1. INTRODUCTION

A significant component of the Waikato Regional Transportation Model (WRTM) is the landuse data, which is used in the traffic generation stage of the model. The details of the landuse data are covered in a separate technical note. This technical note covers geographical spread of the landuse data.

As it is not practical to model trips for each property individually, areas where similar activities are carried out are grouped into zones. Please note that this supercedes the first draft of this technical note issued on 26th of September 2008, including a significantly more refined zone system compared to that originally offered.

2. ZONE STRUCTURE BASIS

As outlined in the landuse requirement technical note landuse data is obtained from a number of sources including the Statistics New Zealand's 2006 Census data. The census data is available for a number of geographical units including meshblocks and area units.

The smallest geographical unit that Census data is available in is at meshblock level. Meshblocks vary in size from part of a city block to large areas of rural land. Area units are aggregations of meshblocks yet are smaller than Territorial Local Authority (TLA) areas. Area units generally coincide with suburbs or parts thereof in larger urban areas. Area units typically contain between 3,000 to 5,000 people. To enable use of the Census data the transport model zones are formed from either meshblocks, aggregations of meshblocks (smaller than area units) or area units.

In addition to the zones for the study area the interaction between the study area and the surrounding areas must be taken into account. This is done using what are known as external zones. The external zones are developed to represent traffic follows on the major links on the boundary of the study area.

3. REGIONAL MODEL ZONES

The Waikato Regional Transport Model (WRTM) regional model zones have recently been updated. It has a composite zone system that combines the Hamilton urban zones and the previous regional zones.

The urban model zones are still the 2006 Hamilton Model zones, which are aggregations of meshblocks and form the basis of the urban model zone structure.

The previous regional zones that covered the Hamilton urban zones have been replaced with the urban model zones. The rest of Waikato regional zones that is outside of the urban model study-area directly correspond with the Census Area Units. The regional model zones for the western portions of the Bay of Plenty Region generally correspond directly with Area Units, however, there are a small number of zones that do not.

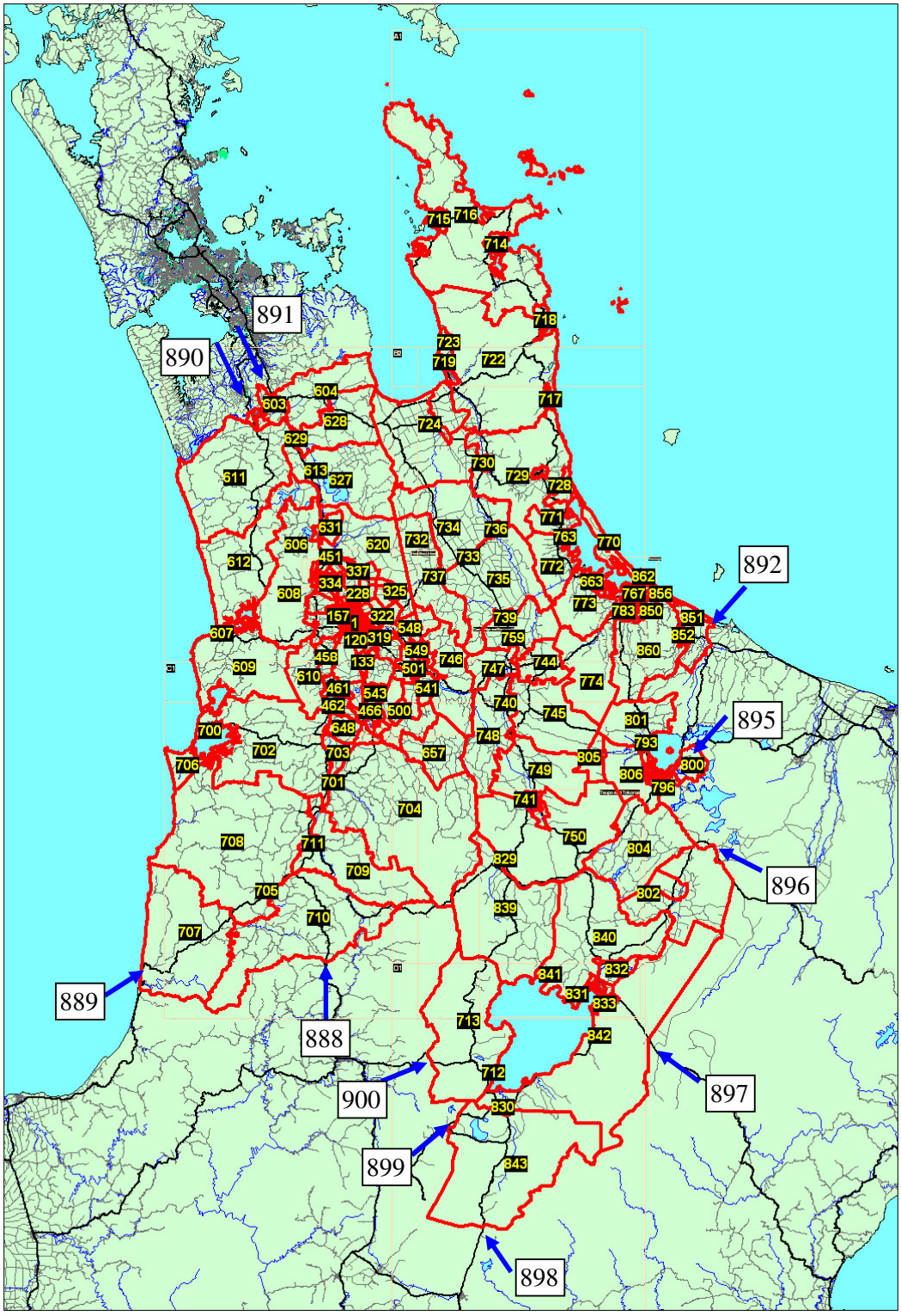
Transportation models existed for the Tauranga, Rotorua and Taupo TLA's prior to the WRTM project. To ensure compatibility between the WRTM and these two models, the Tauranga and Rotorua model's zones have been aggregated to be as close to Area Unit boundaries as possible. These aggregated TLA model zones have been used as zones for the WRTM. Further to that, the Taupo CBD Area Units and central and Western Tauranga Area Units have been broken down into more refined zones, which are aggregated meshblocks. This has been done to improve the quality of the model in these important areas.

The external zones for Hamilton urban model no longer exist as the new composite zone system has been developed. As having Tauranga to be included in the regional model, the external zones have also been modified to represent each of the State Highways that cross the WRTM study area boundary.

