Promax
LIQUID MANAGEMENT SOLUTIONS

The lowdown on high groundwater and underground tanks

Who: Barrett Homes

Where: Tauranga, Bay of Plenty

Products: 54 x 2,500 litre underground tanks with hydraulic uplift restraint anchors.

Why: When Barrett Homes built 18 homes in a Tauranga subdivision, they needed to install tanks to go with them. High demand on the local stormwater system made these tanks necessary, but in the limited space available, it was apparent they'd have to go underground. That would usually be easy to achieve, but there was another issue to contend with: high groundwater. Knowing our reputation for manufacturing the strongest underground tanks in New Zealand and our innovation in keeping those tanks anchored, Barrett Homes came to Promax for not one but two solutions.

What: Promax helped Barrett Homes design a tank system to work within a very tight footprint. There was little space between the piles of the homes, but our compact 2,000 litre underground tanks with 1.2 metre diameter were the perfect fit. Each Promax underground tank is engineered by geotechnical experts and Finite Element Analysis tested (FEA). We knew they'd be able to withstand ground and water pressure at depth, but we also needed to keep them in place.

Thanks to the Promax uplift anchor system, we also found the resolution to that curly question. Where there is high groundwater (as there was in this case), the uplift restraints overcome the natural buoyancy of tanks, anchoring them safely. It's a simple but highly effective idea: straps are looped over the top of the tank and attached to restraint boxes on either side. The boxes are then set into concrete to ensure the tank remains stable, even on sites with high groundwater or flood-prone areas.

Our collaboration with Barrett Homes is yet another example of Promax tanks and accessories working together to achieve the very best outcomes for our clients. Our underground approach enabled the houses to proceed quickly through the council approvals process, and nothing makes a customer happier than blasting through red tape!