

15 February 2023

WE Ref: 2072

Hamilton Campground Ltd

s 9(2)(a)

PEACHGROVE MIXED-USE PRECINCT - THREE WATERS SERVICING SUMMARY

1 INTRODUCTION

Hamilton Campground Ltd proposes to develop approximately 2.7ha of land on the corner of Peachgrove and Ruakura Roads, Hamilton (refer to Figure 1 below) into 170 residential units, a 150-key hotel complex and various other commercial spaces using the COVID-19 fast-track consent process.

Wainui Environmental Ltd has prepared a three waters servicing summary to support the application for referral under the Covid-19 fast-track legislation. The memo specifically addresses:

- Site description and summary of the proposal;
- Three waters servicing;
- Summary of works required to achieve the proposal; and
- Whether there are any servicing reasons that would preclude the application from being considered for the fast-track consenting process.

2 SITE DESCRIPTION

The site is located at the south-eastern corner of the intersection of Peachgrove Road and Ruakura Road in Hamilton East. The development site encompasses the existing Hamilton City Holiday Park and the residential housing located off Emmerdale Lane, Joshua Lane and Peachgrove Road.

The site is fundamentally flat, with a slight grade from west to east. Site levels range from RL40.0m adjacent to Peachgrove Road, falling down to RL39.0m within the campground and eastern part of the site.

The site is a brownfields site. Existing surfaces within the campground comprise access roads, ablutions blocks and portable cabins. Asphalt caravan parking sites are located throughout. A large portion of the remaining campground area is made up of grassed tent sites. The dwellings located off Emmerdale Lane and Joshua Lane generally consist of compact town house type dwellings. The dwellings off Peachgrove Road are larger lot state housing, with generally large, vegetated lawn areas.

3 PROPOSED DEVELOPMENT

3.1 Proposal

Hamilton Campground Ltd proposes to develop the site into approximately 170 residential units, a 150 key hotel complex, a gym, and other commercial areas as shown on the DKO concept plans.

4 THREE WATERS MANAGEMENT

The proposed development site will require servicing for three waters infrastructure, including water supply, wastewater and stormwater.

Preliminary investigations into the required three waters engineering aspects for the site have been completed. In summary, the site is well positioned in an existing residential area and is well serviced with existing three waters infrastructure.

Overall, the effects of the development on the surrounding three waters infrastructure can be considered minimal and can be managed via onsite mitigation and/or minor infrastructure upgrades. Discussions with Hamilton City Council are on-going with respect to potential network upgrades.

4.1 STORMWATER MANAGEMENT

The site is serviced by existing stormwater reticulation, with several existing discharge points to the north and west of the site. Hamilton City Council has indicated the stormwater infrastructure to the north of the site within Ruakura and Te Aroha Streets is at capacity and cannot receive stormwater discharges from the developed site.

The stormwater management methodology for the development shall be developed in accordance with the Waikato Regional Infrastructure Technical Specifications (RITS) and the Waikato Regional Stormwater Management Guidelines to meet the discharge parameters for the site. The stormwater management philosophy for the site would also adhere to the principles of Te Ture Whaimana o Te Awa o Waikato (the Vision and Strategy for the Waikato River). As a brownfield site, the site falls within Hamilton City Council's existing network discharge consent for stormwater, and as part of the resource consenting process, the District Plan requires the preparation of a sub-catchment integrated catchment management plan.

- A Water Sensitive Urban Design philosophy will be used to develop the stormwater management design for the compact built environment proposed for the site.

Stormwater management devices within the site will comprise a toolbox of best-practise management measures to meet the discharge requirements and will likely include:

- Attenuation measures for peak flow control
- Soakage devices
- Raingardens for water quality treatment of roads and carparks etc.
- Catchpits and pipe reticulation (sized for the 10-year ARI event)
- Rainwater collection for reuse

The detailed engineering design of the development will include the design of all stormwater infrastructure within the development. Stormwater systems will be designed to allow for the effects of climate change.

Stormwater from the developed site is proposed to be discharged to a new pipeline within Peachgrove Road and then to an existing Ø1800mm trunk main that is located within Hamilton Boys High School. This new stormwater pipe will be designed for future development along the frontage of Peachgrove Road and to manage and potentially improve existing stormwater drainage in this area.

Overall, any effects of the proposed development on the city's stormwater network can be managed as part of the design process.

4.2 FLOODING

The eastern part of the site is affected by Hamilton City Council's Rapid Hazard Flooding Modelling (RHFM) for the 1%AEP (100-year ARI) event.

The mapped flooding affecting the eastern part of the site is shown as generally between 0.1-0.2m deep with a maximum depth of 0.46m in one isolated area near the eastern boundary. Velocities are all less than 0.50m/s.

Figure 1 below contains a screenshot of the subject site from the Hamilton City Council's RHFM map.



