



INFRASTRUCTURE ASSESSMENT REPORT

**Bridesdale Subdivision zone extension
For Bridesdale Farm Developments Ltd
May 2018**



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REGISTERED LAND SURVEYORS, LAND DEVELOPMENT & PLANNING CONSULTANTS

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1.0 INTRODUCTION

Clark Fortune McDonald & Associates (CFM) has been engaged by Bridesdale Farm Developments Ltd to assess infrastructure options for a proposed subdivision zone extension on land located off Hayes Creek Road, in the Bridesdale residential development.

The proposal seeks to develop the land into medium density residential activities.

The site is legally described as Lot 406 D.P.505513. The total site area comprises 1.1140Ha and is contained in CT 763196

The site has frontage to Hayes Creek Road.

This report is preliminary only. Further information and detailed engineering design will be required as development proceeds.

The report considers infrastructure demands based on the proposed medium density residential activities.

2.0 SCOPE OF WORK

The scope of work includes examination of existing QLDC as-built records, confirmation of capacity of existing services to determine the adequacy of the existing infrastructure, and recommendation of infrastructure servicing options.

3.0 DESIGN STANDARDS

Site development standards include, but are not limited to, the following:

- NZS4404:2004, Land Development and Subdivision Engineering, incorporating the QLDC amendments dated 20 September 2005.
- NZS4404:2010
- Drinking-Water Standards for New Zealand 2005.
- NZS PAS 4509:2008, New Zealand Fire Service Fire-fighting Water Supplies Code of Practice.
- Water for Otago, Otago Regional Council regional water plan.
- Document for New Zealand Building Code Surface Water - Clause E1 / Verification Method 1.

4.0 WASTEWATER

4.1 Existing infrastructure

QLDC as-built records show that 63mm diameter pressure pipework is present in Hays Creek Road. The existing reticulation connects to a Pump Station in Hayes Creek Road. This Pump Station discharges to a 110mm uPVC rising main to the QLDC gravity reticulated system in Red Cottage Drive.

4.2 Proposed connection

All of the development lots would require on site pumping to connect to the existing infrastructure in Hayes Creek Road.

Any potential effects on the greater infrastructure including the pump stations, rising mains and treatment will be mitigated by the imposition of headworks fees at the time of connection to Council's service.

5.0 STORMWATER

The development of the site area will increase stormwater runoff.

5.1 Existing infrastructure

QLDC as-built records show that 450mm diameter gravity pipework is present in Hayes Creek Road.

5.2 Disposal options

All of the development lots would be able to reticulate by gravity to the existing QLDC network. A new stormwater line will need to be installed from the southern lower end of the lots to connect to the QLDC system.

We note that currently there are no headworks fees required in the Lake Hayes Catchment under Council's current headwork's policy.

6.0 WATER RETICULATION

6.1 Existing Infrastructure

These parts of the development are within the Lake Hayes water supply catchment boundaries and would be serviced by Council infrastructure. There is existing 125mm watermains in Hayes Creek Road fronting the proposed development area.

The water supply to the Lake Hayes area is currently provided from the North Lake Hayes intake. The area is part of the Lake Hayes Water Supply Pressure Zone that is fed from the Bendemeer Reservoir.

A new water supply has been constructed at the neighbouring Shotover Country Development. A new bore field is located adjacent the Shotover River which pumps to a 1,000m³ reservoir at Shotover Country. This scheme is connected with Lake Hayes and it appears likely that this network will be further upgraded to provide service to the Lake Hayes Estate area.

The minimal effects on the greater infrastructure including the existing watermains, pump stations, storage reservoirs and treatment will be mitigated in part by the imposition of headworks fees at the time of connection to Council's service.

7.0 POWER, TELECOMMUNICATIONS AND GAS

Trunk Power and Telecommunications mains run adjacent the site underground in Hayes Creek Road.

It is not anticipated that there will be any supply or capacity issues for these services and connection will be made available from existing infrastructure at the time of development in accordance with the relevant service providers specifications.

8.0 CONCLUSION

Wastewater, stormwater and water infrastructure is available to service the development in Hayes Creek Road. It is likely that a new stormwater line will need to be constructed to connect to this existing infrastructure. The capacity of existing QLDC infrastructure is not subject to this report.

Telecommunications and electrical services are available to the site to cater for the proposed activities.