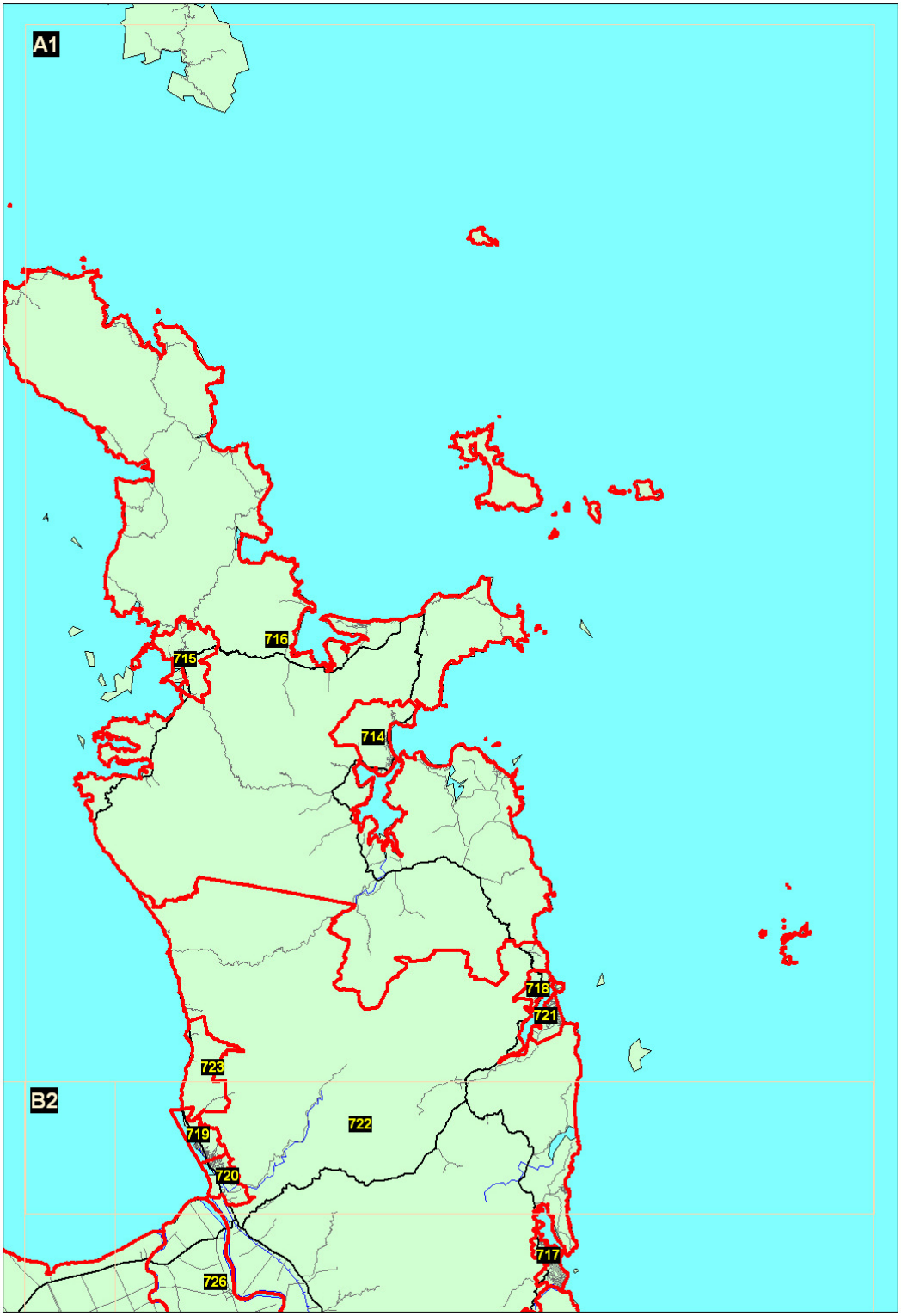
There are a total of 900 zones including spares and 11 external zones in the WRTM.

4. PLOTS OF ZONE SYSTEMS

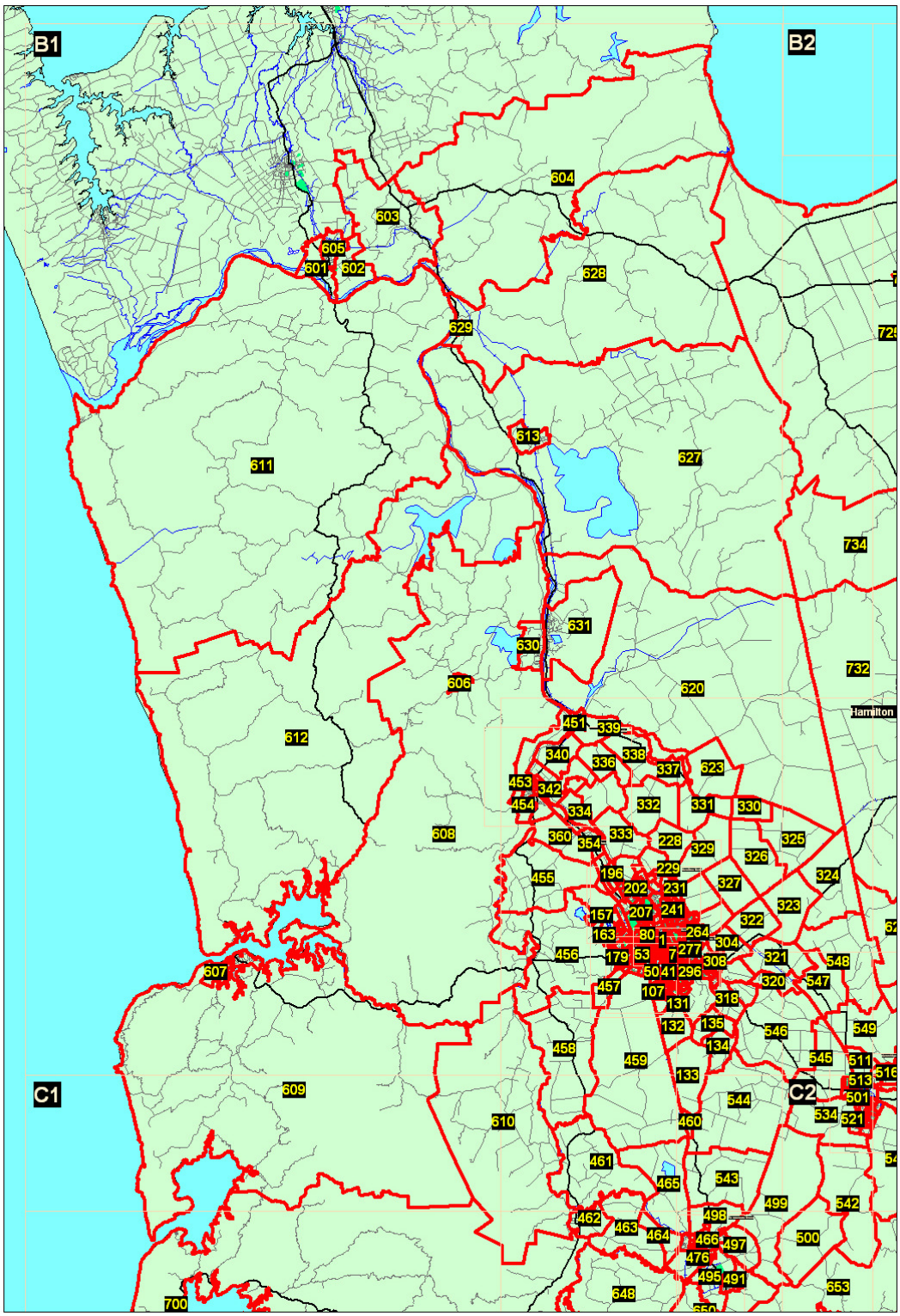
A number of plots have been prepared that show the location of the zone for the rural and urban models. **Figure 1** to **Figure 19** show the Regional Model Zones that compose the Hamilton zones and previous regional zones.



