

12.10	REPORT TITLE:	PROCUREMENT OF NEW WASTEWATER SEWER MAIN AND PUMPING STATION
	DATE OF MEETING:	2 NOVEMBER 2020
	FILE NUMBER:	DOC/20/142975
	ATTACHMENTS:	1) PROJECT LOCATION PLAN 20/138935 2) LOCATION PLAN OF RELATED PROJECTS DOC/20/146612
	<u>Key Contact</u>	Brian Clancey, Deputy Chief Executive Officer/ General Manager, Wastewater/Recycled Water
	<u>Sponsor</u>	Andrew Stuart, Chief Executive Officer

Mount Barker 2035 – District Strategic Plan:

The Urban Environment
UE 5 Objective: Integrated Water Management
Strategy UE 5.1: Continue to build on Council’s reputation as a leader in wastewater management

Annual Business Plan:

Wastewater/Recycled Water Key Annual Objectives
Continue with planning, design and construction of the capital works program for delivery of the required wastewater infrastructure to service growth;

Purpose:

To seek endorsement of the recommended procurement strategy for the new wastewater sewer main (from Hampden Road to the Springs Road wastewater treatment plant) and the wastewater treatment plant inlet pumping station.

Summary – Key Issues:

- To cater for growth in demand, additional wastewater infrastructure is required to be procured in Mount Barker, as shown in attachment 1;
- The proposed procurement strategy for this infrastructure is outlined below; and
- The current forecast demand will require the additional wastewater infrastructure shown in attachment 1 to be operational by February 2022.

Recommendation:

That Council:

Endorse the project procurement strategy, being an open tender call for the design and construction of a new wastewater sewer main (from Hampden Road to the Springs Road wastewater treatment plant) and the wastewater treatment plant inlet pumping station, as shown in the attached location plan (attachment 1).

Background:

1. At the council meeting held on 1 June 2020 Wastewater/Recycled Water Strategic Objectives were endorsed which include of direct relevance to this project the following:
 - *Minimise environmental impacts;*
 - *Cater for planned population growth and densification;*
 - *Ensure that effective community engagement occurs.*
2. The licence to council issued by the EPA to operate the Springs Road Wastewater Treatment Plant requires delivery by council of the recently EPA approved Environmental Improvement Plan which includes of relevance to this project the following action:
 - *Construct and commission storm equalisation basin, inlet works and odour control facility at Mount Barker WWTP.*
3. A series of informal gatherings for council members on wastewater/recycled water infrastructure have occurred over a period of time, with the most recent being held at the Laratinga Pavillion/Springs Road Wastewater Treatment Plant on 26 October 2020.
4. As per the terms of reference for the Audit and Risk Committee (ARC), the ARC will provide advice to council on this project pre the consideration of any recommendation to award a tender.
5. The warrant for this project arises from the existing gravity trunk mains delivering effluent & sewerage to the Springs Road WWTP is forecast to reach capacity around February/March 2022. The Hampden Road Trunk Main is the critical tie in point for all of the sector trunk mains and it will benefit both existing and future wastewater customers.

6. Calculations by Council engineers and verified by WGA Consulting Engineers based on flow monitoring data to ascertain actual flows, and the projected population increase determined by Council's planning department and consultants Forecast.id, were performed to determine when the existing effluent gravity trunk mains are forecast to reach capacity.
7. In addition, the existing siphons were not constructed to cater for sewer discharges. As the percentage of sewer increases (relative to effluent from septic tanks) leading up to February 2022, so does the risk of blockages in these siphons which would result in overflows to the local environment, in particular the Mt Barker Creek that the siphons pass under. The frequency of siphon maintenance will increase closer to February 2022.
8. The required timing for the additional infrastructure to be operational based on current forecasts is for construction to commence in March/April 2021 (also see Risk Assessment heading below)
9. To achieve that timing, it is currently anticipated that the award of a tender for design and construction would need to occur in February 2021
10. The decision to award the tender would be made at a council meeting.
11. Reference design has been prepared by Walbridge Gilbert Aztec (WGA) consulting engineers. Of particular note is that the infrastructure would need to be located at a depth of several metres below ground level.

