7.3 Contract No. 2019/166 - Gordon Barnard Reserve - Rain Garden and Stormwater Harvesting Implementation Works

Abstract

This report seeks Council endorsement to bringing forward the foreshadowed funding from 2020-21 Financial Year, originally planned for the design and implementation of the Water Sensitive Urban Design project at Macleay Park, and to allocate additional funding to Contract No. 2019/166, Gordon Barnard Reserve - Rain Garden and Storm Water Harvesting Implementation Works.

Further to the endorsement of the additional funding, this report seeks Council endorsement for the award of Contract No. 2019/166, Gordon Barnard Reserve - Rain Garden and Storm Water Harvesting Implementation Works.

This contract involves the Implementation of a Rain Garden and Storm Water Harvesting system at the Gordon Barnard Reserve (GBR). The proposed project at GBR is the next priority Integrated Water Management Strategy (IWMS) project and is a Council Annual Plan commitment.

The total cost of the Contract to be awarded to Contek Constructions Pty Ltd is $1,440,471 (excluding GST).

Due to the value of the contract, it was publicly advertised in accordance with the requirements of section 186 of the *Local Government Act 1989*.

Confidential information is contained in **Attachment 1**, as circulated in the confidential section of the agenda attachments, in accordance with Section 89(2) of the *Local Government Act 1989*, as the information relates to contractual matters and premature disclosure of the information could be prejudicial to the interests of Council or other persons. This item has been included in the public agenda to facilitate transparency and accountability in Council's decision making.

If discussion of the confidential information in the attachments to this report is required in order for Council to make a decision, this item will be deferred to the confidential section of the agenda.

Officers' recommendation

That Council resolve:

1. To bring forward funding forshadowed in the long term financial strategy for the Water Sensitive Urban Design (WSUD) project in 2020-21, in order to deliver the Gordon Bernard Reserve - Rain Garden and Storm Water Harvesting Implementation Works project. The increased funding will be captured in the September 2019 amended budget.

2. To note that the WSUD project planned for 2020-21 (nominally Macleay Park) will require an additional budget allocation if it is to proceed in that year.

3. To award Contract No. 2019/166, Gordon Barnard Reserve - Rain Garden and Storm Water Harvesting Implementation Works, to Contek Constructions Pty Ltd (ACN 060 505 099), for a total cost of $1,584,518 (including GST), based on full budget now being available by virtue of resolution 1 above. The estimated cost to Council after the return of GST Input Credits is $1,440,471.

4. To authorise the Director Environment and Infrastructure to execute the contract agreement with the above contractor.

Responsible director: **Carolyn Terry**
Acting Director Environment and Infrastructure

1. Purpose

The purpose of this report is for Council to give consideration to bringing forward the foreshadowed budget from Financial Year 2020-21 and to award Contract No. 2019/166, Gordon Barnard Reserve (GBR) - Rain Garden and Storm Water Harvesting Implementation Works.

2. Policy implications and relevance to community plan and council plan

Council Plan and Boroondara Community Plan
Construction of the GBR Rain Garden is an Annual Plan commitment which will contribute to a number of strategic objectives and targets including:

Strategy 3.5: Reduce the environmental impact of Council facilities and assets through continued greenhouse gas saving initiatives and storm water treatment and re-use.

Strategy 2.1: Sustainably design, manage and utilise parks and green spaces to foster a connected and healthy community for all ages and abilities.

It will also support Council's annual potable (tap) water use target (Performance Measure) and help increase the volume of harvested water (rain and storm water) re-used within Council buildings and open space irrigation (Target).

Integrated Water Management Strategy
The aim of this strategy is to set the strategic direction and implementation approach for improving water cycle management across the municipality over the next decade. It builds on Council's achievements over the past decade to save water, improve storm water quality and protect the health of our waterways.

This project will deliver on the following IWMS objectives:

- Minimise use of drinking water.
- Increase local water harvesting and 'fit-for-purpose' reuse.
- Remove pollutants contaminating our storm water before it enters our waterways and Port Phillip Bay.

3. Background

Integrated Water Management Projects
The IWMS proposes progressive delivery of Water Sensitive Urban Design projects across the municipality to meet these objectives. WSUD projects have been identified and prioritised across Boroondara. The top three priorities are identified at Chandler Park, Gordon Barnard Reserve and Macleay Park.

