

Confidential Item
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Authorised by the CEO

AGENDA ITEM NO.: 23.2

TO: Council Meeting on 18 April 2017

DIRECTOR: Greg Georgopoulos, Director Infrastructure Assets and Environment

REPORT AUTHOR: Anders Bogdanowicz, Environment and Transport Engineer

SUBJECT: Strategic Property Acquisition - Prospect

1. EXECUTIVE SUMMARY

- 1.1 During December and September 2016 high intensity rainfall events occurred that resulted in localised flooding around Charles Street and Princes Street, Prospect.
- 1.2 At the time of these rainfall events the pump station located at Stan Watson Reserve failed to start due to electrical faults within the system.
- 1.3 Following these rainfall events, Council engaged a stormwater consultant to undertake a flood assessment of the impact of these events on the drainage systems in the area. Based on the rainfall assessments it was determined that regional flooding from the broader catchment was still likely to have exacerbated the flooding in the vicinity of Charles Street pump station. As a result, even if the pumps had not failed, some localised flooding in the area would have occurred during this event.
- 1.4 As part of a longer term solution, consideration needs to be given to increasing the capacity of the stormwater system to provide a greater level of protection for high rainfall events, given that the area is within a trapped low spot.
- 1.5 To increase the capacity of the stormwater system, Council undertook a desktop study regarding the impact that purchasing the property next to Stan Watson Reserve(93 Charles Street) and turning it into a detention basin, would have on reducing the impact of high rainfall events on the local catchment.
- 1.6 It was concluded that this would provide a significant amount of storage and thus additional time before flooding would occur, if the runoff arriving at the pump station is only from the local catchment.
- 1.7 It should be noted that staff will need to undertake a more detailed analysis to determine what level of flood protection this concept would achieve.
- 1.8 Purchasing of this property will also contribute to and expand upon City of Prospect's currently limited open space.
- 1.9 The acquisition of 93 Charles Street is a key deliverable of the Flood Mitigation project (C.25) contained in the Draft Budget 2017-2018. This report is presented to provide Elected Members with information to assist in the Draft Budget deliberations.

2. RECOMMENDATION

- (1) **The Council receives and notes Item 23.2 Strategic Property Acquisition - Prospect.**
 - (2) **Budget bid for the 93 Charles Street Property Acquisition to be considered as part of the 2017-2018 budget deliberation process.**
 - (3) **The Infrastructure and Assets Manager be delegated to continue negotiations with the property owner at 93 Charles Street, Prospect regarding its purchase by Council, subject to funding.**
 - (4) **That in accordance with Section 91(7) and Section 91(9) of the Local Government Act 1999 and on the grounds that Item 23.2 for the meeting of the Council held on 18 April 2017 was received, discussed and considered in confidence pursuant to Section 90(3)(b) of the Local Government Act 1999, this meeting of the Council, does order that the agenda item, report and attachments and any other associated information submitted to this meeting and the minutes of this meeting in relation to the matter remain confidential and not available for public inspection for a period of 12 months or until the contract has been signed and that this order be reviewed every 12 months.**
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3. RELEVANCE TO CORE STRATEGIES / POLICY

- 3.1 **Strategic Plan to 2020 Theme 4 – Services** “Leaders of the sector providing efficient, responsive, accessible services”

Strategy 4.1 Excellence in Infrastructure

4. COMMUNITY INVOLVEMENT

- 4.1 Consultation with the property owner of 93 Charles Street regarding acquisition has occurred.

5. DISCUSSION

- 5.1 Due to the high rainfall events experienced in late 2016, Council wanted to determine if the pump station at Stan Watson Reserve would have helped mitigate flooding at the surrounding properties even if it had functioned. To gauge a better understanding of the flood events that occurred, Council engaged Tonkin Consulting to undertake a hydrological assessment for the September and December 2016 occurrences. The critical events were as follows:

5.1.1 8 September 2016

- (1) Rainfall data from this event indicated that the event was close to a 15 year Average Recurrence Interval (ARI) event. However it would appear that given considerable flooding in the Enfield area that the event may have been above a 15 year ARI event in the vicinity of Charles Street.

5.1.2 28 December 2016

- (1) The rainfall event during the early hours of 28 December 2016 has been assessed to be about a 5 to 10 year ARI event for shorter duration (1 hour) but increasing to between and 20-50 year ARI event for a 3 hour event. There was significantly more total rainfall (~50mm) in this event, than compared to the September event (~25mm).
- 5.2 The Charles Street pump station is located within the Hindmarsh Enfield Prospect catchment that has been floodmapped by Tonkin Consulting. It is located within a regional trapped low spot and receives significant volumes of flood waters in large rainfall events from the broader catchment area. The modelling outputs show that even with the pump working, the area in the vicinity of the Stan Watson pump receives significant flooding in a 100-yr ARI event (~70 properties inundated), moderate flooding in a 20-yr ARI event (~10 properties inundated) and virtually no property flooding in a 5-yr ARI event.
 - 5.3 Based on the rainfall assessments outlined above, it would indicate that regional flooding from the broader catchment is likely to have exacerbated the flooding at the vicinity of the Charles Street pump station. Even if the pumps had not failed, some localised flooding in the area would have occurred during both events in 2016. It should also be noted that the finished floor levels for some of the dwellings in the vicinity of the pump station are below street level. Therefore significant flooding of these properties will occur if flood waters reach the back of footpath levels adjacent to these properties.
 - 5.4 As part of a longer term solution, consideration should be given to increasing the capacity of the stormwater system to provide a greater level of protection for high rainfall events, given that the area is within a trapped low spot. This could take the form of:
 - 5.4.1 Increasing detention balance storage within Stan Watson Reserve;
 - 5.5 Council engaged a stormwater consultant to undertake a desktop study to review the impact purchasing of 93 Charles Street would have on increasing the balance storage of the stormwater system.
 - 5.6 If 93 Charles Street was purchased and say 1.0m³ per m² of detention storage could be provided, (assuming it would be fenced off due to the steep batters that would be needed to get to a low enough level to be effective), there could potentially be 600-700m³ of additional balance storage which would be equivalent to the runoff generated by about 70mm from the local catchment.
 - 5.7 This would then provide a significant amount of additional time before flooding would occur, if the runoff arriving at the pump station is only from the local catchment (this is not the case in the 1 in 100yr storm event).
 - 5.8 Having a basin in 93 Charles Street would provide more flood storage; however detailed modelling is required before the level of protection can be confidently ascertained.
 - 5.9 Purchasing of this property will also increase the quantity of open space within City of Prospect.
 - 5.10 The level of public open space in Prospect is low with only 23.34ha (3%) of the total 778ha land area being parks and gardens. It also ranks lowest in inner metropolitan

Adelaide in terms of open space per hectare per 1000 people at 1.2ha compared with the inner metropolitan average of 8ha.

- 5.11 As an inner metropolitan established suburban area, there is limited capacity for acquiring new open space and this acquisition is seen as a great opportunity. The advantage of purchasing 93 Charles Street would also ensure the Stan Watson Reserve could have an improved amenity and the layout of the Reserve could be reviewed to establish a more flexible space.
- 5.12 The acquisition of 93 Charles Street is a key deliverable of the Flood Mitigation project (C.25) contained in the Draft Budget 2017-2018. At the Workshop 4 April, this project was presented as part of the 'funded pool' of projects and is projected to be covered by the capital expenditure allocation earmarked in the Long Term Financial Plan.
- 5.13 The draft budget will be subject to a public consultation in May 2017, and the final budget is scheduled for adoption at the June Council Meeting.
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ATTACHMENTS

Nil.