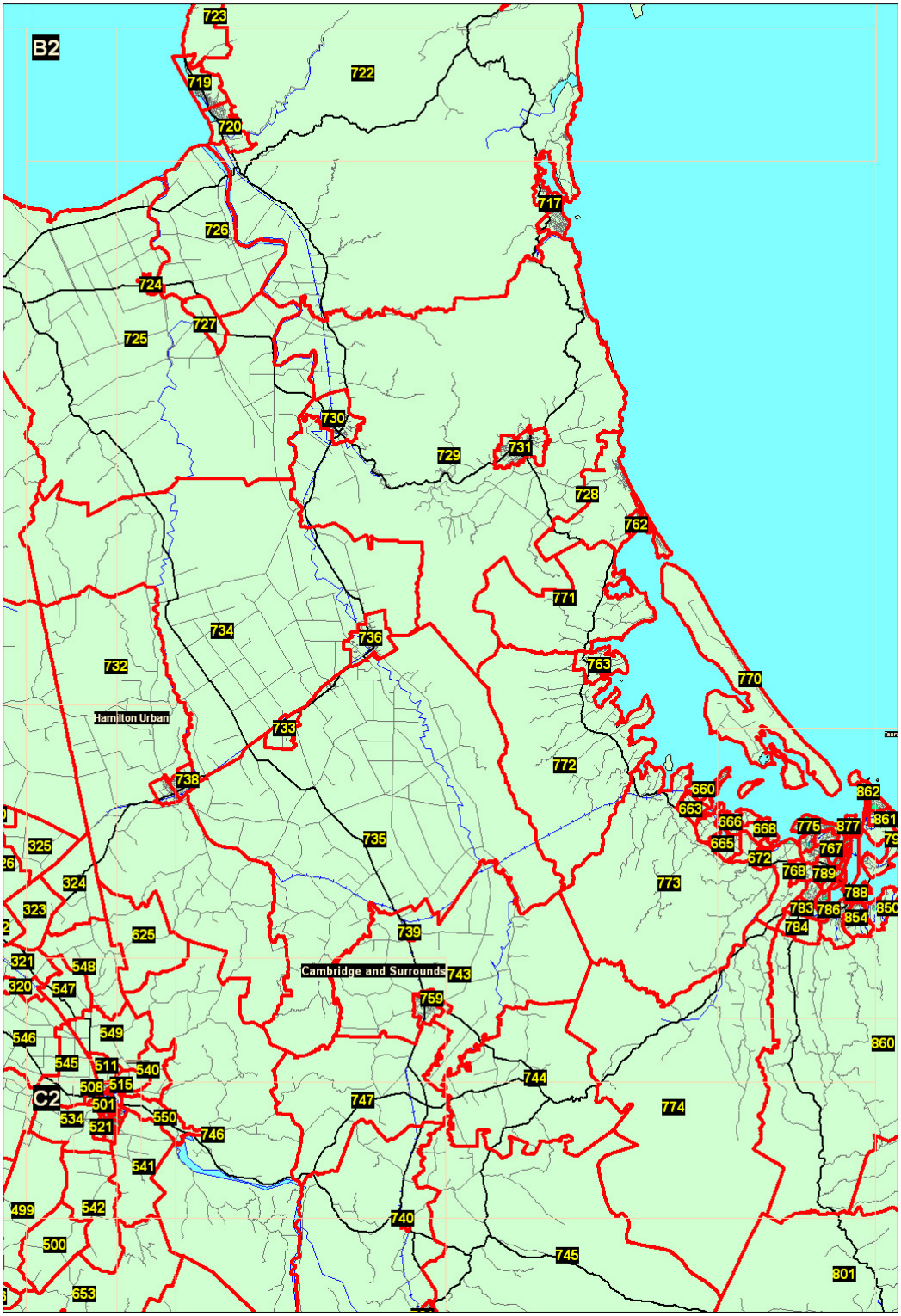
Waikato Regional Transportation Model	**Regional Model Zones – Overview and Externals**	**Figure 1**
Waikato Zone System		



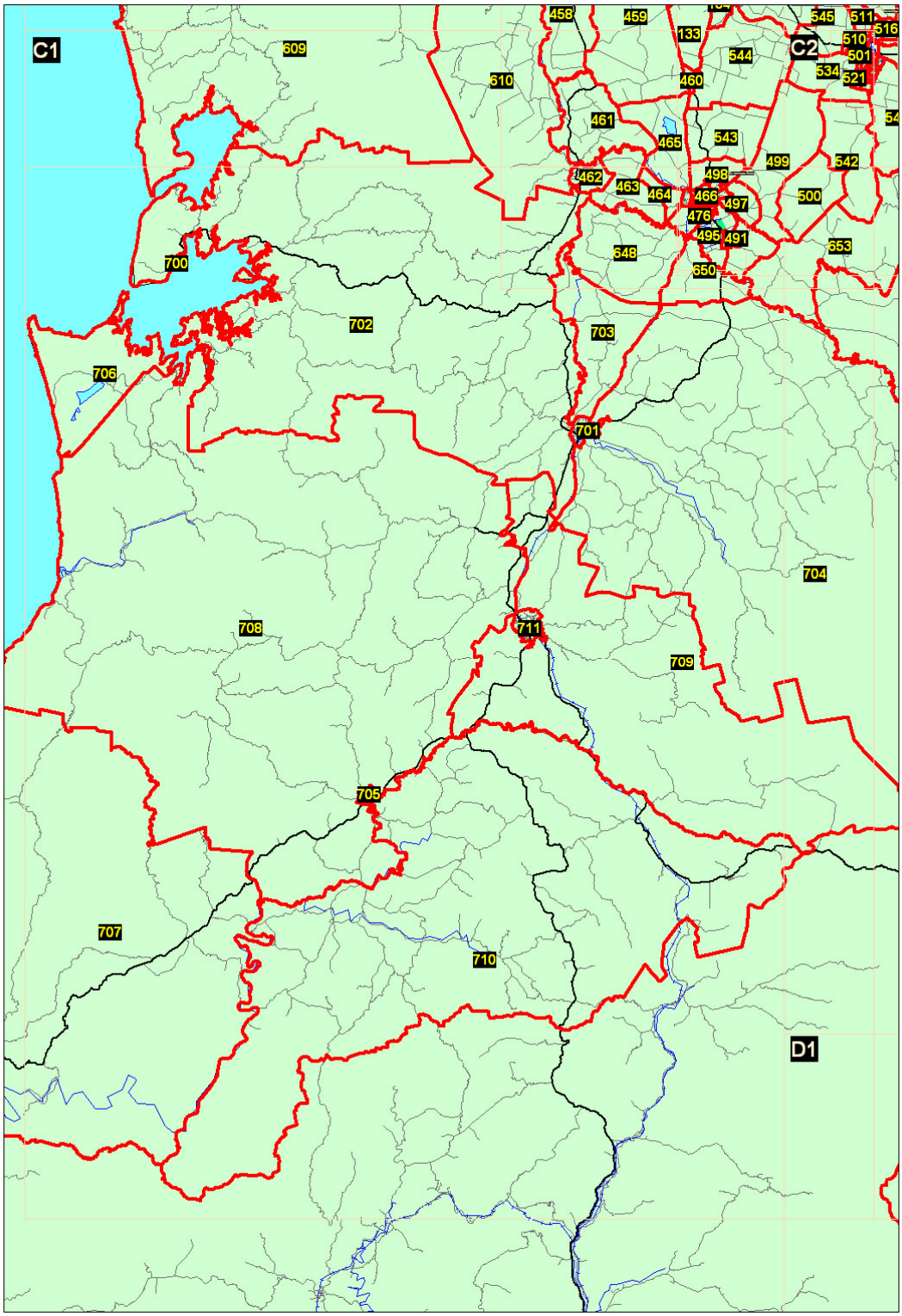
Waikato Regional Transportation Model	**Regional Model Zones – Window A1**	**Figure 2**
Waikato Zone System		



