

CM13.3. Water Infrastructure Supervisory Control and Data Acquisition (SCADA) System, Telemetry and Instrumentation Upgrade - Contract No. 19/02274

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CONFIDENTIAL	No		
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Purpose of Report

To recommend a preferred contractor for the upgrade of Council's telemetry system, through a select tender process.

Background

AlburyCity went to the open market through an Expression of Interest (EOI) during June 2019 to find appropriately qualified and experienced contractors to undertake a major upgrade to Council's Infrastructure Supervisory Control and Data Acquisition System (SCADA), Telemetry, and Instrumentation system. At the close of the EOI, nine submissions were received and following the evaluation process four contractors were deemed to have the most appropriate skills, experience and qualifications to undertake the upgrade.

Subsequently, a report was provided to Council on 12 August 2019 recommending that four contractors be chosen to undertake a select tender process for the upgrade. The shortlisted contractors are indicated below:

1. Safegroup Automation Pty Ltd;
2. Hunter H2O Pty Ltd;
3. Alliance Automation Pty Ltd; and
4. 360 Engineering Pty Ltd.

The upgrade to the telemetry system is required as AlburyCity's existing radio telemetry and SCADA system was originally commissioned in 1998. The system acts as an electronic data conduit for the safe and efficient operation of Council's water and wastewater networks. The reliance and increased volume of data transfer over the last 20 years, combined with the aging nature of the original system, has exceeded the telemetry systems capacity to safely and effectively operate.

The scope of the works included in the tender are summarised below:

- design and construct water and sewer radio telemetry infrastructure, base station and repeater equipment;
- design and program water monitoring station SCADA interface at the Albury Water Filtration Plant;

- design and program wastewater monitoring station SCADA interface at the Jelbart Road Mechanical, Electrical and Metering Workshop; and
- design, procure, program, and install telemetry hardware in all water pump stations, water storage reservoirs, radio base stations, and repeaters.

The project will be delivered in three stages over a four year period:

- Stage 1 – upgrade of the water supply network;
- Stage 2 – upgrade of the wastewater pump station network; and
- Stage 3 – upgrade of the wastewater treatment plants' network.

The Stage 1 contract duration is estimated at 32 weeks, with Stage 1 works to be completed during the 2020/21 and 2021/22 financial years. Stage 2 of the contract is scheduled to be completed in the second half of 2021/22 and Stage 3 will be completed in the 2022/23 financial year.

The intent of the EOI and select tender process was to a shortlist suitable contractor who can complete all three stages of the contract whilst maintaining consistent SCADA programming, telemetry architecture, and hardware platforms.

Tender Assessment

At the close of tenders, submissions were received from all four contractors shortlisted during the EOI process, these contractors are listed below:

1. Safegroup Automation Pty Ltd;
2. Safegroup Automation Pty Ltd – alternative tender;
3. Hunter H2O Pty Ltd;
4. Alliance Automation Pty Ltd; and
5. 360 Engineering Pty Ltd.

All tenders were evaluated in accordance with the Council's Procurement Policy and Guidelines. The assessment panel for the tender comprised Coordinator Procurement and Contract Management – Gerard Coyle, IT Project Coordinator – Glenn Henderson, Team Leader Network Services – Adam Carty, Team Leader Treatment Services – Heidi Josipovic, and Water Filtration Plant Supervisor – Shawn Charlton.

In addition, AlburyCity commissioned an independent and external evaluation of all submissions, which was undertaken by RM Engineering Solutions Pty Ltd. The independent review was undertaken due to the complexity of the project and highly detailed submissions provided by the contractors.

Conformity Check

A conformity assessment was undertaken to ensure all submissions received were in accordance with the contract documentation and specification.

Company	Pricing Details	Supporting Information	WHS Documentation	Comment
360 Engineering Pty Ltd	✓	✓	✓	Conforming
Alliance Automation Pty Ltd	✓	✓	✓	Conforming
Hunter H2O Holdings Pty Ltd	✓	✓	✓	Conforming
Safegroup Automation Pty Ltd	✓	✓	✓	Conforming
Safegroup Automation Pty Ltd – alternative tender	✓	✓	✓	Conforming

As indicated above, all submissions were assessed as conforming. However not all companies had their Work Health and Safety (WHS) currently registered with Council. This does not preclude them from possible selection as they have provided the necessary documentation to demonstrate the ability to meet the Council's WHS requirements in their submissions.

Qualitative Assessment

A qualitative assessment considered a range of issues including:

- past performance – including referee checks, relevant experience, and expertise in performing same or similar projects;
- methodology and program – project methodology and proposed program;
- capacity – current and future commitments and workload;
- capability – including the availability, of resources, equipment, and contract management capabilities; and
- the benefit to the local region – social and community benefit to the Albury/Wodonga region.

