

<b>Committees</b>	<b>Dated:</b>
Hampstead Heath, Highgate Wood and Queen's Park Committee Projects Sub Committee	21 September 2015 08 October 2015
<b>Subject:</b> Hampstead Heath Ponds Project – Update Report	<b>Public (with non-public appendices)</b>
<b>Report of:</b> Superintendent of Hampstead Heath and the Project Director	<b>For Decision</b>

### Summary

The Ponds Project has been under way since mid-April and continues to progress well. There has been a delay to work at the Model Boating Pond, caused by an issue with the temporary sheet-pile dam but this will not extend the overall programme. The 18-month construction programme is scheduled to be completed in October 2016.

The report gives the latest position on all aspects of the project, including the education aspect (Appendix 1), and in particular the Ladies' Bathing Facilities, where a firm price has been received that keeps that element of work within programme but which exceeds the provisional sum allowed for it.

Officers have kept a regular review of the project's risks, and their associated likely costs (Appendix 2 – non public), and the report covers other changes to the works that affect the budget.

The project remains within budget, and a small saving of £37,141 is projected. A table showing the breakdown of the budget as revised is given as Appendix 3 (non-public).

The current programme is set out in Appendix 4.

### Recommendations:

It is recommended that the Committee:

- Approves the reduction of the overall Ponds Project budget of £37,141, bringing the overall budget to £21,161,334.
- Approves £1.69m as the revised budget for the new changing facility at the Kenwood Ladies' Bathing Pond, subject to further value engineering.
- Approves the reallocation of the specific risk provisions and the associated reduction in risk budget as set out in Appendix 2.

### Main Report

#### Background

1. The Ponds Project was initiated following a series of hydrological studies which revealed that, in the event of a severe storm, there was a risk the reservoirs on Hampstead Heath could overtop, potentially leading to erosion and dam failure, putting lives, property and infrastructure at risk.

2. Between 2012 and the summer of 2014, a highly iterative and consultative process was undertaken to consider the design criteria and approach, and then a wide range of options. In June 2014, an option for each chain of Ponds was selected and approved, on the basis that it satisfied the existing requirements of the Reservoirs Act 1975 and the anticipated requirements under the Flood & Water Management Act 2010, whilst preserving the natural aspect and state of the Heath in the most effective manner, in accordance with the City's duties under the Hampstead Heath Act 1871, and in accordance with agreed design principles.
3. Work is taking place on two chains of Ponds – the Highgate Chain and the Hampstead Chain. The main focus of works on the Highgate Chain is raising the dam at the Model Boating Pond by 2.5m, the associated extension of the Pond and the creation of a new island to accommodate the retained trees. The crests of the dams at Stock Pond, Kenwood Ladies' Bathing Pond and Bird Sanctuary Pond will be restored (i.e. the surface of the dam will be levelled to the current highest point). The dams at the Men's Bathing and Highgate No.1 Ponds will be raised, using sheet pile walls capped with oak. Spillways will be created on all Ponds.
4. On the Hampstead Chain, the majority of work will focus on the creation of a 5.6m high dry dam (viewed from the lowest point in the valley) at the location of the current Catchpit. There will be crest restoration works at the Vale of Health, Viaduct and Hampstead No. 2 Ponds. The dam at the Mixed Bathing Pond will be raised by 1m. Buried culverts are being installed at Hampstead Nos. 1 and 2 Ponds.
5. Following Committee approval in June 2014, a planning application was submitted to the London Borough of Camden in July 2014. Planning consent was granted by Camden's Development Control Committee in January 2015, subject to Conditions and a Section 106 agreement. Preparation works took place in February and March 2015, with work on the Ponds Project starting on 13 April.

### **Planning Conditions and Section 106**

6. City Officers are continuing to liaise with colleagues in Atkins and the London Borough of Camden to discharge the Planning Conditions associated with the approval, in line with the work programme. There are nineteen Conditions in total. Of these, seven require no further approval but need to be complied with, eight have been approved and one part-approved (further details to be submitted). The final three Conditions relate to the Kenwood Ladies' Pond changing rooms and will require more information to be submitted prior to the works commencing.
7. The Community Working Group established as part of the Conditions continues to meet monthly and to monitor the project (more on this below). The London Borough of Camden also asked that three apprentices be employed. Appointments for two of these positions have been made. The third post was re-advertised in July 2015, but no successful candidates came forward. We are currently liaising with Camden over this matter.

