not appear to appear in any other documents.	Alan Brown/Jon Berry Jon Berry/Fay Price
34	**Meeting closed 14:15**	