The highest priority project is a wetland at Chandler Park. This project was designed in 2016-2017 and would divert storm water from the Kew Main Drain and treat this through wetlands before releasing the water back into the Yarra River.

Prior to beginning construction, officers identified project risks resulting from the North East Link (NEL), and following advice from North East Link Project (NELP) (formerly North East Link Authority) that the proposed alignment will affect Chandler Park, the wetland project has been postponed indefinitely. Construction designs for the Chandler Park Wetland have been provided to NELP, and officers are working with NELP to advocate that the wetland be constructed as part of the NEL.

The GBR project is the second highest priority project identified in the IWMS and will deliver significant water and pollution savings.

The GBR project will divert water from a storm water drain under the reserve which is collected from the Balwyn North catchment. The water is then filtered through a heavily planted garden (rain garden) which removes pollutants and cleans the water before it is stored in an underground tank. Excess filtered water will be released back to our waterways. The stored water will receive further treatment and will be used to irrigate the two playing fields. Irrigation of our playing fields is one of Boroondara's highest water demand generators and addressing this demand is a critical element of the IWMS. The rain garden is the key visual element of the project and is intended to be an attractive addition to the park. Storage and diversion infrastructure will be installed underground. Water treatment and pumping equipment will be located in a pumphouse adjacent to the existing cricket nets.

The GBR project will reduce Council's use of drinking water by 7.5 million litres per year, and provide additional water security during times of drought and water restrictions. In addition, large volumes of pollutants will be prevented from entering the Yarra River and Port Phillip Bay.

Integrated Water Management Project Funding

Grant funding of $400,000 from Melbourne Water (MW) and $200,000 Department of Environment Land Water and Planning (DELWP) was originally allocated for construction of the wetland at Chandler Park. Of this, $100,000 (MW) and $100,000 (DELWP) were refunded in 2017-18 as the GBR project could not meet the specific criteria required to qualify for these full grant allocations. A further $100,000 of the original DELWP allocation was required to be refunded in 2018-19 resulting in a corresponding reduction in the allocated budget for this project.

$300,000 of the original MW funding was retained when officers advocated that the rain garden at GBR met the original grant criteria. MW has approved a variation to this original grant agreement allowing the funding to be used for the GBR project.

This funding is dependent on completion of the project by 28 December 2019.

Invitation to tender

In accordance with Council's procurement procedures and Section 186 of the *Local Government Act 1989*, Council invited public tenders from suitably qualified organisations to undertake the Implementation of a Rain Garden and Storm Water Harvesting system at GBR.

An invitation to tender was advertised in the local government tenders section of "The Age" newspaper on Saturday 23 February 2019 and on Council's website. The closing date for submissions was 4pm, Monday 25 March 2019.

In response to the advertisement, Council received three submissions:

- Contek Constructions Pty Ltd;
- Multipro Civil Pty Ltd; and
- Simpson Construction Company Pty Ltd.

4. Outline of key issues/options

Budget shortfall

The tender evaluation identified Contek Constructions Pty Ltd as the preferred contractor. An amount of $1.485M (including contingency) (excluding GST) is required to complete the project.

This amount is $633,000 more than the available budget and $443,000 (or 42%) over the cost estimate. This presents a significant challenge in project delivery.

Officers have reviewed the tender prices to better understand the underlying reasons for the discrepancy between the cost estimates and the prices received.

The degree of consistency across the tendered prices received from all three contractors suggests that the cost estimate was too low in the first instance. The cost estimate was developed by the lead design consultant with direct input from each of the sub-consultants (i.e. civil, landscape, hydraulic and electrical) sub consultants. While it is disappointing that the design consultants have failed to accurately predict construction costs, there are some likely contributing factors.

The main cost deviation relates to the civil (i.e. construction and earthworks) and hydraulic (i.e. irrigation, pumping and filtration) works. The key reasons for this are higher than expected costs for excavation and disposal of contaminated material. Although extensive soil sampling and testing was conducted as part of the detailed design phase, all tenderers appear to be factoring in additional costs above the design consultants' expectations to manage these risks. These risks are compounded by general uncertainty in the waste management industry, which has recently observed greater scrutiny from governing bodies like the Environment Protection Authority (EPA), along with the recent closure of some waste handling sites. Another contributing factor relates to the fact that all tenderers have proposed to outsource the hydraulic elements of the project. This is understandable given the specialised nature of the water purification and pumping requirements of WSUD projects.

