

TERRA FIRMA RESOURCES - LAKE PUKETIRINI DEVELOPMENT - WATER IMPACT ASSESSMENT SUMMARY

Site Characteristics

- The development site comprises a modified agricultural environment with limited natural values. There are no specific characteristics of the subject site which are considered to prevent or restrict provision of 3 waters servicing for the proposed residential development activities.
- Existing water quality values associated with the adjacent Lake Puketirini receiving environment are acknowledged and the detailed 3 waters engineering design can be configured to prevent any adverse effects within the lake receiving environment.

Stormwater Disposal

- Site geology is considered unlikely to be appropriate for stormwater disposal to land/ground soakage.
- Stormwater disposal from the main Rotowaro Block residential development area (19Ha) can be captured within a piped reticulation network and conveyed to 2 x's constructed stormwater treatment wetlands prior to discharge to Lake Puketirini. Additional at-source treatment measures (rain gardens) can be incorporated within the site roading network if determined to be necessary. These measures are considered appropriate and in-line with best practice stormwater management methods to avoid any adverse water quality effects within Lake Puketirini. Furthermore, stormwater discharges would be subject to specific discharge consent approval under the Waikato Regional Plan at the time of development.
- The Weavers Crossing rural residential development block (2Ha) presents a reduced potential for adverse stormwater effects based upon a significantly reduced development catchment area and reduced development densities. Stormwater management within this area is expected to utilise typical private, on-site stormwater management measures for this type of development including provision of a treatment swale device for accessway runoff and onsite rainwater attenuation/re-use systems (tanks) for lot development surfaces.

Water Supply

- The development site intends to establish water supply connection via extension of the existing WDC Huntly municipal supply network which currently extends to the western outskirts of Huntly in proximity to the site. Multiple existing water supply lines are identified which extend in proximity to the development site including along the boundary of the Weavers Crossing Block.
- Initial consultation with Watercare Services Ltd did not identify any concerns or constraints in regard to connection to the existing water supply network. However, further investigations will be required to determine an appropriate water supply connection point for the development and any potential network capacity restrictions.

Wastewater

- The Rotowaro Block residential development site intends to establish wastewater connection via extension of the existing WDC municipal supply network which currently extends to the western outskirts of Huntly in proximity to the site. Installation of a centralised wastewater pump station is anticipated to convey wastewater from the site up to the existing gravity flow reticulation network. Further investigations will be required to determine an appropriate wastewater connection point for the development and any potential network capacity restrictions and associated upgrades.
- There is no municipal wastewater connection in proximity to the Weavers Crossing Block which presents a feasible option for extension/connection to this area and hence wastewater treatment/disposal for the proposed Village Zone development lots will be required to implement on-site treatment/disposal methods as is common for this type of development and in place for the adjacent/existing large lot development sites.

Conclusion

- Overall, the subject site is considered to present feasible opportunities for 3 waters servicing to enable the planned residential development activities. These matters will be subject to further investigations and refinement as part of the subdivision engineering detailed design processes.