

Item No: D2 Delegated to Committee
Subject: **MINUTES OF THE FLOODPLAIN RISK MANAGEMENT COMMITTEE HELD ON 24 JULY 2019**
Author: Aurelio Lindaya, Manager Engineering Services
Approver: Tom O'Hanlon, Director - Technical Services
File No: 19/124657
Reason for Report: For the Committee to consider the recommendations of the Floodplain Risk Management Committee

Recommendation:

THAT the following recommendations contained in the minutes of the Floodplain Risk Management Committee held on Wednesday 24 July 2019 be adopted:

- A. *That Council thanks the Paddington community for its participation in the process to prepare the Paddington Floodplain Risk Management Study and Plan.*
- B. *That the final Paddington Floodplain Risk Management Study and Plan, dated July 2019, prepared by Catchment Simulation Solutions, be adopted, subject to George Street being included in the streets identified in the Paddington FRMSP as likely to experience significant property damage, risk to life and/or evacuation difficulties during significant rainfall events (Paddington FRMSP p2) and George St, Elizabeth Place being included in the areas identified 'At the peak of the 1% AEP flood, approximately 1,300 properties (out of 5,366 contained within the catchment) are predicted to experience depths of inundation that exceed 0.1 metres. The areas that are most significantly impacted by floodwaters include: (Paddington FRMSP p18)*
- C. *That Council requests staff to prepare a report on the water sensitive urban design projects, raised by the community through the consultation process for the draft Paddington Floodplain Risk Management Study and Plan. They include treatments at the following locations:*
 - i. *Detention tank in the roundabout at Hargrave Street and Elizabeth Street*
 - ii. *Flow path entrances to George Street.*
 - iii. *Grassed open space at the intersection of Elizabeth Street and Windsor Street*
 - iv. *Reserve at the intersection of Cascade Street and Sutherland Street – installation of underground and above ground storage, where feasible.*
 - v. *Cul-de-sacs of Royston Street and Cecil Street where storage could be installed beneath the roadway surface and flows stored before drainage to the existing stormwater system.*
 - vi. *Open space within 4-8 Hampden Street premises where underground storage could be provided.*
 - vii. *Elizabeth Place underground storage detention tank.*
- D. *That staff provide a further review and commentary on the feasibility and costings associated with the installation of a large detention tank on land adjacent to Elizabeth Place to enable Council to make a decision about the inclusion of this option in the Paddington Floodplain Risk Management Study and Plan.*

Background:

The Floodplain Risk Management Committee (FRMC) has been established as an advisory committee to assist Council in the development and implementation of Floodplain Risk Management Plans. The FRMC reports to the Environmental Planning Committee.

The Floodplain Risk Management Committee consists of:

- Councillor Matthew Robertson (Chair)
- Councillor Mary-Lou Jarvis
- Councillor Mark Silcocks
- A representative from the Department of Planning, Industry and Environment
- Council's Director - Technical Services (or his delegate)
- Council's Design & Investigations Engineer
- Three local residents
- A representative from the Waverley-Woollahra State Emergency Services (SES)
- A representative from Sydney Water

Discussion

The FRMC met on 24 July 2019 at 6.00pm in the Thornton Room and the meeting was chaired by Councillor Robertson. The meeting was well attended with representatives from Sydney Water, Office of Environment and Heritage (OEH), residents and Council.

The Minutes of the meeting are attached as Annexure 1.

Item 3.1 - Paddington Floodplain Risk Management Study and Plan

Following on from further community consultation with the residents of the upper Paddington catchment as resolved by Council's Environmental Planning Committee in February 2019, the Paddington Floodplain Risk Management Study and Plan (FRMSP) was updated and completed.

The final Paddington FRMSP is attached under separate cover in Annexure 2.

The report and presentation on the Paddington FRMSP which was considered by the FRMC are attached as Annexure 3 and 4.

The report and presentation was generally well-received by Floodplain Committee members and, after some discussion, the Committee recommended the FRMSP be approved by Council, subject to the amendments reflected in the Minutes and in the recommendation.

The primary discussion items by residents at the FRMC meeting, which have been addressed through the recommendations, included:

“Non-structural” flood mitigation options

A representative of the Paddington Society raised concerns that almost no “soft/non-structural options” were recommended as part of the FRMSP and requested Council investigate measures which considers environmental impacts. A number of locations and soft/non-structural options were suggested.

Council's Flood Consultant and Sydney Water's representative advised the examination of environmental measures, such as Water Sensitive Urban Design (WSUD) treatments, although very important from a water quality perspective, does not provide a significant benefit from a flooding perspective. Floodplain management examines flood behaviour and proposes treatments to address significant stormwater events to reduce flood risk within the catchment rather than the more frequent storms that result in most pollution generation.

Notwithstanding the above, it was agreed that a further report on Council's environmental program and WSUD program be prepared for Council which considers the proposed locations and soft/non-structural options suggested by residents.

Elizabeth Place Underground Storage Detention Tank

The Elizabeth Place Underground Storage Detention Tank proposal relates to a recent petition signed by residents of the upper Paddington Catchment requesting the purchase of portions of a number of private properties along Oxford Street for the purposes of creating a roadway and a public park off Elizabeth Place.

