

## WHAREROA NORTH - PRIVATE PLAN CHANGE THE TRUSTEES OF HAUHUNGAROA #6 Infrastructure efficiency - potential costs to the community

### 1) Introduction

This report addresses the issue raised in the further information request from Taupo District Council (TDC) dated 15th February 2018 regarding the potential costs to the community arising from the creation of additional residential land at Whareroa and in particular the cost and efficiency of infrastructure for servicing this expansion of Whareroa which would be enabled by the proposed plan change.

It is important to recognise that an eventual expansion of Whareroa across the stream to the north has been part of the thinking since the first residential lot was created at Whareroa over 40 years ago and all the necessary infrastructure (roading, wastewater, water supply and utilities) has been led to this proposed crossing point and sized accordingly.

As can be seen from the TDC Mapi extract below, even the legal road reserve has been created to allow the future extension of Whareroa Road across the stream.



### 2) Roading

The development of Whareroa is unique in Taupo District due to the fact that the settlement has been created and expanded over the decades by one developer, Hauhungaroa #6. This Trust has a genuine desire to create a quality residential area.

“unlocking the answers”

To establish the first stage of the village 40 years ago, the Trust funded and constructed roading access to the development from SH32 via Kuratau Hydro Road. This involves 9km of roading which exists almost exclusively to serve Whareroa and it was anticipated that this would serve Whareroa North in the fullness of time.

There is an argument that the creation of extra lots enabled by this proposed plan change would mean that this 9km of access roading would be better utilised. But more importantly it must also be recognised that the roading network serving the Taupo District (and New Zealand generally) has sections which are highly trafficked and other sections which cater for very few vehicle movement. Every road user has the right to use any part of the public roading system that they may choose to. For this reason, TDC collect the revenue necessary to operate and maintain the district roading network from the general rate, it is recognised by TDC that roading provides a "common good". So, as with any subdivision of land, this development will create extra roading and therefore extra operation and maintenance costs, but it will also provide for another 160 "customers" to help pay for this. This roading extension has been anticipated as a logical extension of the network (see google maps above) and existing assets have been designed accordingly, no upgrade of the existing roading is proposed or necessary.

The proposed development of Whareroa North involves a new bridge across the Whareroa Stream and a short section of roading up and onto the flat area where the residential development will occur. This section of roading will not provide property access along its length which could be seen as "inefficient roading" but as described in the previous paragraph, in any network including roading there will always be highly utilised sections and other sections underutilised. Rural residential subdivision for example obviously creates less "efficient" roading than close urban subdivision does because a longer length of road is needed for each new lot.

Roading is a network for the good of the public at large and TDC have recognised this and fund roading from the general rate. Close urban subdivision creates efficient roading and rural or rural residential development creates less efficient roading, there will always be differences. This proposal lies within that spread. Because the existing asset has been designed to extend to the north and because roading is regarded as a district wide network, there would be insignificant change in the cost to the individual ratepayer as a result of this development.

### **3) Water Supply**

The existing community water supply at Whareroa is currently funded by a specific water rate as are all water supplies in the Taupo District. Those connected to the Whareroa water supply fund the operation and maintenance costs of the Whareroa intake, treatment, pumping, reservoirs and reticulation. Whareroa's water supply can be readily extended to service the proposed development at Whareroa North because existing water reticulation leading to the proposed stream crossing point has been sized to cater for the extra lots envisaged at Whareroa North.

More consumers will also mean that the cost of operating and maintaining the scheme will be spread across a greater number of benefitting consumers. The cost per ratepayer will theoretically be reduced due to the economies of scale if all other factors remain unchanged.

If costs rise (as they will if more extensive water treatment is incorporated due to a Central Government directive) then these increased costs will be spread across a greater number of consumers when Whareroa North proceeds and so the cost increase to the individual ratepayer will be less when spread across a larger consumer base.

#### **4) Wastewater**

Wastewater services in Taupo District are funded by a rate on all properties which are served by a community wastewater scheme. This is basically a uniform charge and is applicable whether served by a large scheme or a small scheme. The rationale behind this approach is that all schemes exist to protect the environment (particularly the potential nitrogen inputs to Lake Taupo) and payment should be based on the total cost of this protection from wastewater pollution spread across all users rather than taking into account the economies of scale of larger schemes versus small schemes and rating them differently.

The addition of Whareroa North can (as with water supply) be done easily by extending the current infrastructure across the bridge and up to the new development so there is no impact on infrastructure efficiency, the extra costs are met by the greater number of connected properties. Existing TDC owned infrastructure has been sized to allow for expansion to the north.

Again, there will be insignificant impact on the individual ratepayer as a result of this development proceeding.

#### **5) Summary**

As mentioned in Section 2, any subdivision of land involves the creation of extra infrastructure to service that development. There will be extra operation and maintenance costs associated with this additional infrastructure to serve Whareroa North, but this development will also provide another 160 "customers" to pay for this.

Hauhungaroa #6 Trust has built infrastructure in the existing Whareroa Village which will also cater for extension of Whareroa to the north. This proposal therefore is for an efficient expansion of those existing services, utilising the capacity that has been created for this purpose during previous stages of the development. Even the legal road reserve is in place to extend roading to enable access to Whareroa North. There will be insignificant impact on the individual ratepayer as a result of this development proceeding.