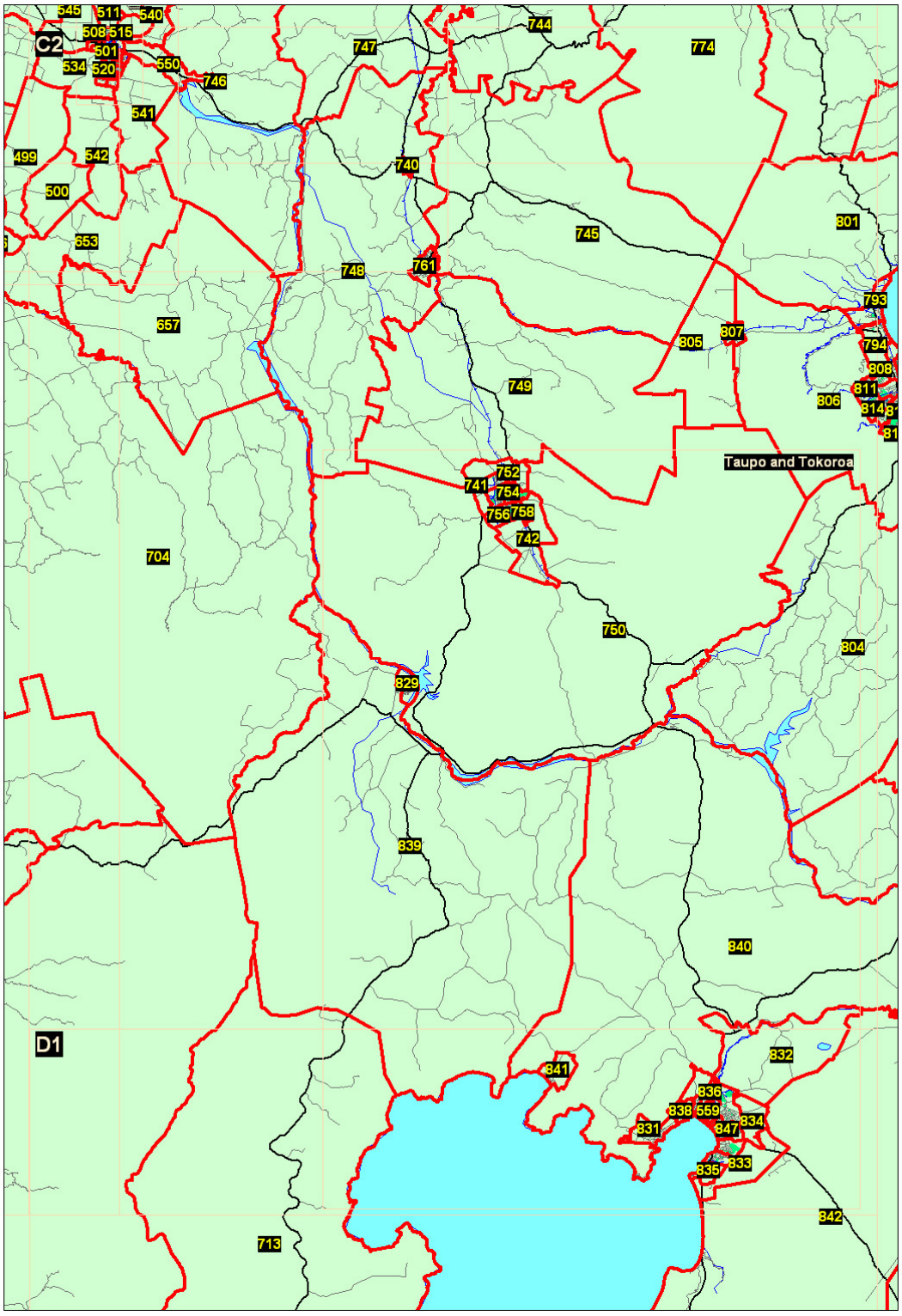
Waikato Regional Transportation Model	**Regional Model Zones – Window B1**	**Figure 3**
Waikato Zone System		



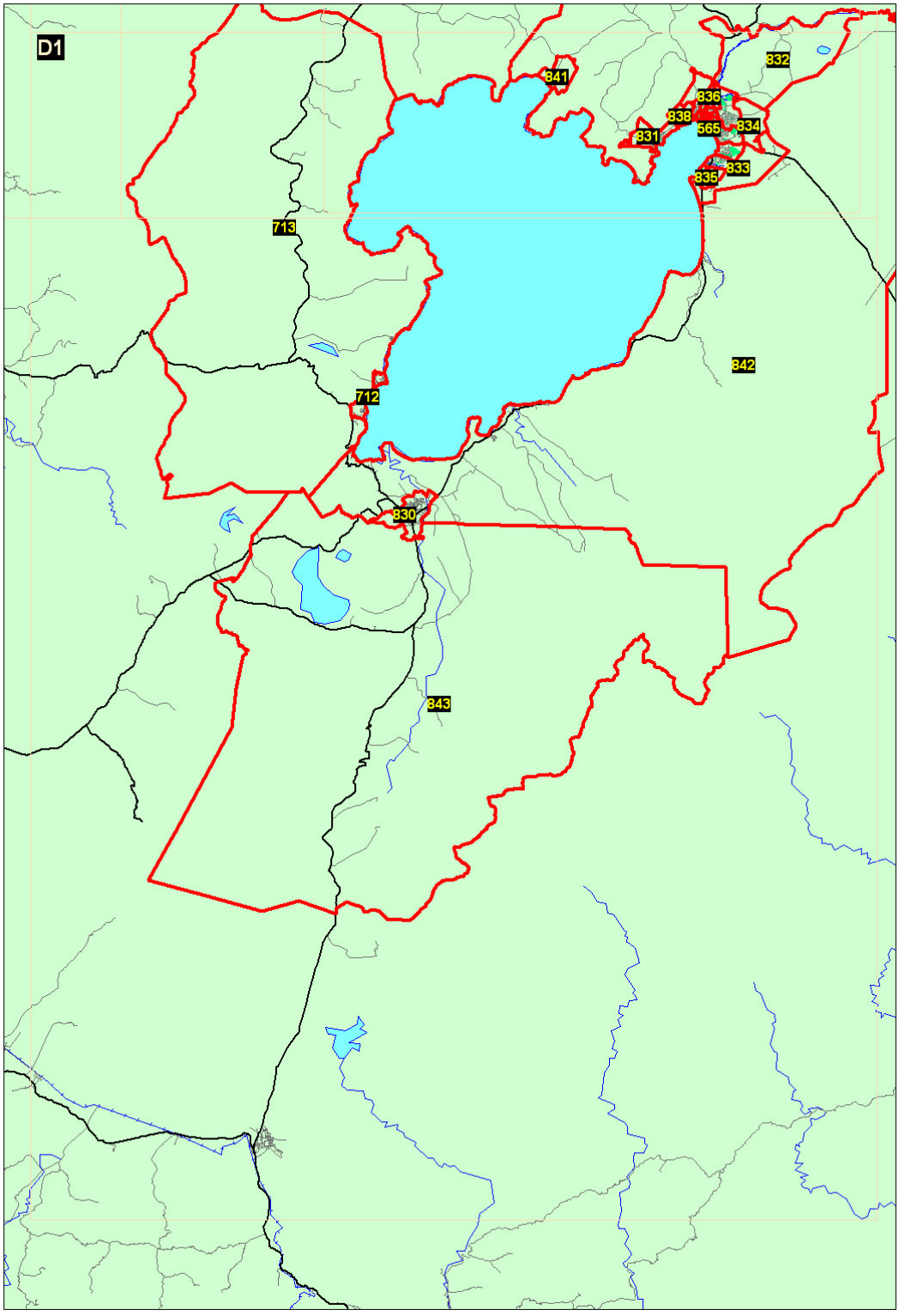
Waikato Regional Transportation Model	**Regional Model Zones – Window B2**	**Figure 4**
Waikato Zone System		



