

Seadown Water Scheme

SEADOWN SCHEME

History

The current water scheme was developed in 1974 by Levels County Council. It was originally an open race, later converted to pipes. Water is supplied to unrestricted tanks or troughs. Since the 90's new connections are to restricted tanks that feed private troughs.

Main user groups



Domestic water users (lifestyle blocks)



Sheep, beef and dairy users (stock water)

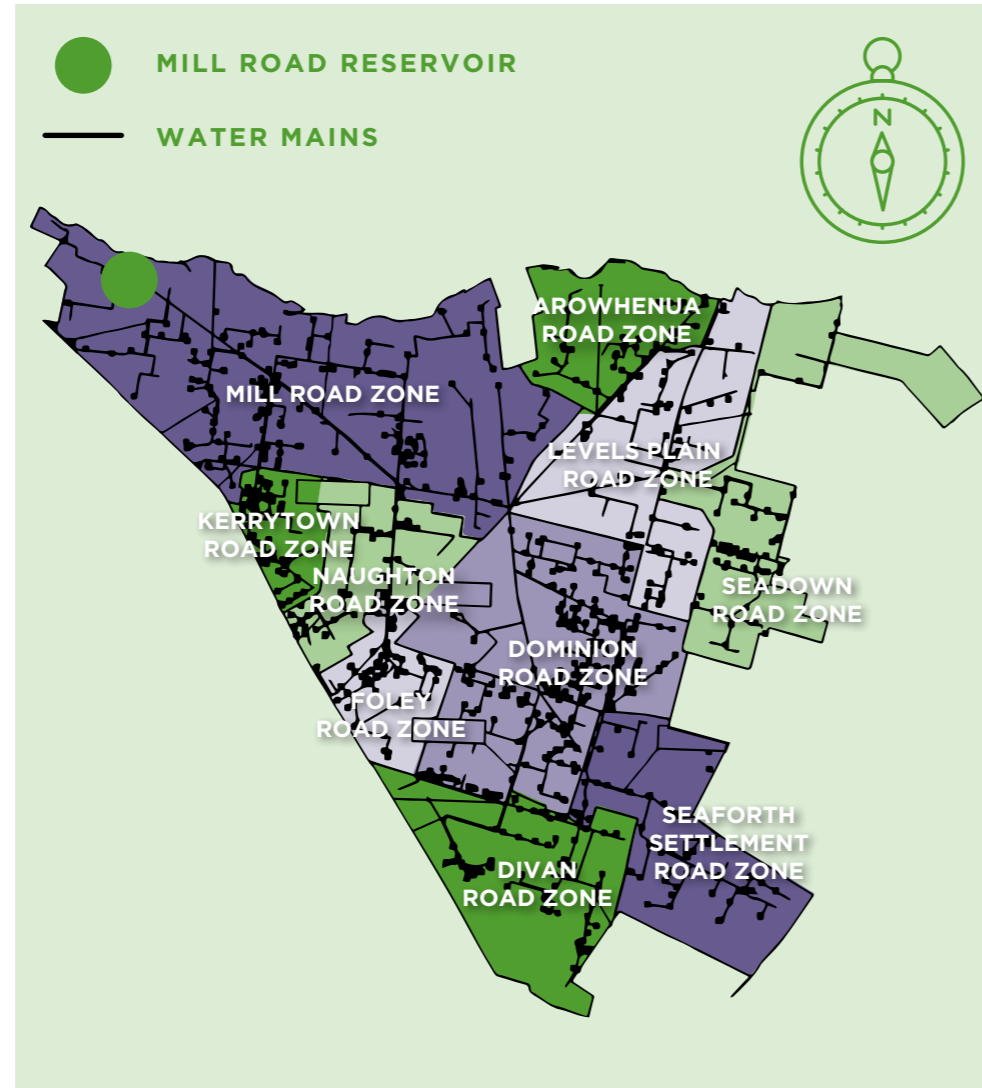


Other users (e.g. cropping, Airport, Ravensdown, Speedway)

Scheme at a glance

- 5226 hectares scheme area
- 452 rateable properties on the scheme
- 612 troughs (63 % of total connections)
- 223 unrestricted tanks (23% of total connections)
- 133 restricted tanks (14% of total connections)
- \$28.80 per hectare (area)
- \$713 per domestic - all inc. GST 2021/22