As part of the further consultation with upper Paddington catchment residents for the FRMSP, requests were made to include the investigation of a storage detention tank under the possible public park and/or roadway to mitigate flooding in the area.

Council's flood consultant was asked to examine the proposal from a floodplain risk management perspective in the first instance given that if the underground storage tank investigations revealed that the option had significant hydraulic benefits, a positive Benefit Cost Ratio (BCR) and was recommended for implementation as part of the FRMSP, the project would be eligible for significant grant funding (2:1) from the Department of Planning, Industry and Environment as part of the NSW Government's Floodplain Management Grants Program.

After undertaking a comprehensive assessment, Council's flood consultant did not recommend this option for implementation. Despite the option offering hydraulic and flood damage reduction benefits across a number of properties located between George Street and Cascade Street, the high implementation costs and low benefit cost ratio limits the project's viability.

The preferred flood mitigation option recommended for the upper Paddington catchment, which incorporates upgraded stormwater pipes and pits within the road reserve, has a higher benefit cost ratio and better flood mitigation outcomes for the overall upper Paddington catchment area.

Land Valuation

During the FRMC, concerns were raised with the land acquisition costs used in the BCR calculation for the Elizabeth Place underground storage detention tank.

The land acquisition cost of \$18,600/m² used in the calculations for the underground storage detention basin was based on advice from Council's Property Department which considered the average market rate identified in land valuations in Paddington undertaken recently by Council.

It should be noted that land valuations do vary quite significantly as it is based on a number of factors including location, land size, condition of buildings and the planning controls applicable to the prospective properties. As the land identified for the underground storage detention basin is private property, compulsory acquisition may also influence the valuation price.

At the FRMC meeting, a local resident suggested that a figure of \$8,500/m² or lower should be the figure used based on recent property sales in the area. The resident advised that if a figure of \$8,500/m² or lower were to be used as the estimated property/ easement cost, then the BCR associated with the Elizabeth Street underground storage detention tank could be greater than one.

Council's flood consultant advised the FRMC that even if a rate of \$8,500/m² were to be adopted as the land valuation for the area, the resultant benefit cost ratio of the Elizabeth Place underground storage detention basin would still be below 1, with a BCR of 0.8.

To address the concerns raised by residents at the FRMC in relation to land valuation and to enable Council to make an informed decision on the Elizabeth Place underground storage detention tank, Preston Rowe Patterson were engaged to prepare a formal land valuation for the private land earmarked for the underground storage detention tank.

A copy of their valuation is attached as Annexure 5.

The formal land valuation indicates that the likely compensation payable for the indicative area earmarked for the Elizabeth Street underground storage detention tank is a range based on potential diminution percentages to purchase land for road, public park and underground storage flood mitigation purpose. The valuation information is summarised below:

Property	Area (m ²)	(\$/m ²) (Lower Range)	(\$/m ²) (Upper Range)	Valuation (Lower Range)	Valuation (Upper Range)
436-440 Oxford Street, Paddington	281	\$7,580	\$12,633	\$2,129,980	\$3,549,873
442 Oxford Street, Paddington	109	\$4,128	\$6,881	\$449,952	\$750,029
22 George Street, Paddington	109	\$5,734	\$11,468	\$625,006	\$1,250,012
TOTAL				\$3,204,938	\$5,549,914

From the above valuation it is apparent that the average land acquisition cost across the properties, ranging from \$5,800/m² to \$10,300/m² is below the figure included in the Paddington Floodplain Risk Management Study and Plan (\$18,600). The relatively wide valuation range supports the statement that valuations do have the potential to vary significantly.

After reviewing the valuation for the site, Council's Engineering and Property staff recommend Council adopt the conservative upper valuation range of \$10,300 as any future purchase of private land would be subject to negotiations under the Land Acquisition (Just Terms Compensation) Act 1991 with the landowner.

The revised BCR for upper valuation of \$10,300/m² would be 0.7. (It should be noted that the revised BCR for the lower valuation of \$5,800/m² would be 0.99 or 1.0).

After considering the revised formal land valuation and carefully reconsidering all the flood mitigation options available for the upper Paddington catchment, Council's Engineers still support the preferred flood mitigation option recommended in the Paddington FRMSP for the upper Paddington catchment.

This option still affords a slightly better BCR and provides improved hydraulic performance for the overall upper Paddington catchment. The preferred option of implementing standard stormwater pipes and pits can be considered and integrated into Council's Infrastructure Renewal Program and can be carried out in a staged manner subject to funding availability and Council's future Infrastructure Renewal Program. Council would also be able to apply for grant funding for this option.

Conclusion:

It is recommended that Council endorse the Minutes of the Floodplain Risk Management Committee meeting held on 24 July 2019 which recommends adoption of the Paddington Floodplain Risk Management Study and Plan.

Annexures

1. Minutes of the Floodplain Risk Management Committee held on 24 July 2019 [↓](#) 
2. Paddington Floodplain Risk Management Study and Plan (*circulated under separate cover*) 
3. Report to FRMC - Paddington Floodplain Risk Management Study and Plan [↓](#) 
4. Presentation to FRMC - Paddington Floodplain Risk Management Study and Plan [↓](#) 
5. Valuation for Elizabeth Place Underground Storage Detention Tank [↓](#) 