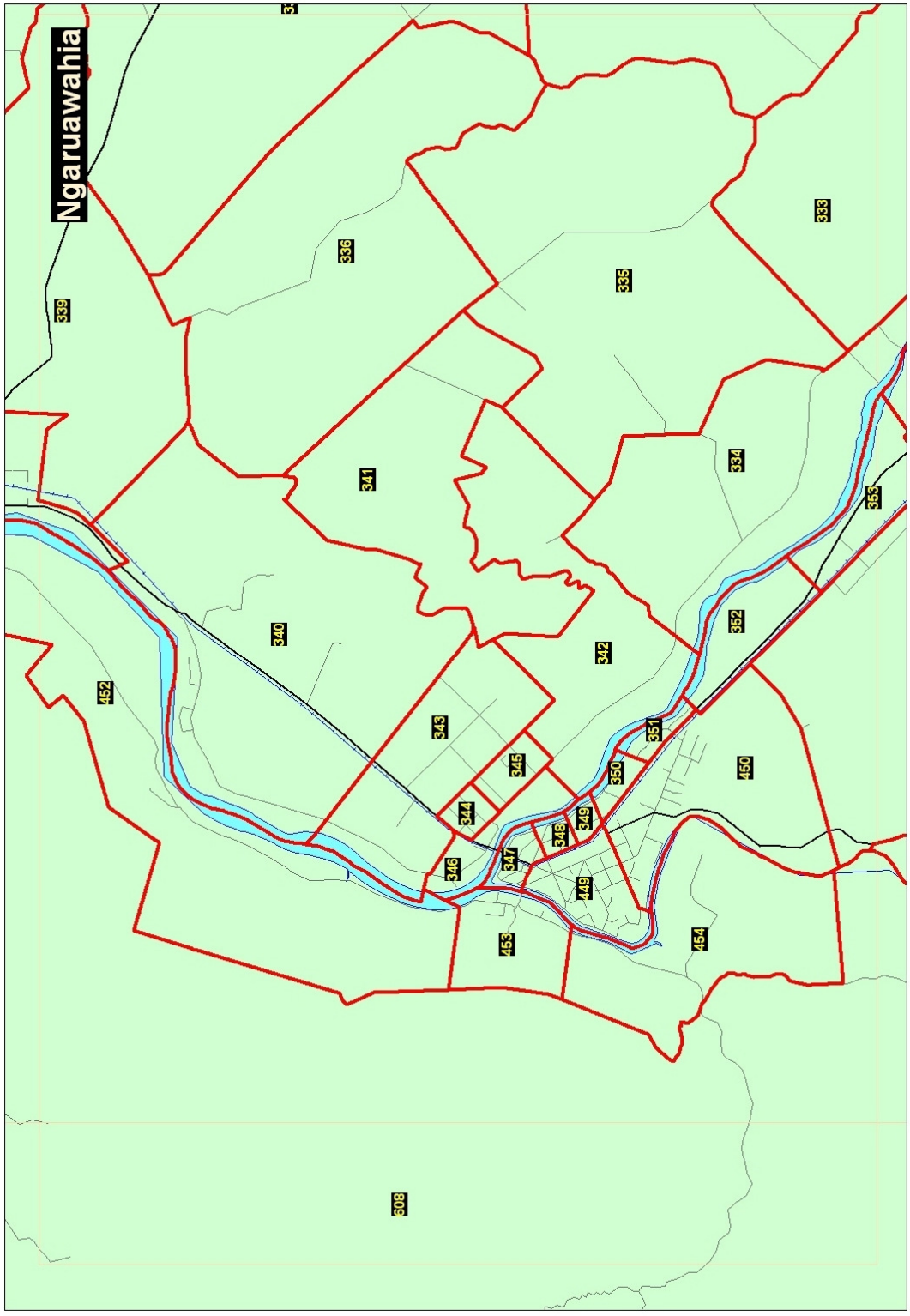
Waikato Regional Transportation Model	**Regional Model Zones – Window C1**	**Figure 5**
Waikato Zone System		



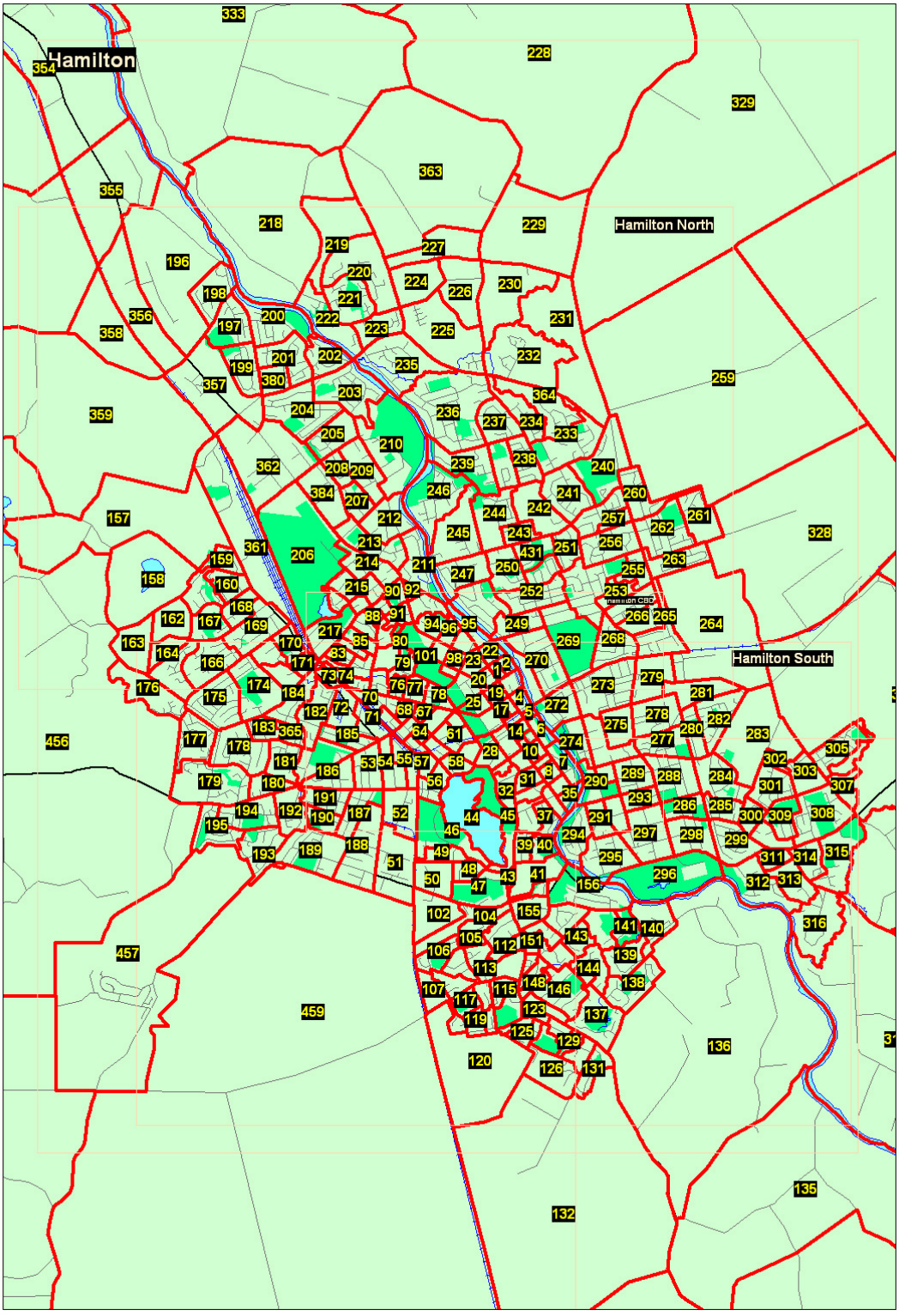
Waikato Regional Transportation Model	**Regional Model Zones – Window C2**	**Figure 6**
Waikato Zone System		