Figure 1: 100-year Flood Hazard Area (Source Hamilton City Council Flood Viewer)

The RHFM mapped on the site is considered low-risk.

Further detailed flood modelling has been undertaken of the site and surrounding catchment to determine the existing low-level flooding due to changes in catchment topography since the RHFM maps were issued in 2012. The modelling also looked at whether there was any future flood risk as a result of climate change, the proposed development and future development within the catchment. The detailed modelling confirmed that the site is not currently subject to flooding and that there is no future risk of flooding in the catchment due to the proposed development.

Wainui Environmental Ltd is in the process of verifying the detailed flood model with Hamilton City Council.

5 WASTEWATER

The existing site currently has two discharge points, one to the east and one to the west. All wastewater flows ultimately discharge to the Ø900mm eastern interceptor pipe on Argyle Street, approximately 500m from the site.

Initial modelling shows that there are existing issues within the wastewater network in the vicinity of the development, with overflows occurring during the modelled existing 'wet weather' design event.

Wainui Environmental Ltd are working with Hamilton City Council to determine the need for upgrades to the Council network or onsite wastewater flow management measures i.e. storage of wastewater with off-peak discharges to the wastewater network.

The internal wastewater network will be designed in accordance with the RITS.

Overall, any effects of the proposed development on the city wastewater network can be managed as part of the design process.

6 WATER SUPPLY

The site is surrounded by water infrastructure, including a Ø250mm trunk main within Ruakura Road, Ø63mm and Ø150mm water mains and a Ø620mm bulk main within Peachgrove Road extending along the site's frontage. The development will be serviced by the existing water network.

Preliminary water modelling has been undertaken and has confirmed that there is sufficient pressure and flow within the surrounding network to service the development. The modelling has identified existing high head losses within several pipes near the site, which are exacerbated slightly by the proposed development. The increased head losses do not reduce the level of service to any surrounding properties or to the subject site.

Detailed design will need to be undertaken to confirm that firefighting pressure and supply will be met within the multi-level buildings proposed within the site.

The internal water network will be designed in accordance with the RITS.

7 HAMILTON CITY COUNCIL CONSULTATION

Preliminary consultation has been undertaken with the Hamilton City Council Strategic Development Unit regarding the three waters servicing associated with the proposed development and constraints within the networks.

Refer attached correspondence.

8 CONCLUSION

An assessment of the three waters' infrastructure servicing has been undertaken for the proposed development. There is sufficient infrastructure surrounding the site to enable development of the site in accordance with the proposed master plan.

Where issues and effects have been identified in the surrounding network, these are not significant and can be adequately managed through subsequent design processes. We consider that, in terms of servicing the development, there are no reasons why the application cannot be considered for the fast-track consenting process.

We trust the above is to your satisfaction. Should you require any further information, please do not hesitate to contact the undersigned.

Yours faithfully

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From: John van Rooy s 9(2)(a)
Sent: Tuesday, 14 June 2022 3:40 pm
To: Tristan Jones
Cc: Kane Beadle; Deborah Mckillop; Mark Apeldoorn; James Oakley; Hayden Vink
Subject: 14 Ruakura Rd - Potential fast track development

Hi all

Following the meeting, with Kane Beadle & Tristan Jones (Jones development), James Oakley & Hayden Vink (Wainui Environmental) and Mark Appledorn (Stantec), as a catchup on the 3 waters and traffic engineering matters summarised below.

James reported the progress Wainui has made in the 3 waters modelling exercises and resulting discussion we have had.

We both agree that the current infrastructure with some engineering can accommodate the development. The developer, Jones Development is prepared to liaise with council to fund and facilitate any agreed and reasonable improvements to the 3 waters infrastructure to mitigate adverse effects.

Mark reported that the proposed roading layout did not pose an issue to the development proceeding. There were internal roading configurations that needed refinement.

There may need to be some refinements to the design of the two primary access points depending on the future adjacent road reconfigurations of Ruakura and Peachgrove Rds but council does not consider this an impediment to the development

Council pointed out of the need to refine the future design of the two access points as crossings

- Requiring undertake threshold treatments as traffic calming
- To make pedestrians and cyclists priority
- Relocating adjacent bus stops to improve future sight lines

Council has insisted that there shall be no additional access points to the development and that sufficient on-site manoeuvring can be achieved to allow vehicle to drive in and out without backing into the road traffic.

In light of the above we consider the proposal can be safely and adequately serviced by traffic infrastructure subject to detailed design and Council are generally supportive of the roading layout shown on the draft design plans and the three waters infrastructure.

In summary, I consider we can continue the liaison on the basis that this development as currently proposed can progress to the next stages.

Ngaa mihi



John van Rooy

Senior Development Engineer | City Development Unit

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