Officers have also observed that industry prices for civil works in general have risen due to the volume and nature of large-scale infrastructure projects currently taking place across Victoria. In particular, large civil projects, for example, the Melbourne Metro Rail Tunnel, have led to an increase in volumes of fill being transported and disposed of which has pushed up related prices. Neighboring Councils have also recently observed 30-40% increases in tendered prices for similar works.

Officers from Council's Projects and Strategy department have compared the tendered prices with other recent projects, and have confirmed that the tendered prices are generally consistent with recent market rates.

Review of Project Scope

The scale of the rain garden and storage has been value engineered through the design process and represents an optimal balance between project costs, the volume of water treated and the volume of water harvested for re-use to irrigate the adjacent ovals. The design performs strongly in terms of storm water pollution reduction and reuse. The project has been tested using industry standard cost benefit analysis methodology. Even with the increased costs, the project still compares favourably with other storm water harvesting schemes in Melbourne. The environmental benefits this project delivers are the main reason we have been able to retain/attract grant funding from DELWP and MW. The project is expected to provide over 70% of the annual water requirements of the playing fields.

Officers have explored a number of options to further scale back the project to better reflect the available budget. This has proven difficult as many of the costs associated with the project are fixed; for example, the number of pits and pipes would be the same regardless of the size of the project. One of the biggest opportunities to reduce costs is to scale back the size of the underground water tank. Reducing the storage capacity of the tank by 50% is estimated to reduce project costs by $100,000-150,000 (7-10%) due mostly to reduced disposal of contaminated material and the purchase of a smaller tank. This 50% reduction in storage size would reduce the supply of water to the playing fields to 57% of annual requirements. However, any reduction in system specification will likely result in Council losing the $300,000 in remaining grant funding from MW, as this is dependent on the project meeting designed levels of pollution reduction and water harvesting. This essentially negates any cost savings less than $300,000.

Project importance to achieving IWMS targets

With the exception of the (postponed) Chandler Wetland project, the GBR project remains the best value opportunity to support Council's IWMS objectives and targets of reducing potable water use, harvesting an alternative water source and reducing pollution to our waterways.

Council's target for use of harvested water is 30 million litres for 2024. The implementation of the GBR project is critical to meeting the target and will contribute 7.6 million litres per annum. The project also provides future water security for the two sports grounds at GBR with associated cost savings.

Preferred option to deliver project

Construction of the GBR Rain Garden and Storm Water Harvesting project will require an additional allocation of funds. To achieve this, officers propose bringing forward funding from the foreshadowed budget for the next priority IWMS project at Macleay Park, which is due for construction in 2020-2021.

This is considered a preferred approach because:

- The GBR project is fully designed and 'shovel ready' to implement.
- It delivers on Council's publicly advertised Annual Plan commitment.
- It represents the best opportunity to meet Councils IWM objectives and targets.
- It provides some protection against future drought and water restrictions.
- The next priority project at Macleay Park has not yet been fully designed and is likely to attract similar construction costs.
- Failure to deliver the project this year will likely result in the $300,000 MW grant funding being lost.

Project Risk - Excavation and Disposal of Contaminated Material
Construction of the rain garden project at GBR will require a significant amount of excavation.

To manage risks associated with potential land contamination, extensive geotechnical investigations have been carried out including soil sampling from 15 test bores within the project area.

The soil samples identified that:

- There are moderate areas of low level contamination consistent with Category C for disposal. This categorisation allows for inclusion of a low levels of asbestos debris however no asbestos was identified in this area.
- Higher level contamination is present in an isolated pocket which falls just outside of the planned excavation area. This higher level contamination does not extend through a large plane or depth. The higher level contamination is classed as Category A for disposal.

Based on the results from these bores and the required excavations, the project designers made a conservative allowance for the volume(s) of contaminated material requiring disposal. These volumes were itemised in the excavation quantities included in the tender, and the preferred contractor priced the works according to these conservative figures.

While is not possible to predict all eventualities using test bores, the test results indicate that any additional contamination could only exist in isolated pockets, rather than being widely distributed through a large plane or depth.