Discussion:

12. Procurement advice has been obtained from Mr Tim Wheaton of Wheaton Enterprises Pty Ltd.
13. Procurement strategy option for this project have been considered which included determining the project scope having regard to the pros and cons of including the inlet pumping station. That assessment has seen the project scope include the inlet pumping station. The pumping station will be the largest installed by Council, it will be 14 metres deep with a 6 metre diameter.
14. It is anticipated that the nature of this project is likely to see tender submissions that propose the use of micro tunnelling technology. In short, micro tunnelling involves a series of entry and exit holes for the drilling rig with the primary advantage being minimal disruption to the surface area along the route of the pipeline. It is anticipated that this methodology will likely see a higher construction cost than other construction methods (see below) so that will need consideration as part of the tender assessment process.

15. Other methods of construction include open trenching and directional drilling. Any of which if submitted by contractors will be evaluated on their merits in terms of cost and impact to the community and surrounding areas.
16. Council staff don't have experience with the use of micro tunnelling technology. As a consequence, it is proposed to secure at least one external person with such expertise in addition to Mr Chris Reynolds, Commercial Manager, Wastewater to be part of the council tender assessment panel which would be responsible for making a recommendation to the Project Sponsor Brian Clancey who in turn would make a recommendation to be considered at a council meeting.
17. The option of Early Contractor Involvement (ECI) procurement approach was considered for this project. Given the extent of design work completed and the tight time frames it is proposed to put a design and construct tender for this project to the open market and not use ECI.
18. Consideration was also given to the option of aggregating all of the required sewer collection main infrastructure projects to be procured as a single package. The other projects and indicative timing being as listed below and located as shown in attachment 2:
 - a) CBD Sewer Trunk Main (2022/23);
 - b) Central Sector Trunk Main (2023/24);
 - c) Eastern Sector Trunk Main Stage 2 (2025/26).
19. It is not envisaged that any of the other sewer main construction projects {as listed above as a), b) and c)} will require the use of micro tunnelling. These projects are anticipated to see either open trenching or directional boring methodology used.
20. It is proposed that these three other construction projects {as listed above as a), b) and c)} be procured as a package via an ECI process in order to maximise cost efficiency. That will be the subject of a separate council meeting agenda item in due course, with the timing of these projects not being immediate as shown above.
21. A prudential report is required to be prepared for this project and that is about to be commenced. Following a recent tender call for the preparation of a number of wastewater/recycled water related prudential reports over the next two years, Dean Newbery Consulting has been appointed.
22. Given the nature of this project procurement, an independent probity advisor is being used. Mr Brenton Ellery from Nexia Edwards Marshall (Accounting and Financial Services) has been retained for that role.

- 23. Mr Ellery has worked with council previously, most recently in relation to the Mount Barker City Centre Catalyst Project.
- 24. As illustrated in attachment 1, this project will see further council infrastructure located within the St Francis de Sales College site for which an easement will need to be in place. Engagement with the College has been undertaken to ensure that the project implications are well communicated and that strategies to manage such implications will be well executed.
- 25. This project will likely also see some interruption to access to a section of the linear trail. The objective will be to minimise this as much as possible. Once the extent and timing of that impact is known, a management strategy will be implemented including advance notice via a communication plan. This will feature in the tender documentation and the evaluation of tender submissions will have regard to options and cost implications.
- 26. It is proposed to call the tender for this project in November 2020 via an open process. The tender brief will leave flexible the methodology and technology (the how) with the emphasis being output based (the what).
- 27. The target timing is that a recommendation to award the tender be presented to a council meeting in February 2021.
- 28. In advance of that it is intended that there would be further council meeting agenda items with a project business case, recommendations on this project from the Audit and Risk Committee and the consideration of a prudential report.
- 29. This project represents a critical piece of wastewater infrastructure and it is important to ensure that effective project management controls are in place.
- 30. Given the nature of this project, it is proposed that quarterly reporting be provided to council members via agenda items to future council meetings until project completion.
- 31. Other key project considerations are covered below under the various corporate headings.

