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26 August 2019

Waitaki District Council
20 Thames St
OAMARU

Attention:

The Mayor and Councillors
Fergus Power, CEO
Neil Jorgenson, Asset Group Manager
Martin Pacey, Water Services and Waste Manager

Re: Lake Ohau Alpine Village Water Supply Scheme – Response to Simmons Submission

This letter is in response to written comments about Fluent Solutions in the submission of Linda and Stephen Simmons dated 19th August 2019.

Prior to addressing specific comments made in the Simmons Submission, the following section provides some background information on Fluent Solutions.

1.0 Background

Fluent Infrastructure Solutions Ltd (Fluent Solutions) was formed in March 2013. The four company directors were all previously employed by Duffill Watts & King Ltd (later CPG and then Spiire) in the Dunedin office and managed the company's NZ-wide Centre of Excellence for all three waters and infrastructure works.

The staff at Fluent Solutions have been involved in the development, design and implementation of numerous civil, environmental and infrastructure projects throughout New Zealand.

Some relevant municipal water supply projects Fluent Solutions and staff have been involved in are:

Waitaki District Council

- Hampden to Moeraki Pipeline – lead designer, specification and construction monitoring. This won the Otago Construction Award (\$1M - \$5M category) at the recent Civil Contractors NZ awards.
- Moeraki Water Supply – booster pump Station – preliminary and detailed design

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- South Hill Watermain Upgrades – Preliminary and detailed design of water mains
- Oamaru Water Treatment Plant and treated water reservoir – issues and options investigations and reporting, design and project management (as Duffill, Watts and King Ltd) and have more recently been involved with membrane replacement and membrane fouling issues. This won a Silver Award for Innovation and Excellence at the ACENZ awards.
- Water Safety Plans for Oamaru, Ohau, Otematata, Lower Waitaki and Waihemo Water Supplies
- South Hill Microzone Booster Pump Station – preliminary and detailed design.
- Redcastle Road booster pumping station design.

Queenstown Lakes District Council

- Shotover Country borefield water supply – detailed design of new borefield (565L/sec) with UV disinfection and chlorination plant.
- Kelvin Heights water supply UV disinfection treatment plant (200L/sec).
- Arrowtown water supply borefield, booster pumping station and reservoir upgrades
- Arrowtown water supply UV disinfection treatment plant.
- Arthurs Point water supply UV disinfection treatment plant.
- Treated water supply reservoirs at Ben Lomond, Fernhill, Goldfields, Arthurs Point, Quail Rise, Arrowtown and Beacon Point.

Dunedin City Council

- West Taieri Water Supply Upgrade water supply – issues and options, detailed design and construction monitoring of new membrane water treatment plant for 1,700m³/day water supply (Duffill Watts and King Ltd).
- Southern Water Treatment Plant – piloting a range of treatment processes and advising council on best treatment process for dealing with surface water (DCC).
- Numerous pipeline upgrades and renewals.

Fluent Solutions are also well respected in the industry for their wastewater and stormwater designs.

All works performed over the last 40 years by Fluent Solutions staff have helped the team develop considerable experience and a very strong understanding of the issues involved relevant to water supplies and the NZ Drinking Water Standards. This has allowed Fluent Solutions to provide robust and cost effective results for many satisfied clients.

For the Ohau Water Supply Upgrade, one of our Directors, Melanie Stevenson, worked with WDC staff to develop options and cost estimates to present to the Ohau Community. This work was performed while being engaged by the WDC on a secondment basis.

Melanie is an Environmental Engineer with BE (Nat. Res) (Hons), BSc (Physics) and Water Treatment Operations Certificate qualifications. Melanie has worked in the water industry for over 20 years and has an extensive knowledge of water treatment processes, drinking

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water standards, the management of water supplies and is fully conversant with the requirements of local authorities, having spent 10 years of her career at the Dunedin City Council and Otago Regional Council.

2.0 Response to Specific Comments in Simmons Submission

The following section now addresses specific comments written by Linda and Stephen Simmons.

2.1 Conflict of Interest:

Paragraph 1:

Stephen and Linda's submission states that there is a potential conflict of interest in the engagement of Fluent as a consultant as they believe Fluent designs and constructs water treatment projects, and are under the impression that it is in Fluent's best interests to recommend the most expensive solutions in order to make more money. This statement is completely wrong and based on misinformation.

Fluent is not in the business of construction other than for specification and construction monitoring to ensure the work is constructed in accordance with the design.

