

Committee(s):	Date(s):
Hampstead Heath, Highgate Wood and Queen's Park Management Committee	26 th November 2012
Subject: Update on the Hampstead Heath Flood Management and Water Quality Management Project	Public
Report of: Flood Management and Water Quality Project Board	For Information

Summary

This report provides the Management Committee with an update on the progress of this major project, since the last report in July 2012. Considerable work has been undertaken in negotiating a contract for the appointment of the Design Team and the Strategic Landscape Architect. These appointments have now been made and the selection process for a construction contractor has commenced.

The Water Management Stakeholders Group, consisting of representatives from local interest groups, has been established and has been meeting monthly since July 2012. A wider consultation to reach Heath visitors and those living near-by has started and will continue throughout the duration of the project.

Recommendations

That Committee note the progress being made towards the implementation of the Flood Management and Water Quality project.

Main Report

Background

1. At the Court of Common Council on the 14th July 2011 approval was given to the upgrade of the pond embankments on the Hampstead and Highgate chains, at an estimated cost of £15.12m, ±20%. These works are necessary to reduce the risk of dams failing, to comply with the Reservoirs Act 1975 together with the emerging Flood and Water Management Act 2010. It will also be essential to consider design solutions that ensure the City also meeting its obligations under the Hampstead Heath Act 1871.
2. Given the complexity and risks associated with this project the Chairman has requested that both the Hampstead Heath Management and Consultative Committees receive regular updates on progress.
3. The primary aim of the project is to ensure peak water flows pass safely through the ponds or over the dams without any collapse, ensuring the City of London meets its statutory obligations. Works include:

- Embankment improvements - crest armouring, raising and creation of designed spillways
- Landscape amelioration in terms of preserving the semi-rural character of the Heath and habitat improvement
- Replacement of the building currently on the embankment of the Ladies' Bathing Pond
- Water quality improvements

Strategic Risk

4. The risk of failure of dams on Hampstead Heath is listed as Strategic Risk 11 on the Corporate Risk Register and is rated red due to the likelihood being rated as Possible and the impact as Catastrophic.
5. The likelihood assessment was reduced from Likely to Possible to reflect that in some scenarios, the dams will have the capacity to receive waters without breach and flooding downstream. However it should be noted that should severe overtopping occur, erosion is highly likely to result in partial or complete embankment failure and catastrophic flooding into communities downstream of the ponds.
6. Despite this re-assessment, the risk remains red rated. The red rating reflects that, despite our interim measures, the risk of dam failure remains possible under the terms of the risk register and would have a catastrophic impact. Despite the warning systems which the City has put into place, the damages to property and associated loss of life could be severe. (See risk register extract at appendix 1).

Current Position

7. Over the summer and autumn period the following actions have taken place:

Water Management Stakeholders Group

- In July the inaugural meeting of the Water Management Stakeholders Group was held. The Water Management Stakeholder Group is comprised of a body of some fourteen local people with knowledge and interest in Hampstead Heath to provide views and advice to this Committee in relation to the Flood and Water Management Project within the context of the Hampstead Heath Act 1871 and relevant reservoirs legislation.
- The Stakeholder Group is chaired by the Chairman of the Vale of Health Society a founding representative of the Consultative Committee. The Stakeholders Group have met monthly since inception and have received presentations on the background to the project, a legal overview and a briefing on the technical guidance. They have also attended and

contributed to a very informative walk of the Highgate chain of ponds. Notes from each meeting are circulated to the Consultative Committee.

Procurement

- Strategic Landscape Architect – a landscape architect from Wilder Associates has been appointed as Strategic Landscape Architect to the project. This followed the City of London’s evaluation of tenders together with presentations from the two lead candidates to the Water Management Stakeholder Group. Following consultation with their members there was clear support from the Stakeholders Group for Mr Wilder, he took up the position in October.
- Design Team – Following detailed negotiations on costs and finer details, W.S Atkins have been appointed to manage the following packages within the Design Team: engineering, planning, landscape and ecology. It is anticipated that local architectural practice Walters & Cohen will be appointed by W.S Atkins to support the changes required at the Kenwood Ladies Pond. Capita Symonds has been appointed as the cost consultants and the Client Representatives. This dual role for Capita Symonds has generated cost savings. These appointments have all been made within budget.
- Construction Team – Given the nature of the project the City Corporation are keen to appoint the Construction Contractor early in the process. This will provide them with an opportunity to fully understand the sensitivities of the site in working up the construction management plan and technical solutions to meet the emerging designs. The tendering process to appoint the Construction Contractor is currently underway.

Design Review

- The first task of the newly appointed Design Team will be a review of the fundamental aspects associated with the project. This will include verifying (or amending) hydrology studies, including the design flood, downstream impacts, potential options for spillway/dam design that are viable and comparing the existing landscape situation with the proposed changes. Given the importance of this review in determining the level of intervention and potential design solutions to meet the vision and primary aim of the project, the outcome of this review will be reported to both the Heath Consultative and Management Committees. This review will also require the Design Team to consider the current programme, particularly in view of the level of consultation required.

