

TOLLEMACHE

CONSULTANTS LTD.

memo

To: Gary Noland - MADE
From: Tollemache Consultants
Date: 4 October 2021
Subject: **Sub-Catchment Integrated Catchment Management Plan in relation to a referral application for a fast track for Rotokauri North Stage 1.**

1.0 Introduction

1.1 We have been asked to provide a summary of the Sub-Catchment Integrated Catchment Management Plan ("ICMP") which has been prepared for Rotokauri North, as relevant to the Stage 1 area in relation to the application for a referral for a fast track under the COVID-19 Recovery (Fast-track Consenting) Act 2020.

2.0 ICMP

2.1 A ICMP has been prepared for the entire Rotokauri North area as part of the Plan Change 7 ("PC7") process

2.2 The primary purpose of this sub-catchment ICMP is to provide:

- (a) An integrated management approach based upon best practicable option(s) ("BPOs") to avoid as far as practicable and otherwise minimise, the cumulative adverse effects of all new stormwater activities in the sub-catchment; and
- (b) Guidance on how water, wastewater and stormwater within the catchment will be managed in an integrated way and in accordance with proposed land uses that occur within the site.

2.3 The ICMP is supported by a range of technical information including the following two key documents (relevant to three waters servicing) prepared by Bloxam Burnett and Oliver ("BBO"):

- (a) Attachment J Sub-Catchment ICMP Water and Wastewater System Report; and

(b) Attachment K Sub-Catchment ICMP Stormwater System Report.

- 2.4 The ICMP covers an area larger than PC7, as it has related to "catchment areas". As such, it includes an additional 63.5 hectares outside of the PC7 area. The majority of this land falls within the "Stage 2 area", as shown in the existing Rotokauri Structure Plan from the HCDP.

3.0 Water Supply

- 3.1 The PC7 land is currently not serviced by water infrastructure. As such, there is no viable connection to the HCC domestic water distribution for the development that is adjacent to the site boundary.
- 3.2 Therefore, a 450mm bulk main and 250mm trunk main will be extended from existing zoned land to the east.
- 3.3 This bulk main will extend through the site from the east boundary to the west boundary.
- 3.4 As relevant to the Stage 1 development area, this land will fall within the "Ohote Water Network", and all internal reticulation can be provided to connect to the bulk network as part of the development.

4.0 Wastewater Network

- 4.1 The PC7 land is not currently serviced by wastewater infrastructure. As such, there is no viable connection to the HCC domestic water distribution for the development that is adjacent to the site boundary.
- 4.2 Therefore, a 450mm bulk main will be extended from existing zoned land to the east.
- 4.3 This bulk main will extend through the site from the east boundary to the west boundary.
- 4.4 As relevant to the Stage 1 development area, this land will fall within the "Ohote WW" area which is proposed to be serviced via a new pumpstation. All internal reticulation can be provided to connect to the bulk network as part of the development.

5.0 Stormwater Management

- 5.1 The PC7 site has four separate catchments: Ohote Stream catchment (approx. 68ha), Te Otamanui Stream catchment (approx. 38ha), Mangaheka Stream catchment (approx. 19ha), and Rotokauri South Catchment (approx. 13ha).
- 5.2 The natural drainage system has been extensively modified by agriculture, leaving a network of drains in place of streams. This modified drainage network within the site includes a reach of the Ohote Stream and a reach of a tributary of the Te Otamanui Stream.
- 5.3 The Stage 1 development area falls within the Ohote Stream catchment area.

5.4 The proposed stormwater system for Rotokauri North endeavors to reestablish the existing water way in a manner that provides both stormwater management and environmental benefits.

5.5 The primary goals of the stormwater management system proposed include mitigation of downstream effects, flood control, treatment of stormwater runoff from developed areas, and safe conveyance of flow from upstream land. These works will also have benefits in being able to provide for the restoration of stream habitat.

Flood Control

5.6 Stormwater attenuation will be provided to control peak stormwater discharge releasing 80% of the existing condition flow post development while accounting for climate change.

Quality

5.7 Stormwater quality treatment wetlands will provide primary water quality treatment. Wetland swales from the stormwater network to the wetland and wetland swales from the wetland to the receiving environment will be utilised to create a treatment train, to the greatest extent possible.

Restoration

5.8 In addition to providing suitable corridors for stormwater management, a "Green Spine" corridor through the development is proposed to allow room to reestablish the Ohote Stream tributary, with reasonable sinuosity and simulated natural geomorphology. The reestablished stream will be designed to function as natural streams with floodplains containing wetland and riparian habitat areas.

6.0 Conclusion

6.1 Based on the direction for bulk mains and stormwater solutions contained in the ICMP, the Stage 1 land can be adequately serviced with water supply, stormwater and wastewater management solutions.