Information Sheet

Memorial Park Water Treatment Plant

New Water Abstraction Bore

What is the project purpose?

Wellington Water, on behalf of South Wairarapa District Council (SWDC), is upgrading the water treatment facilities at Soldiers' Memorial Park on Kuratāwhiti Street to increase the resilience of the Greytown Kuratāwhiti drinking water supply.

Why an upgrade is required and what's involved

The current bore and treatment facilities exclusively supply 100% of the Greytown Kuratāwhiti drinking water needs. The current bore still meets demand, however:

- the current pump and treatment facilities are ageing and in need of replacement; and
- we cannot switch off the existing pump and treatment facilities to allow maintenance to take place without compromising water supply.

The treatment plant upgrade consists of two elements:

- Installing a new bore to ensure continuity of water supply in the long term.
- Installing the new water treatment plant (a containerised system), which involves connecting the plant to the bore and the wider drinking water network.

We are currently in the process of applying for reserve management consent for the new bore, the treatment plant was consented via an engagement process during April and May 2021.

Benefits

- Ongoing supply of safe, healthy drinking water to the Greytown Kuratāwhiti community.
- Ensure compliance with current national water standards required by Taumata Arowai, New Zealand's water regulator
- Increased resilience: the new bore will enable Wellington Water to carry out maintenance with minimal impact to the Greytown Kuratāwhiti community.

When is this happening?

Construction will be commencing in mid-2023 and is programmed to be completed before the swimming pool is due to reopen in November.

What can I help with?

We are engaging with the local community and mana whenua to seek to understand any issues and concerns you may have regarding the project so we can put in place, where possible, processes to mitigate these concerns during construction. Please email Cristo, our Project Manager (Cristo.Umanzor@ghd.com) by 31 March 2023 with any comments/queries you may have.

Wellington Water

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Our water, our future.

Project Detail

Where is the existing bore located?

The preferred location for the new bore is inside the Greytown Kuratāwhiti swimming pool complex on the grassed area beside the toddler pool. It is shown in the white outlined box in Figure 2.

Which locations were considered for the new bore?

Five locations (shown in Figure 1) were assessed and discussed at length with SWDC as part of the design process:

1. Location 1, immediately next to the bore. This was ruled out because it had the potential to interfere with the current bore during drilling, risking impacting the water quality for users during construction.
2. Location 2, 50m from the existing bore along the southern edge of Memorial Park.
3. Location 3, ~170m from the existing bore in the western corner of Memorial Park.
4. Location 4, ~140m the from the existing bore in the eastern corner of Memorial Park.
5. **Location 5, ~70m from the existing bore in the swimming pool complex. (preferred option)**

Locations 2-4 were ruled out due to the potential impact to operation of the sports field and the proximity to the notable trees bordering the grassed area.

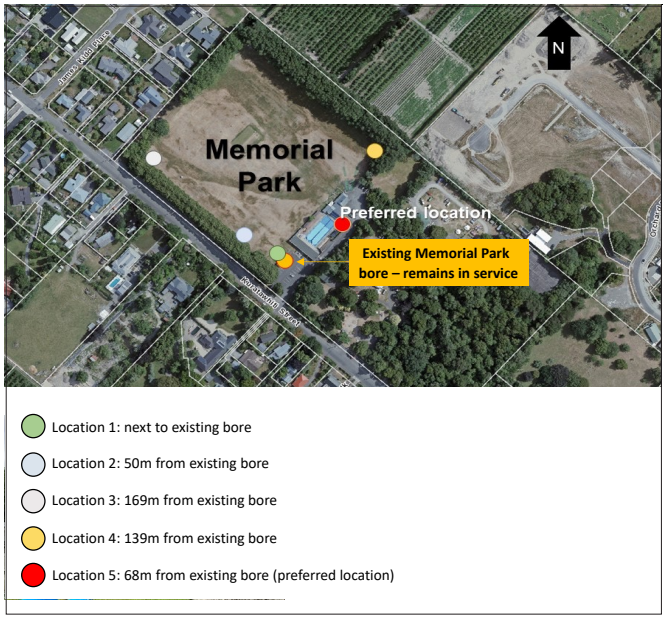

Figure 1: Bore Locations considered

Where is the preferred location for the new bore?

The preferred location for the new bore is inside the Greytown swimming pool complex on the grassed area beside the toddler pool. It is shown in the white outlined box in Figure 2.

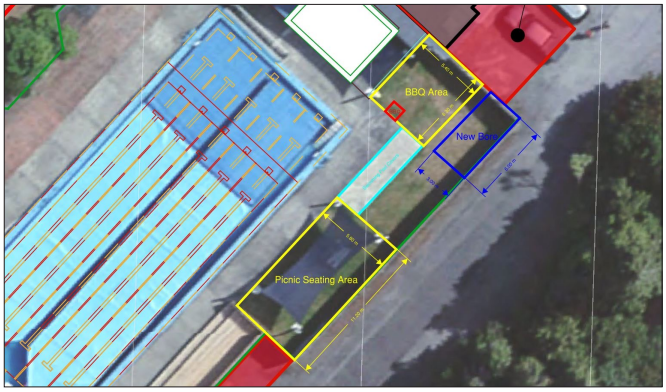

Figure 2: Preferred Bore Location

How much impact will this have on the swimming pool complex?