## Construction work

8. Most of the large-scale work to date has been concentrated at the Model Boating Pond. This Pond was deliberately programmed at the beginning of the construction period, as the works in this location were recognised as carrying the most risk of time-slip, due to the extensive temporary works required and the de-watering of a large section of the pond.
9. A large compound west of the pond has been fenced off, closing the paths that run adjacent to its western edge. A temporary path has been created around the western edge of the compound for vehicle and pedestrian access. At the end of May, a 40-tonne crane installed a temporary sheet piled-metal dam, using a silent, vibrationless method. Unfortunately one of the sheet-metal piles in the temporary dam became declutched, leaving a gap in the piles which was only discovered when an attempt was made to drain the southern end of the pond. Water levels dropped by around 1m but then went up again, a visual inspection revealing the gap in the middle of the temporary dam. The contractors who installed the dam were called back on site and attempted to fix this by blocking the gap; however this was unsuccessful and it became clear a larger scale intervention was required. A 50-tonne crane arrived on site at the end of July and successfully enabled the piling-rig to pull out the pile that had become declutched and replace it. This is considered to be all the contractor's risk.
10. Once the temporary dam was watertight, the pond was partly drained down and the fish rescued. (During the course of this, a Ford Cortina was discovered, along with a metal statue of an eagle). However, unacceptable movement was recorded along the top of the temporary sheet piles during de-watering. The de-watered section was then re-flooded and works halted, until the sheet pile wall had stabilised. Further investigations found there to be a greater depth of silt in the middle of the pond than previous ground investigations had shown. As a result, the sheet metal piles in the middle section of the temporary dam did not have enough resistance from solid ground to stay in place. To solve this, the section will now be propped by longer steel piles on the downstream side. The southern end of the pond will then be drained again and construction will begin on the new permanent dam structure. These delays have added approximately 12 weeks to the programme at the Model Boating Pond, which is now likely to finish in September 2016. This should not impact on the overall programme, which is scheduled to finish in October 2016. Who is liable for the risk of the increased costs of the delay and additional works is currently being considered using the procedures contained in the contract.
11. Works at the Viaduct Pond have now been completed. The existing dam has been raised by 200mm, a new overflow buried pipe installed and a new grass-lined spillway created. The Viaduct Pond is still to be de-silted as part of the project, which will take place this winter, using a suction technique.
12. The works to the culvert between Hampstead No 2 and Hampstead No 1 are now under way. Building the outfall in the northern end of Hampstead No. 1 Pond was the first piece of work at this location. The route of the culvert was then excavated before starting to build the inlet structure for Hampstead No. 2 Pond, with works here anticipated to last approximately eight months in total. There will be a requirement to carry out crown reductions on the two London Plane trees either side of the culvert, due to the construction of the buried culvert and the proximity

of their roots to it. Also associated with the construction work is the diversion of a gas main, which will require some very careful trenching work through the rooting zones of the Plane trees. The works will be closely monitored by the Hampstead Heath Tree Management Team.

13. The construction work at the Vale of Health Pond were deliberately started later than programmed, because of changes to the design, but are still scheduled to be finished on time by the end of September. The changes to the design meant this pond no longer needed an overflow pipe but will instead have a wider spillway, thereby involving less disruption at this sensitive pond. The first piece of work was the installation of a kerb to raise the crest of the dam, after which the spillway was excavated and turfed, and the path on the causeway then raised and resurfaced. There are a number of exposed surface roots on the causeway's existing pathway, which will be protected as far as possible; a solution is currently being developed that will afford the roots greater protection and allow continued growth. As with the works at Hampstead No. 2 Pond, the works will be closely monitored by the Hampstead Heath Tree Team.
14. Works at the Bird Sanctuary Pond will be taking place from mid-September and work at the Ladies Pond will commence in October – however the pond will remain open for swimming while the spillway is constructed.