MAP OF SCHEME BOUNDARIES



CURRENT PROBLEMS WITH THE SCHEME

- 1 Water demand**
Water demand often exceeds the capacity of the scheme, delivering poor pressure and flow to some consumers.
 - A spiky demand profile due to unrestricted consumption and non-compliant connections which is causing pressure level of service issues.
 - High demand in some areas, leading to the local network being undersized.
 - High headloss in some zones during peak day demand - leads to very low pressures in these areas.
- 2 Access to raw water**
High peak demand and projected growth, increases the risk of water restrictions and the scheme breaching consent conditions.
 - Peak flow is at times above consented maximum of 21 l/s.
 - Forecast growth (10%) will see the scheme exceed the consented water take.
 - ECAN is unlikely to approve an increase in water take.
 - Impacts of climate change will continue to affect demand and availability (hotter weather, less rain).
 - Increasing government direction around water (Te Mana o te Wai, National Policy Statement on Freshwater, Essential Freshwater Reforms, ECAN Plan Change 7).
- 3 Public health**
A lack of backflow protection, especially at stock water consumption points, increases the risk of scheme contamination.
 - There is little to protect against a backflow event which could contaminate the scheme (both from new and existing connections).
 - Increasing government direction around public health through the new regulator (Taumata Arowai).
- 4 Aging assets**
Leakage and failures caused by aging assets increase water losses and consumer supply interruptions.
 - Ageing infrastructure is reaching the end of its useful life.
 - Inefficient use of water due to connections failing and pipes leaking.
 - High unaccounted water losses in some areas.
 - Levels of service impacts and interrupted supply.

OUTCOMES

We want to improve and future-proof the scheme so it is:



Safe



Reliable



Efficient



Resilient



Sustainable

INDICATIVE OPTIONS FOR IMPROVEMENT

A range of solutions have been assessed that would mitigate the current issues identified with the network. These are indicative at present and no final decisions have been made. These options include:

- Infrastructure upgrades / renewals.
- Demand management through restricting the supply to currently unrestricted tanks and troughs and / or connecting the troughs to tanks.
- Using restricted tanks to feed troughs, smoothing out peak flows.
- Consideration of additional storage and pipe network improvements to improve resilience.
- Leakage management.

THE OPTIONS

A range of options to improve the scheme have been analysed as part of a detailed technical assessment (this will be made available online). The two preferred options are outlined below.



OPTION 1A Targeted network improvements

Option 1A targets existing network performance issues, through upgrades, restrictions to existing connections and other improvements.

18 km length of network main to be upgraded // Additional 12 km length of small mains to connect restricted tanks to troughs // 40 restricted tanks // Treated water storage close to current reservoir (two days storage 2640 m3) // Solar powered pump system

Estimated cost - \$6.5 - \$7.1M



OPTION 3A Comprehensive network improvements

Option 3A includes the improvements in 1A and considers the restricting of all unrestricted tanks and connecting all troughs to tanks. Troughs with the same owner will be supplied from a common tank.

5.4 km of network main to be upgraded // 30 km of small mains to connect new tanks to network // Additional 163 km of small mains to connect restricted tanks to troughs (via existing or new tanks) // Treated water storage (one day's storage 1300 m3)

Estimated Cost - \$17.7 - \$25.8M

WHAT ARE WE DOING ABOUT IT?

We are working through a process to determine what the best way forwards is regarding the Seadown Water Scheme - the input of scheme users is important to help shape the final recommendation to Council.

START

Technical assessment of the scheme

Undertaken in October 2020 by engineering firm WSP - identified issues and options.



INFORM

Letter sent to all scheme users

Why you're here today.



COLLABORATE

Workshops

To discuss the issues and options, and understand what users of the scheme think.



CONSULT

Online information and user survey (timaru.govt.nz) (we are here now)

Following these workshops we will summarise the issues and opportunities and develop a bank of information on the TDC website. We'll also put together a survey for scheme users to help guide our decisionmaking.



INFORM

What have we found out?

Following the survey we will outline what we've found out, what scheme users think and the preferred way forward.

The solution

There is no preferred solution at this stage - this is why we need your help.