As construction will not start until after the completion of the busy summer swimming period, and are programmed to be completed before the start of the 2024 summer season. We anticipate that the impact on day-to-day pool operations will be minimal. The bore and associated above ground pipework will take up a space approximately 3m wide by 6m long. This area will be fully fenced off from the swimming pool, so you will not be able to see or access the bore from the pool complex.

The shaded grassed seating and BBQ area will continue to be fully accessible from the pool complex.

What other impacts can we expect during construction?

Access to the swimming pool car park will be restricted to the construction team to ensure we keep residents safe. There will be limited vehicle access to the clubrooms, which will be arranged with local user groups as needed.

There will be some construction noise during working hours (7 am – 6 pm) and traffic management on Kuratāwhiti Street at times to enable movement of vehicles into and out of the construction site with deliveries.

Project timing

March 2023 – Engagement with Mana Whenua, park user representative groups and others

April 2023 – Compile feedback to inform construction methodology

Mid-2023 – Construction begins

We anticipate that construction will commence in April/May 2023 with the consented treatment plant and the bore installed mid-2023. Works are expected to be completed by late 2023. This includes a period of time when the treatment plant operations will be tested to ensure they work as designed before the plant is handed to Wellington Water to operate.

Iwi and Community Engagement

Drilling a new bore requires consent under the Reserves Management Plan. To inform this process we are seeking feedback from those with an interest in Memorial Park on the bore, so we can look for ways to mitigate any concerns through engagement and/or construction methodology.

The proposal outlined in this information sheet has been developed with collaboration with Wellington Water and SWDC, while taking into account the current consent requirements for the treatment plant.

Wellington Water has began engaging with the local community about this project. This engagement includes:

- Engagement with Ngāti Kahungunu ki Wairarapa and Rangitāne o Wairarapa.
- Presentation to the Greytown Community Board, which took place on 28 February.
- Meeting with the Māori Standing Committee (14 March).
- Engaging directly with park stakeholder groups (i.e. swimming pool operations, cricket club, camp ground etc.).
- Engaging with all park user groups through email correspondence.

What do we want to achieve from this engagement?

The purpose of this engagement is to seek feedback to inform final construction methodology, and understand any issues and concerns so we can put in place, where possible, processes to mitigate these concerns.

Background Information

Ongoing access to Memorial Park clubrooms

During normal operation of the new water treatment plant and bore, no issues regarding driveway access are expected. There will be some minor disruption when chemical deliveries occur (likely to be approximately once a month) when the delivery truck will need to park in front of the treatment container. This is expected to be for no more than about an hour each time.

Location of treatment plant will minimise disruption

The location of the containerised plant and borehole (off the pavilion driveway in the alcove area, shown in Figure 3 below) was specifically chosen to minimise public disruption. Wellington Water staff may, at times, need to park their vehicles near the plant, but given its location, public access to the clubrooms and parking will not be impacted.

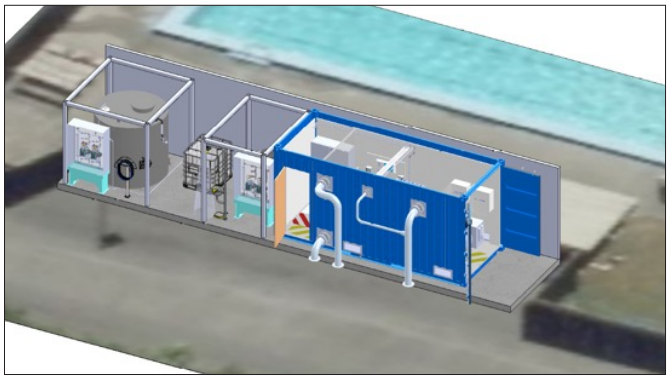

Figure 3: Schematic of the Memorial Park Water Treatment Location in relation to the pool and current driveway

Existing bore details

The current Memorial Park bore is 11 m deep and draws water in from between 9 to 11 m below ground level. The aquifer at this location is shallow and unconfined. In Greytown Kuratāwhiti, bores (which want to be installed above the base of the aquifer to ensure they can produce the yield necessary) are typically less than 15m deep, though deeper aquifers are likely present 5km to the east, near Parkvale. The underlying strata below Greytown Kuratāwhiti has not proved to be particularly productive for the most part, which creates a risk that if we drill to deeper depths, the bore will not provide the yield required to supply the network.

The current bore was pump tested in the early 2000s and showed the aquifer was very permeable with rates up to 46 L/s achieved. The Memorial Park bore is consented to abstract a maximum of 60 L/s (to a maximum daily volume dependent on the time of year), which meets the 30 L/s at peak demand for Greytown Kuratāwhiti.