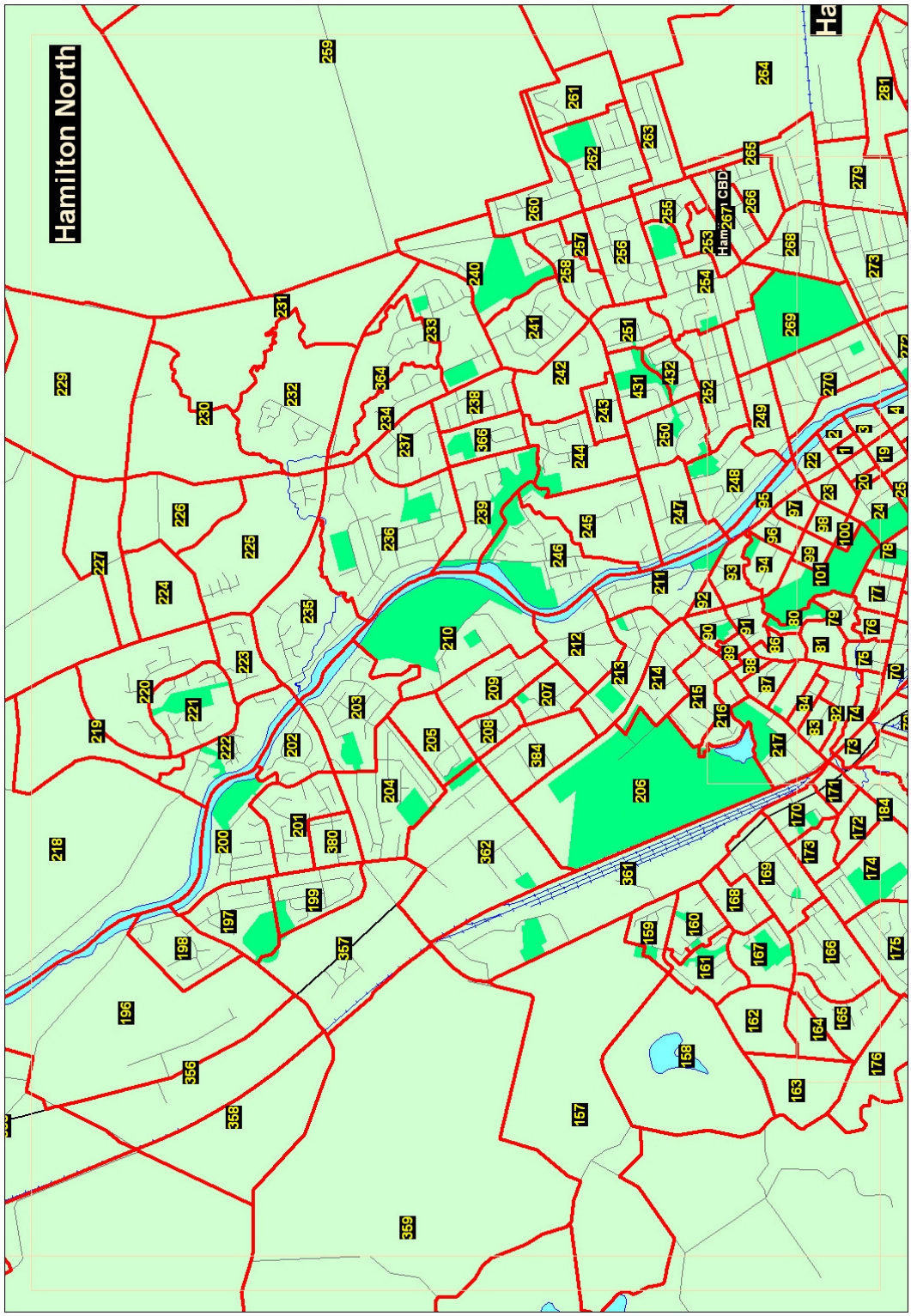
Waikato Regional Transportation Model	**Regional Model Zones – Window D1**	**Figure 7**
Waikato Zone System		



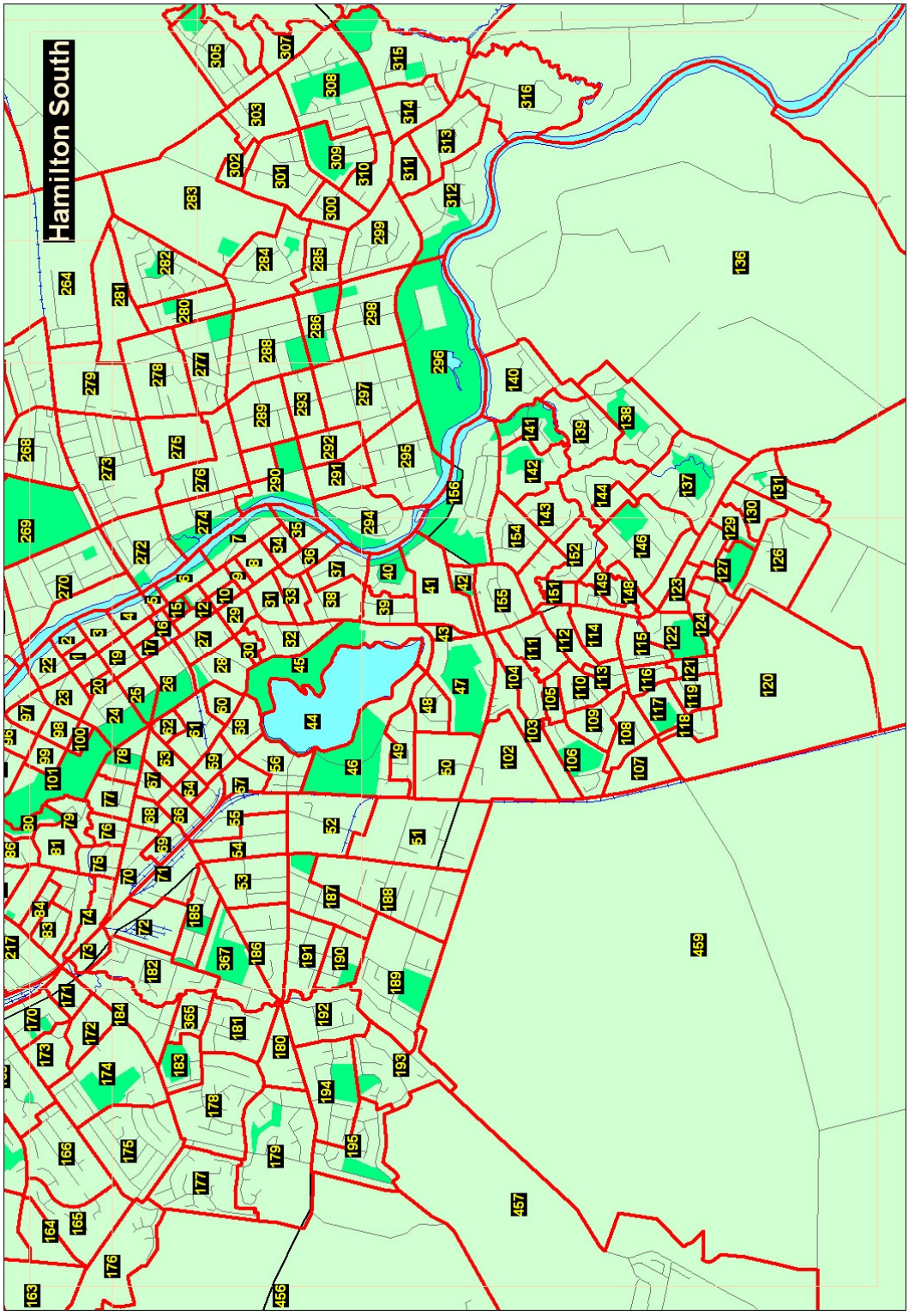
Waikato Regional Transportation Model	**Urban Model Zones – Window Ngaruawahia**	**Figure 8**
Waikato Zone System		