Company	Past Performance (20%)	Methodology & Program (20%)	Capacity (20%)	Capability (30%)	Local Benefit (10%)	Total (100%)
Safegroup Automation Pty Ltd – alternative tender	20	16	17	30	3	86
Safegroup Automation Pty Ltd	19	16	17	28	1	81
Alliance Automation Pty Ltd	16	17	19	24	3	79
360 Engineering Pty Ltd	16	17	16	26	3	78
Hunter H2O Holdings Pty Ltd	12	16	16	20	4	68

Safegroup Automation Pty Ltd (Safegroup) is a Melbourne based company and has undertaken several identical projects throughout Victoria and New South Wales. Some examples include projects completed for Goldenfields Water County Council, Wagga Wagga City Council, Yarra Valley Water,

Wannon Water and Coliban Water. Additionally, Safegroup have completed several smaller scale projects for AlburyCity.

Their current work commitments include the Wandandian Water Supply Scheme for Shoalhaven Water, which is of similar size and scope to this project.

Referee information indicated that the company typically works well with their customers and has a good history of building strong long-term relationships. Safegroup allow for the level of risk involved and adequately resource works to accommodate the high level of complexity found in different water and wastewater systems. Safegroup project execution systems rarely require re-work, and the customers indicate they rarely have commissioning issues. Customers typically note Safegroup met key milestones on time and they are quick to adjust resources to ensure milestones and product deliveries are met on time. Safegroup provided all forms of relevant documentation for the customer including training and operator manuals. Customers noted Safegroup provided good customer service and quality outcomes with a strong focus on providing post project support and maintenance.

In addition, referees have indicated that Safegroup was accommodating with any suggested variations and their project methodology was of a high standard.

Safegroup's primary and alternative tenders included a strong methodology and program which aligned with the project scope. Safegroup's program is detailed, well-structured and their methodology covered all recognisable requirements for a project of this scale and scope. Safegroup's choice of the telemetry hardware and software solutions meet the requirements set out in the project scope. Safegroup's Work, Health and Safety, environmental and quality systems are all ISO/BS accredited with external certifications.

The alternative tender scored slightly higher in past performance and capability due to the alternative tender nominating an electrical subcontractor who has previously performed a larger quantum of work on Council assets than the subcontractor nominated in their primary tender. The choice of electrical subcontractors was the only point of variation between the alternative and primary tender submissions. Both electrical subcontractors have the necessary skills, experience and qualifications to undertake the works specified within the tender submissions.

The alternative tender also scored a slightly higher score for Local Benefit as the alternative tender nominated a locally based electrical subcontractor to undertake the control panel fabrication and installation. The electrical subcontractor who was nominated by Safegroup in the primary tender is not deemed to be locally based.

Safegroup has indicated that they will utilise integrated design philosophies (standards, type tested templates and documentation) and provide extensive training to maximise the ability of Council's internal staff to support and maintain the system through a transfer of skills and technology. Their offer includes training for Council's nominated local electrical contractors.

Alliance Automation Pty Ltd (Alliance) is a Melbourne based company and has undertaken several similar projects throughout Queensland, Victoria and New South Wales. Some examples are projects completed for Wide Bay Water at Hervey Bay, Gunnedah Shire Council and South Gippsland Water.

Their current work commitments include Mid Coast Water telemetry and SCADA support. Within the support agreement Alliance is responsible for ongoing maintenance and project support for Mid Coast Water's telemetry and SCADA control systems, which includes over 200 remote monitoring sites. Alliance also continue to support Gunnedah Shire Council post project, regularly checking in and conducting performance checks on the system as part of an ongoing support agreement.

Referee information indicated that Alliance is flexible when it comes to project processes and ensuring they are working with the customer and supporting them through a project. One customer noted Alliance did not add any cost variations to a project because of lost time caused by the customer, they just assisted the customer to get the project back on schedule. Alliance have been noted for their understanding of all forms of industry standard hardware. Comments around their project management were very positive such as they met all key milestones and tasks were pre-organised well. Referees indicated that they had no issues with Alliance's resource allocation and utilisation and they had good interaction with local subcontractors. Alliance typically have mature Quality Assurance documentation provided throughout their projects and detailed soft and hard copy electrical drawings, training documents and functional descriptions.

Alliance has provided an excellent methodology that addresses key activities of project governance, delivery, scope and design management. Alliance's program for the installation of hardware was the strongest of all submissions. Alliance's choice of the telemetry hardware and software solutions meet the requirements set out in the project scope. Alliance's Work, Health and Safety, environmental and quality systems are ISO/BS certified.

