OIR: 2223/503

5 April 2023

[redacted]

[redacted]

[redacted]

Request for Information under the Local Government and Official Information and Meetings Act 1987 (the Act) (the LGOIMA)

Thank you for your email of 23 March 2023 requesting the following information:

It has come to our attention through a letter drop that the KCDC is planning on erecting an approx. 7.6M litre water reservoir to the rear of [redacted] Speranza Ave. [redacted] As this will be a significant structure beside a residentially zoned area it seems bazaar that the KCDC are planning this without any consultation with the affected residents, i.e. non notified.

Council have been exploring the development of a reservoir to ensure that the water supply system for Ōtaki is resilient. The reservoir will have the following dimensions:

5.5 million litres (5,500m^3)	= volume of the reservoir
35 metres	= diameter of the reservoir
6 metres	= depth of water in the reservoir
7 metres	= height of the reservoir
53 metres	= maximum height of the reservoir above sea level
267	= the number of native trees that will be planted around the reservoir
100 years	= reservoir design life (length of time the reservoir can be used with maintenance but without major repair being needed)
2,500 years	= reservoir designed to withstand an earthquake of this frequency (making it the strongest structure in the area)
4 kilometres	= length of pipes to be installed to carry water from the County Road pump station to the reservoir, and back to the pump station
$6 million	= estimated cost of reservoir (TBC when tenders are received)

A community information session on the reservoir was held at the Waitohu School Hall, Te Manuao Road from 4pm to 6pm on Tuesday 4 April 2023.

1. What is the reasoning for the non-notification?

The development of the reservoir is a permitted activity and does not require a resource consent if it meets the permitted activity standards for buildings and structures in the rural lifestyle zone. The development of the site will include earthworks and landscaping to minimise the visual impact.

We observed the drilling carried out for this project, at the proposed site, but did not observe any other testing. I assume various sites, both within the current subdivision and elsewhere in the district would have been tested. We would like to know where the testing sites were carried out, whether they are within the current subdivision area or elsewhere in the district and the reasoning behind choosing this particular site for the reservoir.

2. Can you supply this information please?

Three sites in the immediate vicinity (on the same parcel of land) have been considered. One has been discounted as it is too high up the hill. The second site was not suitable because the land was too steep and immediately adjacent to a wetland. The third location is the current site, lot 18.

This site was chosen as it was away from identified hazard zones, i.e. flooding and seismic, and for technical reasons relating to the ability to pump to the reservoir, with ready access to the existing water supply network.

We believe there are more practical areas for this reservoir within the current subdivision area, i.e. section 14 directly east of the proposed site that would less intrusive and could allow bunding in the case of a catastrophic event that would allow water to fall into the dam area below it rather than directly into the adjoining properties,

3. On the matter of failure what design features are included in the design, eg. baffles, etc that in a failure event, i.e. earthquake, other, the safety of adjoining properties below the reservoir are guaranteed?

The reservoir is designed as an IL4 structure in accordance with NZS 1170; as the reservoir has a special post-disaster function of storing safe drinking water.

<u>The design features to address seismic loadings are:</u>

- Under hydrostatic loading, the tank acts primarily in hoop stress and by out-of-plane bending of the wall panels, particularly at continuous floor and roof slab connections
- Tank is designed to not be ‘locked-in’ to the ground for the derivation of seismic loading
- The roof slab acts as diaphragm to transfer loads to walls
- Walls are designed to be pinned top and bottom
- Walls are designed to transfer the majority of the seismic shear loading to the floor (walls also act out of plane under water and soil loading
- Wall to floor connection designed for large in-plane shears
- Floor is designed as diaphragm to take out seismic load in a combination of base friction and bearing to perimeter ring beam.

4. ***Can you also please inform us of the proposed piping route from this structure to the Otaki water system?***

The reservoir will be fed from the County Road Pump Station through a new pipe along the existing water supply route up Te Manuao Road, then by easement across the rural lifestyle property direct to the reservoir. The return pipe to the water supply network will follow this line as well.

Council officers would welcome the opportunity to visit and discuss the development of the reservoir. You can expect Peter Bollman, Project Manager - Ōtaki Growth Infrastructure, to contact you in due course. Alternatively you may wish to contact Peter on mobile: 0272007440 or by email at peter.bollmann@kapiticoast.govt.nz.

Ngā mihi

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