

Hornby Community Centre Summary Report - groundwater assessment



Introduction and objectives

Tonkin & Taylor Ltd (T+T) has completed a groundwater assessment on behalf of Christchurch City Council at the site of the proposed Hornby Community Centre at Kyle Park in Hornby. The Hornby Community Centre will be located on part of a former landfill which operated from the 1960s to the early 1980s.

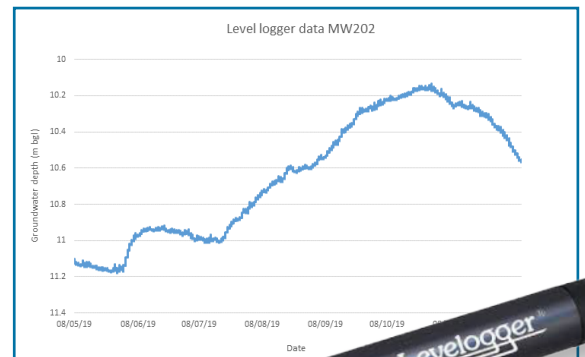
The purpose of the groundwater assessment was to identify if the proposed development of the Hornby Community Centre was likely to result in the contamination of groundwater beneath the site, in particular due to construction earthworks and the installation of piles through landfill material for building foundations.

In April 2020, T+T prepared a report for Council entitled *Groundwater quality assessment, proposed Hornby Community Centre, Christchurch (T+T ref 1003207.7000)*. This summary report presents an overview of the key aspects of the April 2020 report.

Assessment + Methodology

The T+T groundwater assessment comprised:

- The collection and analysis of groundwater samples from beneath the site to assess the current groundwater quality;
- Monitoring of groundwater levels beneath the site between April and December 2019 to understand how groundwater interacts with the landfill material; and
- An assessment of the potential for development activities including piling, earthworks and the placement of sealed areas, to affect groundwater quality beneath the site.



Findings

In summary, the T+T assessment found that the development of the site is unlikely to have a significant long-term effect on groundwater quality beneath the site. This is because:

- The development is likely to reduce the amount of rainfall infiltrating through the landfill material due to the placement of buildings and sealed surfaces (footpaths, car park). The development is therefore likely to reduce the potential for

contaminants to be 'leached' from the landfill waste into groundwater.

- There is no barrier between the landfill waste and groundwater and so piling will not puncture any protective layer currently present between the waste and groundwater.
- There is only a small likelihood of waste being pushed into groundwater during piling as the likely piling method causes minimal ground disturbance.