### **Community Working Group**

15. The Community Working Group (CWG), which was set up in agreement with London Borough of Camden and includes ward councillors among its membership, has continued to meet monthly. They regularly monitor data for the Project, including air quality, water quality, vehicle movements, levels and height of the new dam structures, together with the programme data for the next two months, as well as reviewing any complaints received and actions resulting from these, which enables them to see how the Project is progressing. A copy of the latest programme is attached as Appendix 4.
16. A series of guided walks has been taking place to coincide with work starting at each pond. Members of the Hampstead Heath Consultative Committee, the Community Working Group and the Ponds Project Stakeholder Group are invited to attend these walks, and further walks have been arranged for the general public.

### **Communications during construction phase**

17. Weekly emails with updates on the project are currently being sent to over 800 subscribers, while the Ponds Project blog continues to receive over 100 visits per week at <https://hampsteadheathpondsproject.wordpress.com>. The Heath's social media feeds are being used to advertise the blog and website, and to send out other information on the Project. Heath staff are regularly briefed by email and through face-to-face briefings, so they are able to answer questions and direct the public to sources of further information. The contractor's on-site staff have also been able to answer questions from the public about what is taking place, and have been encouraged by us to do so.

18. A time-lapse camera was installed on the eastern bank of the Model Boating Pond to photograph the dam building and the earth movements. Unfortunately the camera was stolen from this location twice, as a result of which the camera has now been relocated into the work compound on the other side of the pond, which is not as good a location, as it can see only the dam construction activity and not the associated earthworks. A link to this camera is provided on the Ponds Project website.

## **Education**

19. The Ponds Project Education Programme's principle focus is to engage with secondary schools, although engagement with primary schools, tertiary educational institutions and possibly non-school related youth groups is also an objective. To date, twelve secondary schools and nine primary schools have been engaged with. Twenty-eight secondary sessions have been delivered for 684 students, and thirteen primary sessions have been delivered for 335 students. In terms of the total number of sessions delivered, the target has been met exactly, although this has been achieved by delivering more primary and fewer secondary sessions than originally intended. The Ponds Project Education Programme progress report is attached as Appendix 1.

20. The focus in future will be on increasing the number of secondary school bookings, to which end we are developing new sessions to increase the scope of our offer. We are also looking at ways we can engage with additional schools, while maintaining and building upon relationships with those schools already worked with through this programme. This will include running teacher-focused events to showcase our offer, while gaining feedback from the participants.

## **Project Savings and Risk**

21 The Project risk register has been constantly evolving to reflect the changing status of the works on site. At the time of writing, the gross valuation of the works completed is approximately 16% of the expected final cost, while 23% of the risk provisions have been realised (£207,740). A recent review has identified that, whilst some design and on-site risks may have increased, others (particularly those relating to protest and planning) have reduced, and the revised financial allocation to each risk is shown in Appendix 2 for Members to approve. It is therefore expected that this will result in a slight reduction in the overall risk provision of £33,000.

22. There are other aspects of the Project budget that are no longer required, such as the provision for bailiffs to deal with the expected protests during site clearance, unspent budgets relating to the Judicial Review, and fees for the Strategic Landscape Architect. There are also some savings made by changes in the design, the most significant of which to date relates to the move towards seeding rather than turfing for the final landscape reinstatement, which will save £127,485.

23. The most significant remaining risks relate to the cut/fill balance of the major earthwork operations at the Model Boating Pond and the Catchpit. More will be known about the impact of this risk, once the Model Boating Pond has been de-

watered and dam construction has commenced. When works start at the swimming ponds, the risk of unattended swimming will continue to be a concern.