Our business is to provide sound advice based on the information available, the regulatory environment, and our skills and experience to give our clients robust and resilient results in the most cost-effective manner, taking into consideration the initial capital costs and on-going operational costs of any scheme.

Fluent is well known for being pragmatic and a trusted advisor to our clients. We were recently included on the three waters engineering design panel for Queenstown Lakes District Council based on our skills, reputation and knowledge of the district's infrastructure. It should be noted that several other larger consultants were not successful in getting on the panel.

Paragraph 2:

The submission states that a number of "less than successful" water systems have been designed and implemented under the guidance of this consultant for WDC". Fluent is at a loss to identify what water systems are being referred to in this statement. As far as we are aware there are no "less than successful" water systems that are attributable to poor guidance from Fluent Solutions. In fact, two significant projects that Fluent have been involved with (Oamaru WTP and the Oamaru to Hampden Pipeline), were both award winning projects.

Paragraph 3:

This paragraph mentions that Fluent has been in direct contact with a design build contractor of treatment plants and suggests this is a 'clear breach of protocol' and if WDC had instructed this, it was 'intolerable and questionable, and could introduce legal ramifications'.

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Fluent is constantly communicating with consultants, suppliers and design build contractors for all manner of things including pricing of options, and discussions around the feasibility and constructability of infrastructure. The only time that this does not occur is during the construction tendering process where stringent communications rules are complied with. It is important that we keep abreast of the latest technologies by regularly communicating with regulatory authorities, consultants, contractors and suppliers to ensure that Council are provided the best possible advice.

In this case, the reason for speaking with APEX Environmental, was that they are a design build contractor who had presented a cost estimate for the Ohau work. The costs were similar to the cost estimates provided in the Fluent Solutions report and clarification was sought about what APEX had and had not allowed for. APEX could potentially tender for the Ohau upgrade and it is perfectly acceptable for the design engineer to communicate with a potential tenderer outside the tender process as noted above. Notwithstanding the above, Fluent are not competitors with APEX Environmental Ltd as we do not construct treatment plants and are performing different roles in this project.

2.2 Fluent Reports:

Under this section the Simmons submission attempts to discredit the reports presented by Fluent by suggesting the assumptions and calculations are based on flawed data and calculations with a lack of in depth NRW (non-revenue water) and demand management knowledge, experience or knowhow. Fluent Solutions used the flow data available (actual flow records from the Ohau Reservoir), made an informed assessment of leakage (NRW) (off peak night time flows), and used New Zealand Design Standards for demand assessments. The resulting demand assessment was not out of the ordinary for small holiday communities.

The Simmons submission only focusses on technical matters relating to issues of demand flow, as this is Stephen Simmons area of expertise. Albeit that the design demand calculations are a factor used to help establish cost and feasibility of options, other issues also need to be considered:

- Compliance with the NZ Drinking Water Standards
- Local Government Act requirements and needing to allow for future generations
- Access for operators
- Operations and Maintenance
- Land ownership
- Treatability of water
- Security of Supply
- Cost to ratepayers

Fluent Solutions assessment of options considered all of the above issues.

2.3 Conclusion:

This section refers to Fluent Solutions as a “cheap, biased consultant” whom does not have the relevant skills in the area of drinking water supplies. As discussed in the background

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section of this letter, Fluent Solutions and its team are a group of skilled engineers with a long history of working in the water supply industry. Our group of 3-water engineers are often successfully competing against larger engineering consultancies such as Beca, Stantec, Opus and Harrison Grierson, and on occasion are asked to work with these larger consultancies to help supplement their skills.

3.0 Summary

The comments in the Simmons submission regarding Fluent Solutions are based on a misconception of the company. This misconception appears to be a convenient one, in an attempt to discount the work that has been done, in a desperate attempt to retain the existing water supply source, despite the assessed higher risks in terms of water safety, and the higher overall cost to the rate payer.

Fluent Solutions are bound to take the NZ water standard regulatory environment into account, and simply cannot promote options for which are at risk of not meeting Drinking Water Standards and creating long term operational issues for the Waitaki District Council.

Please be reassured that Fluent Solutions is a highly professional engineering consultancy and has presented all options objectively and comparatively in order to help WDC make the best decision for the Lake Ohau residents. There is absolutely no motivation on our part to discredit any source, treatment or other option for any other reason than technical issues. We are very saddened to hear that members of the Ohau Community believe that there is a preference to push for options that provides any financial advantage for Fluent Solutions.

Yours faithfully

FLUENT INFRASTRUCTURE SOLUTIONS LTD

Per:



Anthony Steel
Managing Director