Alliance's benefit to the local region includes a proposal to utilise local subcontractor(s) for the electrical installation and control panel fabrication. Alliance has indicated the majority of labour and up to 20% of the materials, plant and equipment will be sourced from the local region. Alliance has indicated that they will provide technical training to maximise the ability of Council's internal staff and Council's nominated local electrical contractors to support and maintain the system through a transfer of skills and technology.

360 Engineering Pty Ltd (360) is a Parkes NSW based company and has undertaken several identical projects throughout Queensland and New South Wales. Some examples are projects completed for Parkes Shire Council, Narromine Shire Council, Goondiwindi Regional Council and Banana Shire Council. Their current work commitments include ongoing support and project works for Banana Shire Council, Queensland. These works include the supply, programming and installation of radio repeaters for their telemetry network.

Referee information indicated they had positive experiences working with 360. Customers are particularly impressed with 360's service concept design and how 360 consult the customer to create a suitable solution. The quality of the product is high, and their commissioning processes are planned and timed to suit all internal and external stakeholders. Most importantly to many of their customers, 360's after project service and support is good. Customers are typically impressed with the technical knowledge of 360's engineering team and site hardware installers. 360 provide accurate documentation including training manuals, safe operating procedures and as built electrical drawings.

Overall, customers are very happy with 360's intent to work with them and their operators to create a solid specification and total solution for their systems.

360 provided a detailed methodology covering the key activities of project governance and delivery, scope and design management, installation, programming and commissioning. 360's choice of the telemetry hardware and software solutions meet the requirements set out in the project scope. 360 Work, Health and Safety, environmental and quality systems are all ISO/BS accredited with external certifications.

360 has nominated a local subcontractor they will utilise for electrical installation. 360's benefit to the local region includes a proposal to utilise local subcontractor(s) for the electrical installation and control panel fabrication. 360 has indicated the majority of labour and up to 40% of the materials, plant and equipment will be sourced from the local region.

Hunter H2O Pty Ltd (Hunter) is a Mayfield New South Wales based company and has undertaken several similar projects throughout Victoria and New South Wales. Some examples include projects completed for WaterNSW, Water Authority Fiji and Solomon Islands Water Authority.

Their current work commitments include Armidale Regional Council where they are completing a SCADA and communications system upgrade. In addition, they are completing a detailed design of Water NSWs telemetry and communication systems.

Referee information indicated that the company typically met key milestones and operate within the expected timeframes. Hunter allocate and organise their resources to ensure a smooth and successful outcome, and Hunter has been reported to have very efficient and accurate project related documentation. Hunter consults thoroughly with their customer to design a concept to suit the project requirements, and then engineer and document a solution appropriate to the customer's needs. They produce a system-specific and site-specific strategy with their customers to limit potential impacts. They supply accurate functional descriptions for their implemented solutions. Hunter has been found to have very reliable follow up and support services and regularly check in to ensure the quality of the field hardware installations.

Hunter has provided a methodology that addresses key activities of project governance and delivery, scope and design management, installation, programming and commissioning. Hunter's choice of the telemetry hardware and software solutions meet the requirements set out in the project scope.

Hunter has nominated a local electrical subcontractor to undertake their works. Hunter has indicated that they will provide technical training to maximise the ability of Council's internal staff to support and maintain the system through a transfer of skills and technology. Hunter has indicated that approximately half of the project would utilise local labour and materials.

Quantitative Assessment (100%)

The lump-sum tender prices and ratings relative to the lowest price are listed below.

Company	Estimated Contract Value (including GST)	Rating (100)
Safegroup Automation Pty Ltd	\$940,450.50	100
Safegroup Automation Pty Ltd – alternative tender	\$1,064,955.50	88
Hunter H2O Pty Ltd	\$1,136,179.00	82
Alliance Automation Pty Ltd	\$1,239,601.00	76
360 Engineering Pty Ltd	\$1,410,022.90	67

From a quantitative perspective, the primary submission from Safegroup Automation Pty Ltd was assessed as being the most advantageous at \$940,450.50 including GST, with this submission being \$125K (12%) more favourable than the Safegroup – alternative tender. The Safegroup Automation Pty Ltd submission is \$196K (18%) more favourable than the by Hunter H2O, \$299K (24%) more favourable than the submission from Alliance Automation Pty Ltd and \$470K (33%) more favourable than the submission from 360 Engineering Pty Ltd.

The budget allocation for the project in year one (2020/21) is \$350K. With a further budget allocation of \$750K required during the 2021/22 and 2022/23 financial years (total estimated budget over the life of the project is \$1,100,000).