Community Engagement:

Informing only	Direct mail out to key stakeholders is being distributed in late October 2020.
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	Project information to be available via the Council website –
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Policy:

- Procurement Policy
- Wastewater Infrastructure Fees and Augmentation Costs Policy

Long Term Financial Plan:

The Long Term Financial Plan includes annual revenue from wastewater infrastructure fees that are payable to council by developers when development is undertaken.

The wastewater infrastructure reserve account has a balance of \$4.8 million as at 30 June 2020. Additional revenue of \$669,000 has been received since then providing a current reserve balance of \$5.47 million.

It is proposed to acquit some of that balance for this project via a council meeting resolution that would occur at the time of the award of a tender for detailed design and construction.

The Plan also makes provision for capital expenditure for this project in both 2020/21 and 2021/22 as communicated to council members in the confidential informal gathering that was held on Monday 26 October 2020.

Budget:

The adopted council budget for 2020/21 includes provision for expenditure of up to \$3.5million with the balance of the project capital expenditure to occur in 2021/22.

Statutory/Legal:

The project does not require development approval.

Preparation of a prudential report pursuant to the Local Government Act will shortly commence and this report will be presented for consideration at a future council meeting pre the award of a tender for detailed design and construction.

Staff Resource Requirements:

As outlined above, a number of external service providers have been engaged and/or are proposed to supplement council staff including:

- Engineering design;
- Procurement strategy;
- Independent probity advisor;
- Tender assessment panel member/s with expertise in the use of micro tunnelling technology;
- Project management;
- Contract Superintendent;

- Prudential report preparation; and
- Legal.

Environmental:

Approval from the Landscape Board for the two creek crossings will be required, the approval process is currently underway.

The following reports have been completed:

- Vegetation Assessment;
- Aboriginal Cultural Heritage Survey (Archaeological);
- Anthropological Survey.

The tender brief will include a requirement for the preparation and implementation of an environmental management plan.

The local environment will also benefit from the project by the reduced risk of overflows, supporting Council's reputation as a reliable wastewater provider.

Social:

The project will enable public health services to continue to be provided by council.

This project will enable removal of 4 Siphons and 1 Pump Station that are currently serviced once every 6 months. This servicing has to occur in the early hours of the morning which causes disruption to adjacent residents. The removal of these assets will eliminate the disruption to the community and the potential impact to the local environment.

It is anticipated, that during construction there will likely be some restrictions to access for the linear trail from the rear of St Francis de Sales College to the WWTP. Every effort will be made to minimise restrictions and to maintain access to the linear trail where possible, however site safety for trail users and the contractors staff will be Council's and the contractor's main priority.

Risk Assessment:

The project risk register is regularly reviewed and updated.

Key risks to be managed include:

- The timing of tender award and/or construction completion and commissioning is delayed e.g. due to weather and/or the Home Builder stimulus package spikes demand, putting at risk the additional infrastructure being operational pre the existing infrastructure becoming over capacity.

- Cost increases due to unforeseen circumstances such as the extent of rock encountered during construction.
- A Risk Mitigation Plan has been prepared that highlights responses required by Council to potential occurrences. The following is a list of actions required and potential outcomes and in some cases, the associated costs:
 - From June 2021 increased monitoring of pipeline performance.
 - Surcharging of pipelines due to exceeding capacity requiring short term by-pass pumping – estimated capital cost of around \$250k (short useful life) and operating cost of \$25k per month .
 - Clean up costs associated with overflows to the local environment, Circa \$10k per event.
 - Damage to Council’s reputation as a reliable wastewater service provider.
 - Increased risk to the local environment.
 - Noise & odour pollution.
 - Restricted pedestrian access to a section of the linear trail.

Asset Management:

The additional wastewater infrastructure to be constructed would be owned and operated by council and provision for asset management would fall to council and be included in the asset management plan for wastewater.