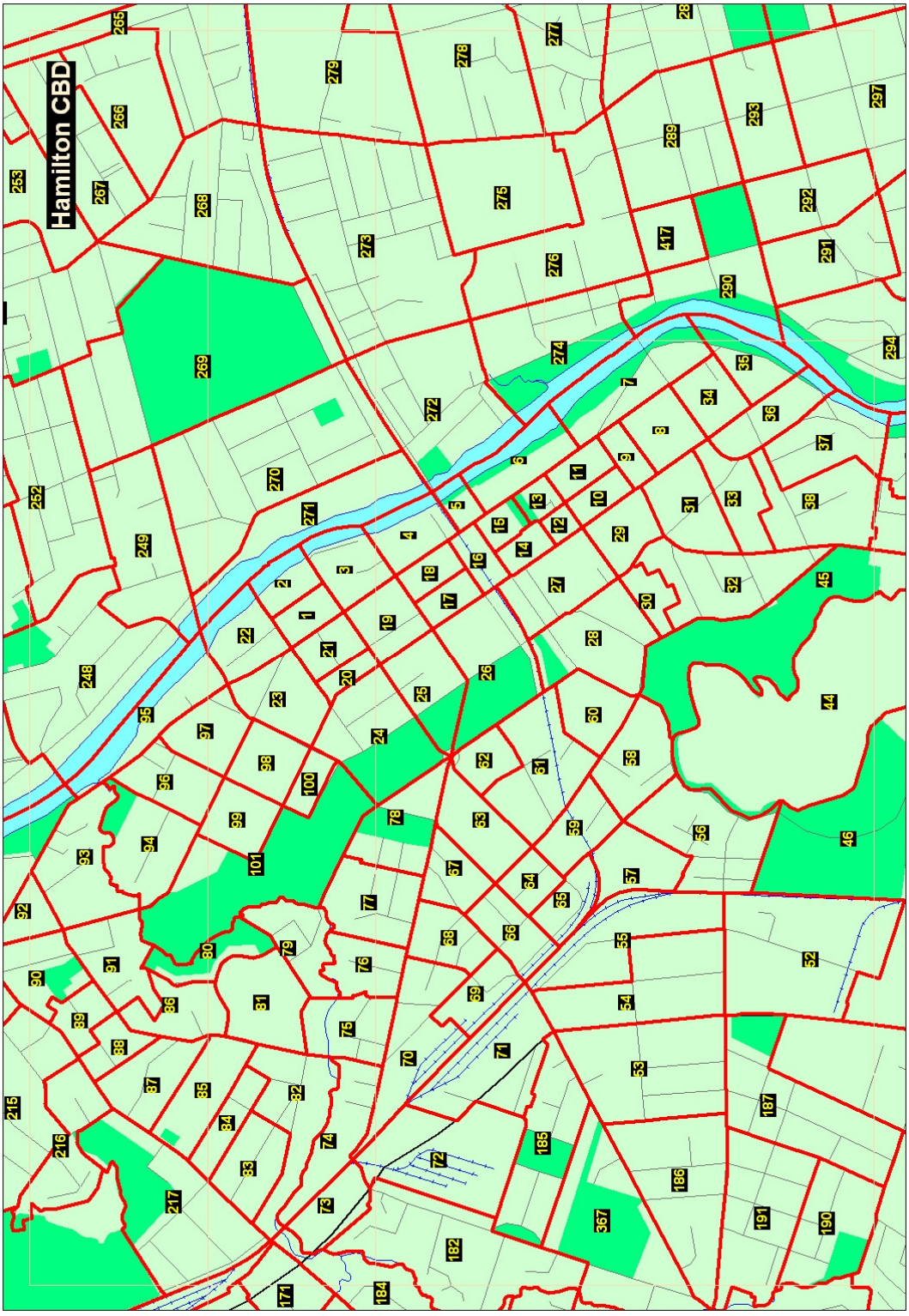
Waikato Regional Transportation Model Waikato Zone System	**Regional Model Zones – Window Hamilton**	**Figure 9**



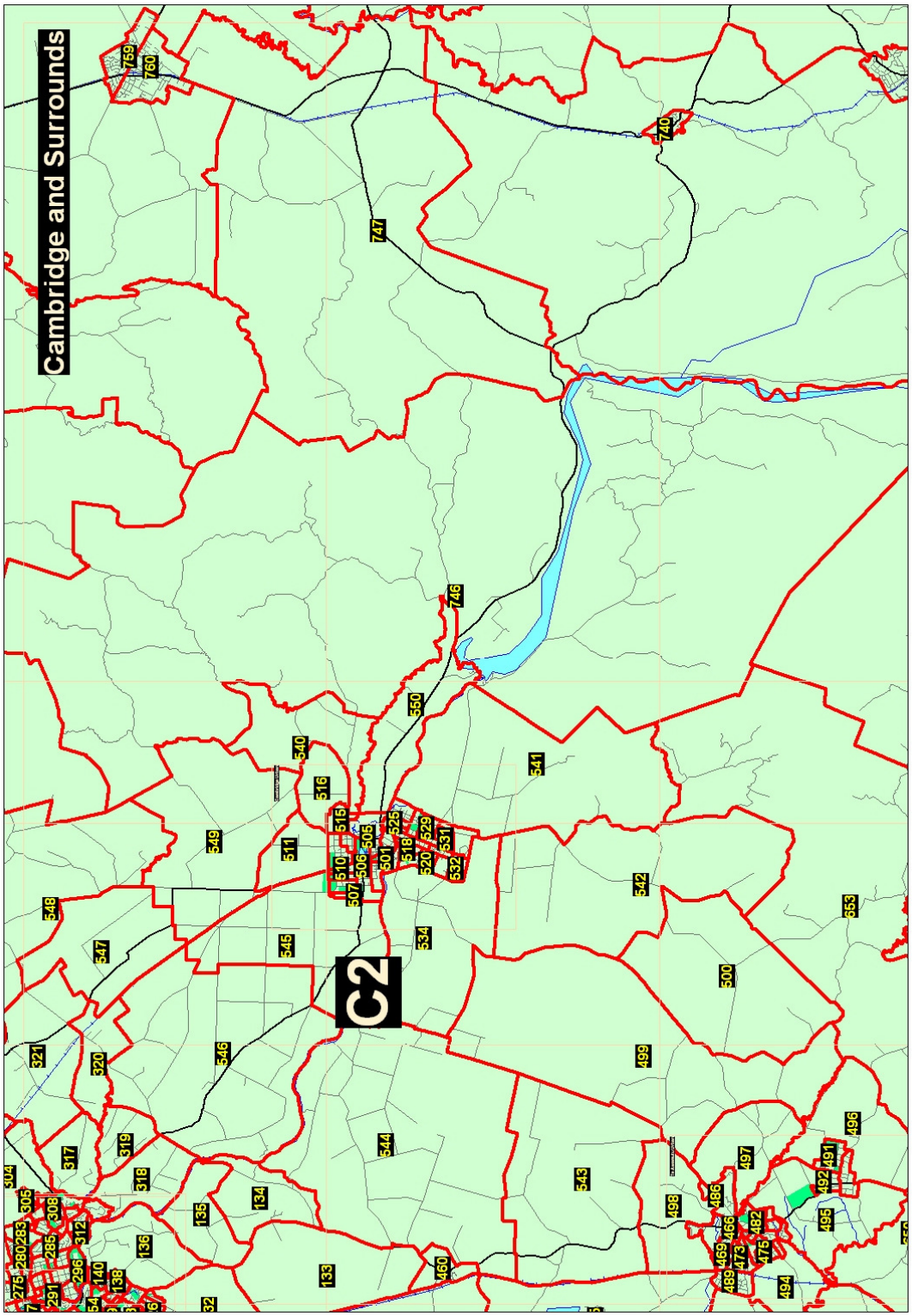
Waikato Regional Transportation Model	**Urban Model Zones – Window Hamilton North**	**Figure 10**
Waikato Zone System		