Implementation of the 2010 Flood and Water Management Act

- Over the past months the City has been liaising closely with DEFRA over the implementation of the above Act. The Act will be implemented in a number of phases with Stage 1 expected to come into force over the coming months, subject to ratification by Government. Stage 1 is likely to result in a change of classification of reservoirs from the current A-D (the Heath reservoirs are currently Category A), to a single “High Risk” category [where likely loss of life is 1 or more] with a high level of supervision and control, and a “Not High Risk” category with less control. It is likely that the Heath dams will be reclassified as High Risk.
- It was anticipated that Stage 1 would also introduce the concept of cascade of reservoirs with an aggregate volume in excess of 25,000 cubic metres, resulting in potentially more of the Heath ponds being subject to reservoir legislation. It is now considered unlikely that this will form part of Stage 1. Officers are seeking a meeting with DEFRA to try and clarify the position.

Consultation

- Initial ‘pop-up’ consultations are taking place once a week at various locations on the Heath to canvas opinion and spread information about the project to visitors. These will continue and will increase in frequency as the need arises. A more structured and widespread consultation programme will be devised when clearer timescales and parameters of what can be consulted upon are set out upon further discussion with the Design Team.

Corporate & Strategic Implications

8. The works support the strategic aim ‘To provide valued services to London and the nation’. The scheme will improve community facilities, conserve/enhance landscape and biodiversity and contribute to a reduction in water pollution whilst meeting the City Corporation’s legal obligations. The risk of any dam breach and serious downstream flooding of communities (and consequent harm to the City’s reputation) is mitigated.

Financial and Risk Implications

9. The aim of the work is to ensure the dam structures are able to cope with the requirements of the reservoir legislation and guidance. Although extreme storms may still result in floods in the area downstream after the work is complete, the risk of the dam embankments failing, which would lead to sudden and severe inundation, will be virtually eliminated. The proposed works also include improvements to water quality to reduce non-compliance with the Water Quality Directive. The project team have

developed a comprehensive Risk Register which is regularly reviewed at Project Board meetings.

10. Project costs (at a Q4 2010 price base) were outlined at £15.12m, this figure was estimated to have a confidence 'range' of $\pm 20\%$ at this stage of the project. Further cost plans will be developed as the detailed design options are produced.

Conclusion

11. This is a major project for the Heath and the City will make every effort to ensure it succeeds in both meeting current and planned reservoir legislation, while also preserving as far as maybe the natural aspect and character of the Heath, in accordance with the Hampstead Heath Act 1871.

Contact:

Jennifer Wood | jennifer.wood@cityoflondon.gov.uk | 0207 332 3847

Simon Lee | simon.lee@cityoflondon.gov.uk | 0207 332 3322

Paul Monaghan | paul.monaghan@cityoflondon.gov.uk | 0207 332 3122

APPENDIX 1

Risk	Major Flooding caused as a result of pond embankment failure at Hampstead Heath Links to: Strategic Aim SA3 and Key Policy Priority KPP4	Gross Risk		R
		Likelihood	Impact	
		3	5	

Detail	If there were to be failure of the pond embankments during a major storm, and no warning was given, the number of lives at risk on the Hampstead chain would be in the region of 400 and on the Highgate chain would be around 1000. This would also result in inundation and damage to local properties, roads and the railway lines towards Kings Cross. Detailed analysis has identified that dam crests are not currently able to cope with the level of overtopping expected to occur as a result of such a storm, increasing the risk of erosion and dam failure. The City of London Strategic Flood Risk Assessment 2012 with new surface water modelling identified 4 areas of risk in the City from upstream run-off (including Hampstead Heath).
---------------	--

<u>Specific Issues</u>	<u>Mitigating Controls</u>
Insufficient warning given of flooding	Telemetry system installed and managed by the City Surveyor as an integral part of the on-site Emergency Action Plan for reservoir dam incidents enabling early warning where pre-determined water levels at key ponds in both the Hampstead and Highgate chains of ponds are breached. Testing of this with the emergency plan and Hampstead staff has happened and further tests are planned with Mite. (City Surveyor/Director of Open Spaces)
Inadequate response to dam overtopping	Emergency Action Plan for on-site response in place and Camden now have an off-site plan in place Liaison with Camden Council's emergency planners is on-going, to work through issues raised by Emergency Services and to appraise them of revisions to our work plan as it develops. (City Surveyor/Director of Open Spaces)
Sensitivities of the local community regarding the natural aspect of the Heath	The City has undertaken extensive consultation with local stakeholders about why this project is required. The City has established a Stakeholder Group to enable key groups to contribute to the detailed design of the scheme and has appointed a dedicated officer to manage consultation. Hampstead Heath, Highgate Wood and Queens Park Committee actively engaged with local community. The group has already met several times to develop their understanding of the project. A Strategic Landscape Architect independent of the Design Team has been appointed to champion the landscape. (Director of Open Spaces)
Non delivery of project to upgrade pond embankments (includes slippage from agreed timetable and budget)	There remains a potential risk for Judicial Review. This is most likely to arise in relation to the City's need to adhere to current Guidance that sets standards for dams that is opposed by certain Groups/individuals. On-going monitoring by Project Board and Projects Sub Committee. Negotiations for the appointment of the Design Team are complete but took a month longer than planned, The contractor's appointment may be affected by the Purdah period for spring elections, the Project Board are considering ways to mitigate this (City Surveyor) .

Summary and Further Action A project has been initiated to upgrade the pond embankments, but until such time that this project is completed (2014/15) there remains a risk of flooding downstream. Responsibility for the delivery of this project rests with the City Surveyor and in relation to the City's reputation, day to day management of the ponds and the community welfare aspects of this risk, the Director of Open Spaces.	Net Risk		R
	Likelihood	Impact	
	3	5	
	Control Evaluation		
	A		