With a total of 15 bores across the project area, the management of risk for this project comfortably exceeds Council and industry practice, and officers are confident that the risk of cost escalation related to encountering higher than expected contaminated material is low.

On this basis, the allowance for the disposal of contaminated soil included in the preferred tenderer's schedule of rates is considered appropriate to cover the most likely contamination costs.

5. Consultation/communication

Community consultation about the GBR Rain Garden design was carried out during October and November 2018. Consultation informed neighbouring residents about the project via a mailout, onsite signage and website content which included detailed drawings. Community feedback on the project has been positive. No objections have been received.

6. Financial and resource implications

The Project Budget is as Follows:	
2018-19 Adopted Budget Carried Forward	$ 403,688
2019-20 Adopted Budget	$ 453,000
Total Project Budget	**$ 856,688**
Project Expenditure to Date:	
2018-19 Expenditure	$ 4,709
Total Available Project Budget	**$ 851,979**
Proposed Project Expenditure:	
Works Component	$1,398,023
Maintenance Services Component	$ 42,448
Contract Lump Sum	**$1,440,471**
Other Project Expenditure	$ 44,508
Total Project Expenditure	**$1,484,979**
Project Budget Shortfall	$ 633,000

The budget shortfall is proposed to be funded from the following source:

Project 147: [72604 - 2020-21] - $633,000

The $856,688 includes funding of $300,000 from MW. Retention of the $300,000 is contingent on completion of the project before 28 December 2019.

Delivery of the project at GBR requires an additional allocation of $633,000 for a total allocation of $1,484,979.

Council's 2019-20 adopted budget foreshadows $1.3M in 2020-21 for construction of the next priority WSUD project (nominally Macleay Park). Bringing forward $633,000 from this budget (Project 147: [72604 - 2020-21]) would allow construction of the GBR project as planned.

While it is acknowledged that delivery of the next priority project at Macleay Park will require additional funding in 2020-2021, councillors will have the opportunity to consider the request for additional funding at this time. Should Council decide not to proceed with another similar project there may be a need to revisit our target next year.

While this project is primarily an environmental project reducing pollution to our waterways and reducing consumption of valuable drinking water, it is also calculated to save Council approximately $20,000 per annum on water purchases and provide an alternative water source during drought or water restrictions. This provides additional water security for our sports grounds and potentially avoids some of the high costs Council has incurred in the past with purchasing and trucking water during drought conditions. Notably, during the drought years of 2008-2010, Council expended approximately $800,000 importing recycled water.

7. Governance issues

The implications of this report have been assessed in accordance with the requirements of the Victorian Charter of Human Rights and Responsibilities. The officers responsible for this report have no direct or indirect interests requiring disclosure.

The contract is being recommended to be awarded to the tenderer who scored the highest combined qualitative and quantitative score and is considered best able to provide best value for Council.

The Instrument of Sub Delegation to the Director Environment and Infrastructure dated 5 April 2019 authorises the Director to vary any contract.

A condition of this delegation, as applicable to this contract, is that if the contract has been entered into by Council and the value of the contract is greater than $500,000, the aggregate value of the contract (taking into account the value of the expenditure for the further term of the value of the variation) may not increase by more than 10% or $100,000 whichever is greater.

8. Social and environmental issues

This project provides both environmental and social benefits.

The project will reduce consumption of valuable drinking water by harvesting storm water. Treatment of this storm water will reduce pollution from entering the Yarra River and Port Phillip Bay and will help deliver the objectives of Council’s adopted IWMS.

The project provides an alternative water source for irrigation of the two sports fields. This provides additional water security during drought and water restrictions. This project will enhance Council’s ability to provide high quality playing surfaces.

9. Evaluation and review

The tender evaluation report is provided as Confidential **Attachment 1.**

As a result of the tender evaluation, the Tender Evaluation Panel recommends that Council award Contract No. 2019/166, Gordon Barnard Reserve - Rain Garden and Storm Water Harvesting Implementation Works, to Contek Constructions Pty Ltd (ACN 060 505 099), for a total cost of $1,584,518 (including GST). The estimated cost to Council after the return of GST Input Credits is $1,440,471.

Manager: Adam Hall, Acting Manager Projects & Strategy

Report officer: Cid Mariani, Coordinator Civil Projects; Mathew Dixon, Coordinator Environmental Sustainability