### **Ladies' Pond**

24. As previously reported, the approved budget at Gateway 5 included a figure of £1.5m as a provisional sum for the removal and replacement of the changing facility and supporting slab at the Kenwood Ladies' Bathing Pond. This approach was taken after it was revealed at a late stage in the pricing process that the existing slab was in a poor condition and needed to be replaced.
25. In order to be able to rebuild the slab, and rebuild the facility, all within the original programme for just rebuilding the facility, the contractor subsequently investigated the use of innovative construction techniques to speed up the delivery of the new changing facility, including prefabrication and the use of alternative construction materials, whilst keeping the same internal layout that had been agreed with the ladies.
26. The constructor has now submitted a proposal for the building which meets our specification and programme requirements. However the price is approximately £1.69m, which exceeds the provisional sum of £1.50m approved at Gateway 5. This additional cost reflects the unknown requirements of the substructure at Gateway 5 and the need to proceed with a solution to meet the tight programme requirements (i.e. building prefabrication off-site).
27. A detailed value engineering exercise is currently under way, and it is expected that the resultant savings would bring the figure closer to the previously approved provisional sum, but it is unlikely to reduce it as far as the original provisional sum. There will be a further report on progress on this exercise at your meeting. In order to progress this process, the Client Representative (Assistant Director of Engineering) has issued an instruction to the Constructor to continue with the design of the building and slab, and to contribute to the value engineering process.

### **Financial Summary**

28. With the saving identified above and the increase in anticipated costs of the new changing facility at the Kenwood Ladies' Bathing Pond, there is a slight saving to the overall budget of the Pond project of £37,141. Most of this saving relates to the reduction in risk provision as mentioned above, and as detailed in Appendix 3 of this Report.

### **Conclusion**

- 29 The delays at the Model Boating Pond, caused by the temporary works, have been unfortunate but the risks involved in this type of work meant that this element was started early, so there is no overall delay expected. The majority of feedback received by the public is that the Project is generally being well-handled. The Partnering Team is pleased with progress to date and continues to meet on a regular basis. Complaints continue to be low in number and are

reported to the Community Working Group on a monthly basis. The project remains within budget and within the original programme.

## **Appendices**

- Appendix 1 - Ponds Project Education Programme progress report
- Appendix 2 – Risk Register (NON PUBLIC)
- Appendix 3 – Financial Update (NON PUBLIC)
- Appendix 4 – Summary of the Programme

## **Background papers**

- CARES Flood Risk Study report
- Haycock Hydrology Improvements Detailed Evaluation Process (HiDEP): Hydrology and Structure Hydraulics and Recommendations Report
- Aecom Peer Review
- Design Review Method Statement
- Design Flood Assessment
- Constrained Options Report
- Shortlist Options Report
- Interim Quantitative Risk Assessment and accompanying Position Paper
- Preferred Options Report
- Strategic Landscape Architect Review
- Ponds Project Public Consultation Report
- Application for planning permission submitted to the London Borough of Camden for engineering works to the Hampstead and Highgate chains of ponds
- Judgment of the Honourable Mrs Justice Lang in R (Heath and Hampstead Society) v Mayor (et al) of the City of London

Background papers are available at [www.cityoflondon.gov.uk/pondsproject](http://www.cityoflondon.gov.uk/pondsproject)

## **Selected previous committee reports**

- Bid Report, July 2009
- Evaluation Report, May 2011
- Project update and appointment of the design team, July 2013
- Preferred Options and Non-Statutory Consultation, November 2013
- Contract Tender Report, January 2014
- Public Consultation Results, January 2014
- Option Selection Report (gateway 4c), June 2014
- Pre-Authority to Start Work Issue Report, November 2014
- Gateway 5 – Authority to Start Work Report, January 2015

Previous committee reports are available at: [www.cityoflondon.gov.uk/committees](http://www.cityoflondon.gov.uk/committees)

**Jennifer Wood**

Ponds Project Liaison Officer

T: 020 7332 3847

E: [Jennifer.wood@cityoflondon.gov.uk](mailto:Jennifer.wood@cityoflondon.gov.uk)

**Thomas Creed**

Engineer – Department of the Built Environment

T: 020 7332 3913

E: [Thomas.creed@cityoflondon.gov.uk](mailto:Thomas.creed@cityoflondon.gov.uk)