

Memorandum

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

Experience and Qualifications

My name is Anna Samantha Jane Fraser

I am an Associate Civil Engineer employed by Beca Ltd.

I hold a Bachelor of Civil Engineering and Commerce 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 for 10 years, predominately in New Zealand, and have carried out a wide range of civil engineering including stormwater 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

- Statement of evidence provided by Susan Ann Henderson on behalf of Waikato – Tainui and Endorsed by Submitter Turangawaewae Marae Trust Board

2.1 Limitations

This review is a limited desktop review carried out by reading the above documents and providing general comment on the suitability of the information to be relied upon and recommendations made at the Proposed Waikato District Plan (PWDP) hearing. No site visit has been undertaken and the information referred to in the documents and calculations have not been verified. Detailed knowledge of the constraints within the network was not available - further discussion with the network operator would be required to identify and address any specific constraints within the network.

Detailed technical reports have not been provided for this review. This review is based on the summary provided in the evidence by Susan Henderson.

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3. Overview of technical matters

Developable Area

The submitter seeks to address the zoning of the Hopuhopu site. The submission includes the following:

- To retain the residential areas of the Hopuhopu site;
- To retain the business zone;
- The zoning at 333 Old Taupiri Road be changed to a specific Hopuhopu Zone, thereby removing confusion and providing clarity around future uses and aspirations for the site; and
- That a joint partnership approach be taken with Council in developing a way forward.

The current site contains four zones in the Operative Waikato District Plan – Rural, Pa, Living and Business. Endowed College and its grounds are in the Pa Zone. The existing sports field and other open space is zoned Rural. Living and Business Zones cover the existing housing and business area. The site is largely a brownfields site.

The submitter proposes to develop a new zone in the Proposed Waikato District Plan (PWDP) for the Hopuhopu Site known as the 'Special Purpose Zone - Hopuhopu' which will replace the new zoning under the PWDP.

Wastewater treatment plant discharge

The site is serviced with a 150mm dia rising main on Old Taupiri Road which discharges to treatment facility which is located to the south of the Hopuhopu Site. The existing residential and business zone, as well as Endowed College and Hopuhopu sports park is currently serviced with a gravity main and pump station connecting into the rising main.

Water supply

A 200mm dia water main network is provided to Hopuhopu Site along Old Taupiri Road. There is a new watermain which runs through the sports park with two water tanks located to the south of Endowed College.

Stormwater

The site is located adjacent to the Waikato River with a gully from the River running through the site.

4. Assessment undertaken

Developable Area

The existing zoning in the OWDC was reviewed against the Proposed District Plan. The Pa Zone (Endowed College and open space) is proposed to be re-zoned with Rural Zoning. The Residential zone and Business zone largely follow the same area, however the Residential Zone has increased in size slightly and reduced the Business Zone (to the east of Penny Crescent).

The submitter proposes to develop a new zone in the Proposed District Plan for the Hopuhopu Site known as the 'Special Purpose Zone - Hopuhopu' which will replace the new zoning under the PDP. The approach is based on the existing zones that apply to the site, but more clearly defines where activities can occur. The new precincts which are proposed within the new zoning area:

- Residential
- Education and Conference

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- Business
- Open Space
- Mixed Use

Wastewater

The submitter has indicated that the majority of the gravity pipe network will need to be replaced based on an assessment of future demand. They also state that the existing two pumping stations have the ability to service the new development. Calculations have not been received for this assessment.

In the evidence it states that Watercare have not indicated any concerns with the capacity of the wastewater treatment plant to service the Hopuhopu development given the type of development proposed. No evidence has been provided of communication with Watercare.

Water supply

The submitter has summarised that there have been significant investments made to upgrading the potable water infrastructure in the area with the water infrastructure being replaced in 2018. In the evidence it states that Watercare have advised that there is sufficient capacity in the trunk water supply pipes to supply the proposed development. No evidence has been provided of communication with Watercare.

Stormwater

The site contains a High-Risk Flood Area and Flood Plain Management Area which is located within the proposed Rural Zoning. The High-Risk Flood area and Flood Plain Management Area extends along the Waikato River which interfaces with the Rural, Residential and Business Zones. The submitter mentions that the development will be able to be accommodated outside of the flood plain extent. A review of the proposed zoning layout has been viewed and Open Space is provided in the area of the flood plain. There is a small extent of the flood plain which is located between the residential and mixed-use precinct. This area is currently zoned Living and development could proceed in this area outside of the flood plain.

The submission identifies that the proposed development will be able to meet the water quality treatment to be in accordance with the WRC and WDC requirements.

5. Adequacy of assessment

The submitter has identified that Site Investigations have been undertaken in relation to the future development of the site on behalf of a Waikato-Tainui Hopuhopu project by Bloxham Burnett and Olliver engineering. A summary of the findings from these investigations are contained within the submission, however a review of the assumptions and calculations have not been completed as the technical report has not been provided.

Based on the evidence presented I expect that the proposal to rezone the area will have a similar demand and capacity requirement for the three waters, if not slightly less than that of the Proposed District Plan.

Wastewater

The WDC Framework report identifies that in growth cells within close proximity to the site, that Watercare are to undertake investigations for the wastewater network, as well as the wastewater pond to confirm capacity. The submitter has identified that gravity pipe network will need to be upgraded for the future demand and that the existing pump stations have capacity. The new zoning is not substantially larger than what is proposed in the Proposed District Plan, therefore it is expected that the flows can be managed. As the site is developed, a model will need to be

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completed to confirm the size of the upgrades of the reticulated network and confirm capacity of the existing pump stations and treatment pond.

Water

Reference is made to Watercare having sufficient capacity for the water supply. This is also reflected growth cells within close proximity in the WDC Framework report. I generally consider that the proposed rezoning will be suitable for the water demand, however when the site is developed a model should be developed to confirm capacity.

Stormwater

I consider that stormwater reticulation, detention and quality will be able to be managed with the proposed rezoning.

6. Conclusions

Based on my assessment of the evidence provided the proposed rezoning of the site could be provided for.

Following my review of the submission I recommend the following:

- Confirmation that the wastewater network, pump stations and treatment plant have sufficient capacity in the long term in the next stage of design
- The high-level assessment completed by Bloxam Burnett and Olliver on water, wastewater and stormwater should be reviewed to confirm assumptions for the site.
- Confirmation from Watercare regarding the capacity of the water supply for the proposed rezoning.