Proposed bore details

The proposed bore is intended to be slightly deeper than the current bore and screened below 10 m to offer some additional protection from contaminants.

Risk of contamination in shallow bores

Shallow bores tend to be more at risk from contamination emanating from the land surface, as such Taumata Arowai (water services regulator) has put in place regulations for these types of bores which include:

- standard of treatment;
- assessing risks in the source water and mitigating them to acceptable levels when identified;
- monitoring water quality at source and within the network;
- contingency/emergency plans; and
- improvement schedules to drive continuous improvement in the network.

The Memorial Park treatment plant, and the bore which feeds the plant, have been designed to meet these requirements and ensure safe water supply for the town.

Possibility of contamination of the bore from the pool

The upgraded bore and plant will increase the level of treatment the water receives, so the risk of contamination from the nearby swimming pool is considered low. This will ensure water supplied to the Greytown Kuratāwhiti community remains healthy, and safe to drink.

Hydrogeology

Most bores near Greytown Kuratāwhiti have been installed into the highly permeable Holocene aged[1] gravel (Q1 in Figure 4 below). This gravel is fed from rainfall and water lost from the Waiohine River and provides the flow for the Papawai - Tilsons springs downgradient. Few wells have been installed into the deeper gravels (Q2 to Q5+), which suggests they are less productive than the Holocene gravels. The existing geological mapping available for Greytown Kuratāwhiti does not show any faults within the vicinity of the town.

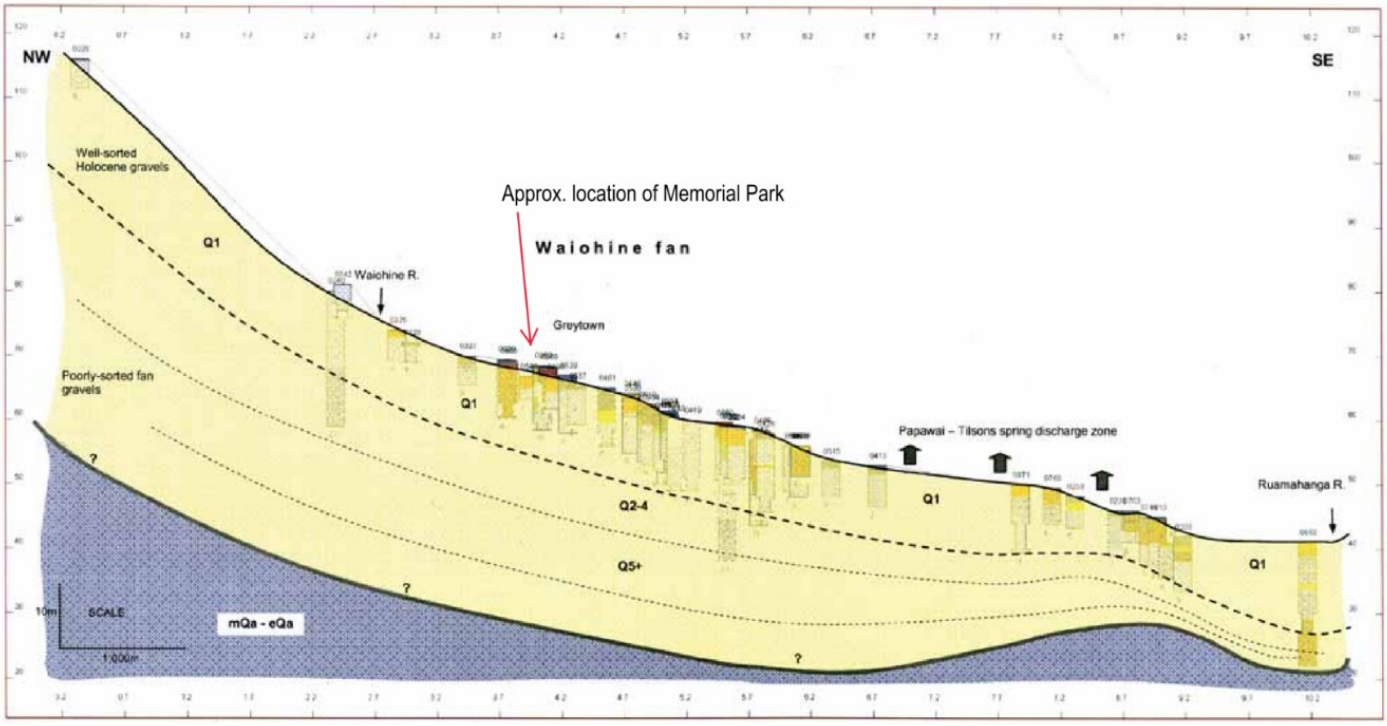

Figure 4: Greytown-Waiohine geological cross section showing fault lines and aquifer (source: Gyopari and McAlister (2010), Wairarapa Valley groundwater resource investigation: Middle Valley catchment hydrogeology and modelling. Greater Wellington Regional Council, Technical Publication No GW/EMI-T-10/73)

[1] Holocene is the current geological epoch, spanning from approximately 12,000 years ago to present day.

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