Risk

- **Business Risk** – Financial risks to the project are possible if issues are encountered when integrating the new telemetry systems into Council's existing networks. This risk is mitigated through the EOI process and the shortlisting of experienced and qualified contractors.
- **Corporate Risk** – AlburyCity provides residential and commercial water and wastewater services to approximately 25,000 properties. Failure to adequately upgrade the telemetry system will see a noticeable reduction in the level of service provided to our customers. Council's risk profile will also increase due to an inability to capture legislated flow and plant data. Equipment and systems failure is also likely, as is the possibility of treatment facilities operating outside of critical quality control points.
- **WHS and Public Risk** – The contractors are required to work on electrical equipment which does pose a WHS risk. The risk is suitably managed as all four contractors have the appropriate levels of qualification, training and experience to work on such systems. In addition, all four contractors have provided sound management systems that ensure the risk to reticulated water quality is kept to a minimal level and with no discernible increase to the risk to public health.
- **Environmental Risk** – The contractors were required to submit Environmental Plans, addressing environment controls to be implemented during the project. The upgraded telemetry system will reduce the risk that overflows and spills can pose to the environment by providing a higher level of control and system oversight.
- **Delivery Program Risk** – The standard risks associated with a complex project which will take a number of years to complete do exist. These include staff turnover, both internally and externally, and various unknowns around encountering complexities within Council's existing

telemetry and electrical systems. These risks have been mitigated by having all the tender submissions evaluated by an independent external consultant and through undertaking the select tender process.

Community Engagement

The project is an integral component of AlburyCity's water and wastewater control, monitoring and alarming systems. The project is necessary for AlburyCity to achieve customer service levels agreed in consultation with the community during the development of the NSW Best Practice Water Supply and Sewerage Guidelines Strategic Business Plan and our Water and Sewer Strategies.

The project delivers on a number of actions out of the Community Strategic Plan – Albury 2030 in that it ensures that Albury has a secure and well-managed water supply through the planning and implementation of sustainable infrastructure to support the long-term growth and development of the City.

The project is included in the Council's 2020/21 Operational Plan which was placed on public exhibition prior to its adoption by Council.

Summary

The scoring for the qualitative and quantitative assessment is summarised in the following table:

Company	Quantitative	Qualitative
Safegroup Automation Pty Ltd	100	81
Safegroup Automation Pty Ltd - alternative tender	88	86
Hunter H2O Pty Ltd	82	68
Alliance Automation Pty Ltd	76	79
360 Engineering Pty Ltd	67	78

From the qualitative assessment, all companies have the required management systems, experience, resources and availability to successfully undertake this project, with both submissions from Safegroup being the only to score more than 80 in the qualitative criteria. All tender submissions specified hardware and software options which met the tender specification.

From a quantitative perspective, the submission from Safegroup Automation Pty Ltd was assessed as being the most advantageous. The submission was \$125K (12%) more favourable than the alternative tender, also submitted by Safegroup Automation Pty Ltd. The choice of electrical subcontractors was the only point of variation between the primary and alternative tender submissions submitted by Safegroup. The primary submission nominated an electrical subcontractor whose business location is outside of the local benefit region, whilst the alternative tender submission nominated a locally based subcontractor. Both electrical subcontractors have the necessary skills, experience and qualifications to undertake the works specified within the tender submissions.

Therefore, based on the qualitative and quantitative assessments, it is deemed that the submission from Safegroup Automation Pty Ltd provides the best value for Council to deliver this project.

Conclusion

Council has undertaken an EOI and select tender process to find the most appropriate contractor for the upgrade and construction of the Infrastructure Supervisory Control and Data Acquisition System, Telemetry, and Instrumentation system. With the existing telemetry system being commissioned in 1998, it is now beyond its capacity to safely and effectively operate.

Following the EOI, four contractors were shortlisted to be included in a select tender process, all four of the contractors shortlisted during the EOI provided tender submissions, with a single alternative tender also being submitted.

The scope of the contract is for the design and construction of the entire water and wastewater radio telemetry infrastructure. This will include the design and programming of the water monitoring station SCADA interface at the Albury Water Filtration Plant, and extend to the design, procurement, program and installation of telemetry hardware in all water pump stations, water storage reservoirs, radio base stations and repeaters.

A quantitative and qualitative assessment indicated that Safegroup Automation Pty Ltd was the most favourable submission. Their tendered price of \$940,450.50 (including GST) is within the estimated budget allocation of \$1,100K which will be reflected in the 2021-2025 Four Year Delivery Plan.

Recommendation

That Council accepts the tender from Safegroup Automation Pty Ltd for Contract No. 19/02274 – Control and Data Acquisition System, Telemetry, and Instrumentation Upgrade for the lump sum amount of \$940,450.50 including GST.