

Memorandum

To: District Plan – Resource Management Policy Team, Waikato District Council
Date: 16 April 2021
From: Roger Seyb, Beca Ltd
Our Ref: 4214056-1680710091-12
Copy: Carolyn Wratt, WDC Consultant Planner
Subject: Technical Specialist Review, Three Waters – Te Kowhai

Experience and Qualifications

My name is Roger Morgan Seyb.

I am a Senior Technical Director in the Water Resources and Civil Engineering fields employed by Beca Ltd.

I hold a Bachelor of Civil Engineering degree from the University of Auckland. I am a Chartered Engineer and a Chartered Member of Engineering New Zealand.

I have been working in the civil engineering field since 1990, predominately in New Zealand, and have carried out a wide range of civil engineering, water infrastructure and environmental projects from conception to construction during that time.

1. Introduction and purpose

The purpose of this report is to provide a view as to whether:

- a) Sufficient and appropriate information has been included in the assessment;
- b) The assumptions are sound and reasonable;
- c) The proposed solutions are technically feasible and realistic;
- d) The timeframes for upgrades or connections are realistic; and
- e) There are any potential or actual issues that the planner and Hearings Panel need to be aware of.

2. Documents considered

Document reviewed:
on behalf of Greig Metcalfe
Statement of Evidence of Bevan Ronald Houlbrooke, 17 February 2021

2.1 Limitations

This review is a limited desk top review carried out by reading the above document and providing general comment on the suitability of the information to be relied upon and recommendations made at the Proposed Waikato District Plan hearing. No site visit has been undertaken and the information referred to in the documents and calculations have not been verified. Detailed information of the site constraints was not available.

3. Overview of technical matters

Mr Greig Metcalfe has an ownership interest in a 68 ha block on the edge of Te Kowhai Village. The land was identified to be Village zoning in the notified plan and Mr Metcalfe does not seek a change to this.

Waikato 2070 identifies Te Kowhai as a growth area with the zoning upgraded to a higher density residential (allowing 450 m² lots) in a 10 to 30 year timeframe.

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Greig Metcalfe wants to advance development of the land as soon as possible and therefore wants to retain the possibility of on site management of three waters services.

WSL have advised me that it is unknown whether the area can be serviced and a strategic study of water supply and wastewater is required.

4. Assessment undertaken

No specific assessment of the provision of wastewater or water supply has been undertaken for the Metcalf block.

Te Kowhai has a small wastewater scheme that provides additional treatment for existing septic tanks in the area and then discharges to land. The system is at capacity. A longer term option for treatment and disposal to accommodate growth may be connection to the network at Horotiu (6km away).

Consultation is required with Watercare on behalf of WDC to determine the preferred option and develop a development agreement along with appropriate cost sharing arrangements.

A connection to the Ngaruawahia scheme could be via storage and pumping via Horotiu. The scheme extension could take several years to design and construct and staging or on site solutions would need to be considered if development is to proceed in the short term.

A public water supply connection will be required given the intensity of future growth proposed. Options may include be to connect to the scheme servicing Horotiu by running a 6km pipe along Horotiu Road to the 250 dia pipe on Great South Road or connect to the Hamilton City network.

Again, consultation with Watercare on behalf of WDC and developing a development agreement is required to determine the preferred option and cost sharing arrangements.

Both wastewater and water network extensions will be most cost effective with the larger future population envisaged under Waikato 2070, so there will be some redundancy in the network extension serving the initial stages of development.

On site management of wastewater will require larger lot sizes to accommodate wastewater land disposal fields and reserve areas. WDC has identified a trigger of providing public three waters services when lot sizes are less than 2,500 m². While it may be possible to have smaller lot sizes than this for on site wastewater disposal in some circumstances, say 1000 to 1500 m² for a small to medium sized residential house, the overall density would be less than a public network would allow.

While a site specific system for wastewater on the Metcalfe block may be feasible, connection to a future public network has benefits in making a public system more viable economically. This in turn is likely to improve the overall quality of discharges in the Te Kowhai area by removing septic tanks, allow a greater density of development overall (as other new development does not need to rely on on site wastewater disposal) and offer more certain and better long term operation and maintenance. Therefore I consider the better long term wastewater solution for intensification of the overall Te Kowhai area is a public network.

Timing of development and identification/provision of the public network is therefore the key issue to integrate and resolve.

I have discussed the development with WSL and they have advised me that it is unknown whether the site can be serviced and that a strategic study of the capacity of water supply and wastewater networks is required to determine this.

5. Adequacy of assessment

As noted above, timing of development and provision of the connections to the public networks are the key matters to integrate and resolve.

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6. Conclusions

The preferred option for, and timing of provision of water supply and wastewater connections to Te Kowhai is currently unknown. While on site wastewater disposal may be feasible for individual developments, its widespread implementation would lead to a lower overall density of development than envisaged by Waikato 2070. A public scheme offers benefits in economic viability for the new connections and in the longer term will lead to environmental improvements.

I recommend:

- Consultation between Watercare (on behalf of WDC) and the submitter to identify when new connections to Te Kowhai could be available and integration of these with development stages.
- That a strategic study into the capacity of the water supply and wastewater networks and treatment plants is carried out. Checks should also be made into whether any further consents for increased water take or wastewater discharges are required.