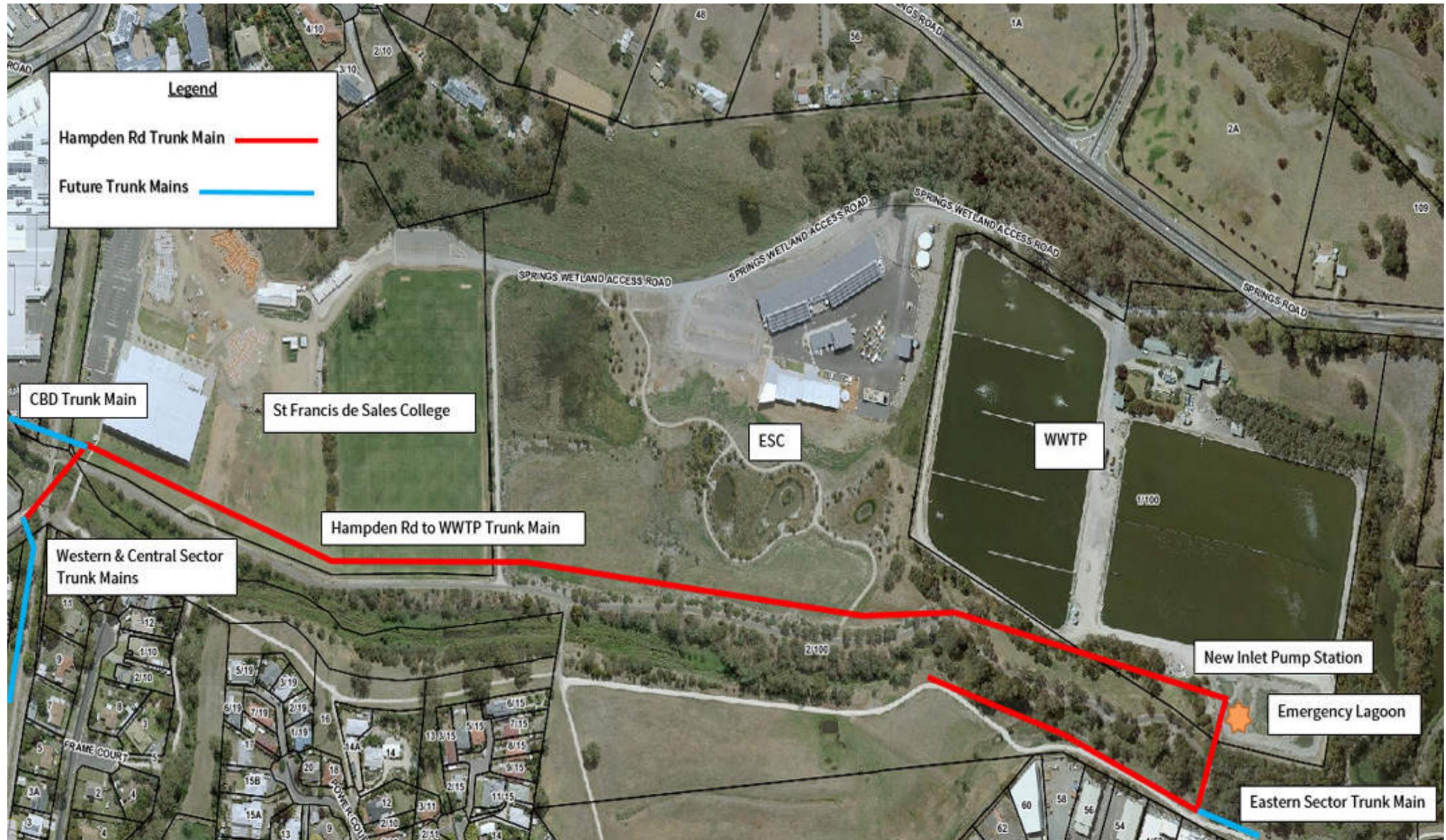
Conclusion:

This project represents investment in a long term asset that is required to enable wastewater service delivery to deliver both a public health benefit to the community and future revenue to council for the provision of this service.

Endorsement of the recommended procurement strategy for this project will enable the necessary actions to proceed and in due course, further agenda items will be presented for consideration at council meetings including advice from the ARC, a prudential report and a recommendation for tender award for detailed design and construction.

Attachment 1

Hampden Road to WWTP Gravity Sewer Trunk Main & New Inlet Pump Station Location Map



Attachment 2 to Item 12.10

Attachment 2

