



1 Countdown Waiheke. 2 Irrigation and Supermarket. 3 Initial Site Works. 4 Septic Tank Pit.

COUNTDOWN WAIHEKE - WORKING WITHIN THE ISLAND ENVIRONMENT

Riley for Progressive Enterprises Ltd

Project Location: Waiheke Island, Auckland



There are few places in New Zealand that present the challenges of planning, designing, constructing, and operating a large-scale commercial development in a sensitive environment; one of these being Waiheke Island. Progressive Enterprises Ltd (Progressive) aimed to establish a standard mainland-size Countdown supermarket without compromise of configuration and facilities where there were no available municipal reticulated services for water and wastewater. Progressive engaged ASC Architects Ltd, Riley Consultants Ltd (RILEY) (civil and geotechnical engineers), WSP Ltd, Jawa Structural Ltd, Watts and Hughes Ltd (contractor), EarthTec Projects Ltd (civil sub-contractor), and Innoflow Technologies Ltd (specialist water and wastewater sub contractor) to assist with the project.

The result of this collaboration is:

- the new supermarket with an area of 3,325m² the first of this scale on Waiheke Island;
- the development incorporates seven retail tenancies;
- the largest commercial development on the island not supported by municipal reticulated services, and the largest to be serviced by an on-site wastewater system; and
- the first large-format supermarket developed by Progressive to be reliant on on-site systems for water supply and wastewater servicing.

The RILEY unified approach of comprehensive investigation and modelling of all three waters (supply, wastewater, stormwater) resulted in an elegant solution. The non-reticulated site required specialist investigation and design of on-site systems. The space required for water supply (from rain harvesting and on-site bore) and wastewater treatment imposed significant constraints on available space compared to conventional municipally reticulated sites. RILEY created complex water usage models to confirm suitable supply and optimise inground storage for tanks located under the car park and main building.

Rainwater is collected and potable water demand is reduced through the use of recycling wastewater from the on-site treatment system. Several measures ensure the protection of the downstream wetland area and marine wetland area. These include installation of a treatment plant; ensuring the discharge field's soakage capacity is maintained through its construction; appropriate top soiling and planting to maximise evapotranspiration; maximising the separation of the discharge area from the wetlands; and providing a buffer region. The supermarket is designed to fit within the unique Waiheke Island environment and is one of Countdown's most sustainable stores. Progressive and the community are pleased with the final supermarket layout.

Judging & Copyright Statement

This project is an entrant in the 2018 INNOVATE NZ Awards of Excellence competition. The winners will be celebrated at our Awards Gala Dinner on Friday, 3rd August 2018 in Hamilton.

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