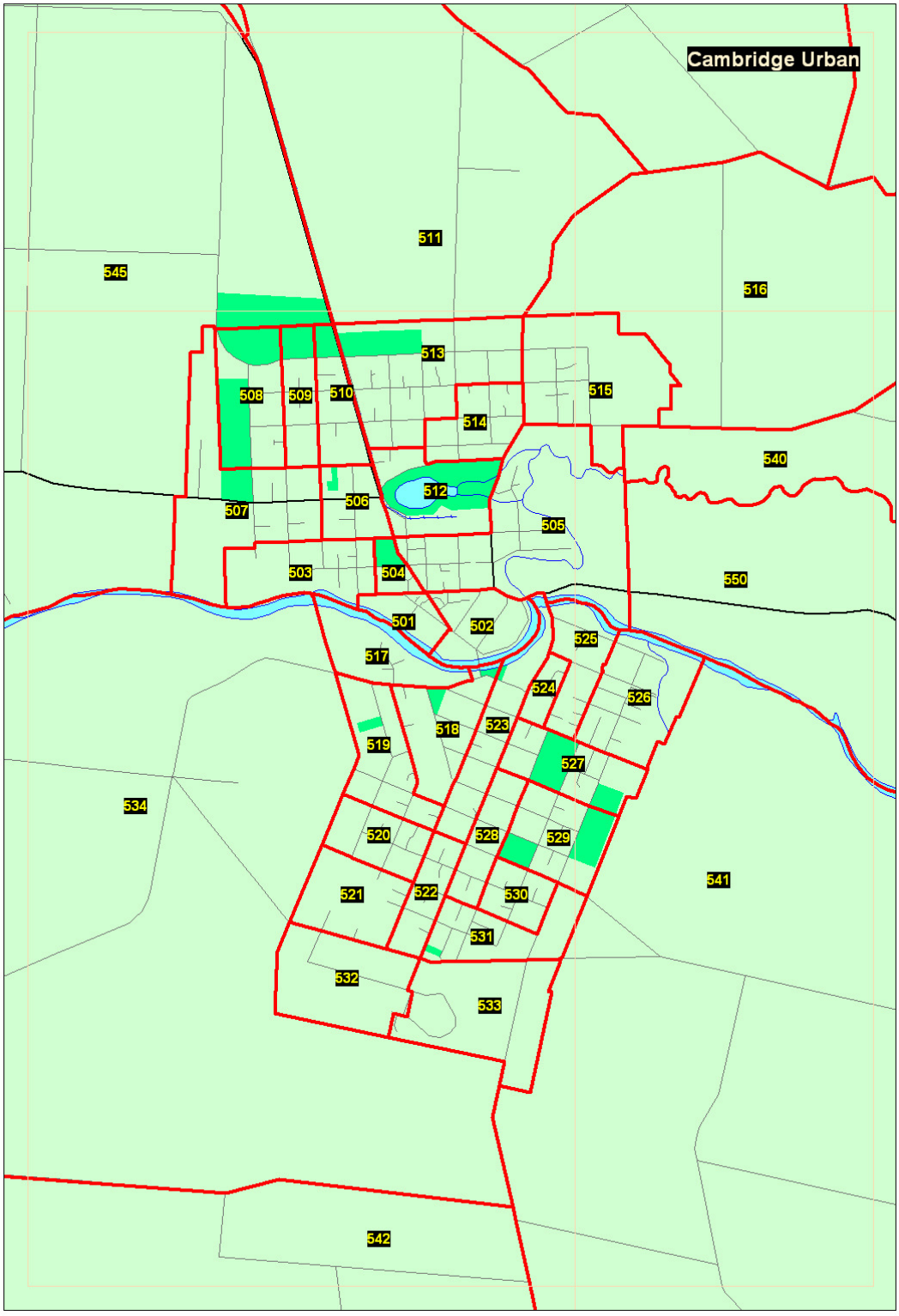
Waikato Regional Transportation Model	**Urban Model Zones – Window Hamilton South**	**Figure 11**
Waikato Zone System		



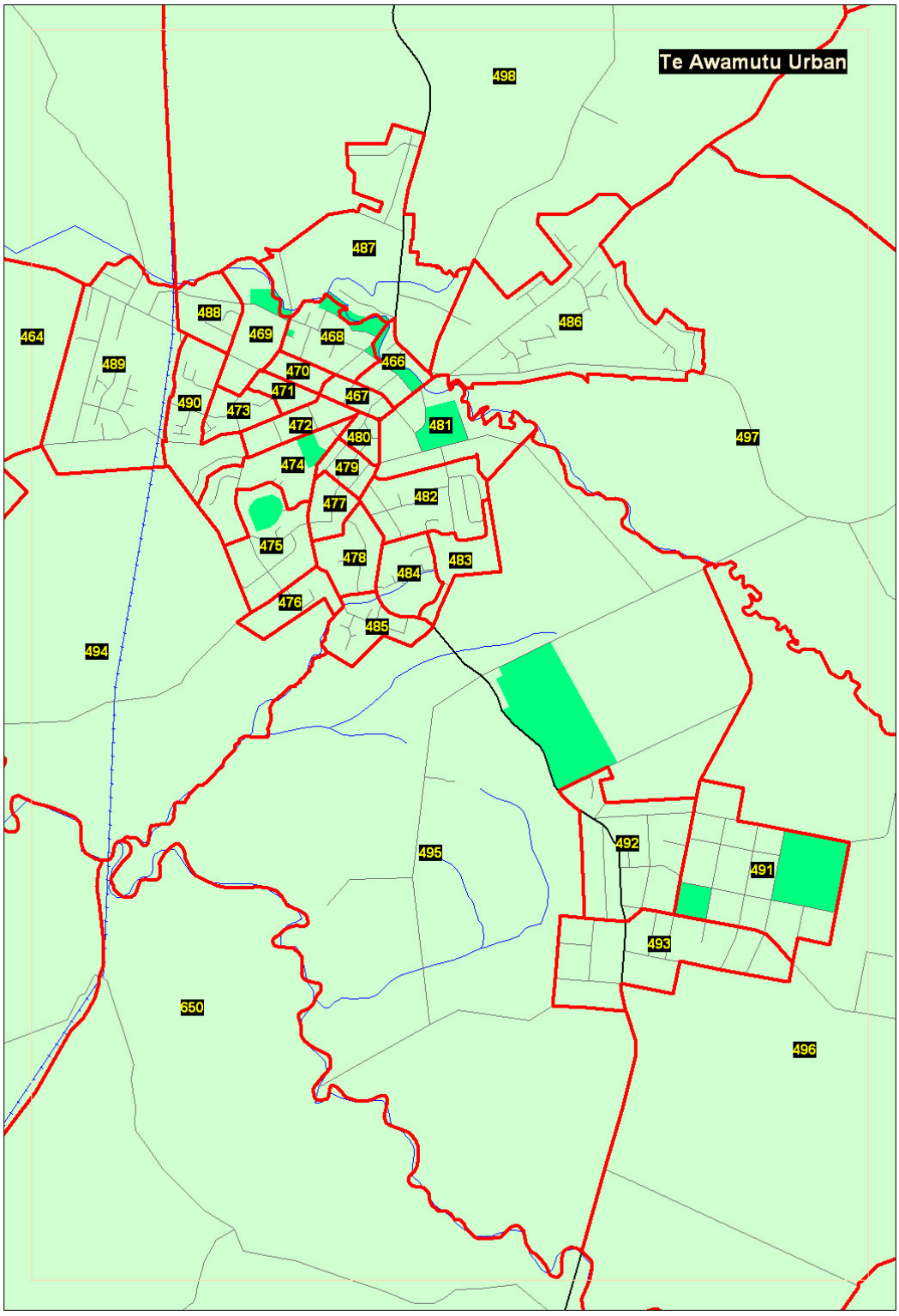
Waikato Regional Transportation Model	**Urban Model Zones – Window Hamilton CBD**	**Figure 12**
Waikato Zone System		



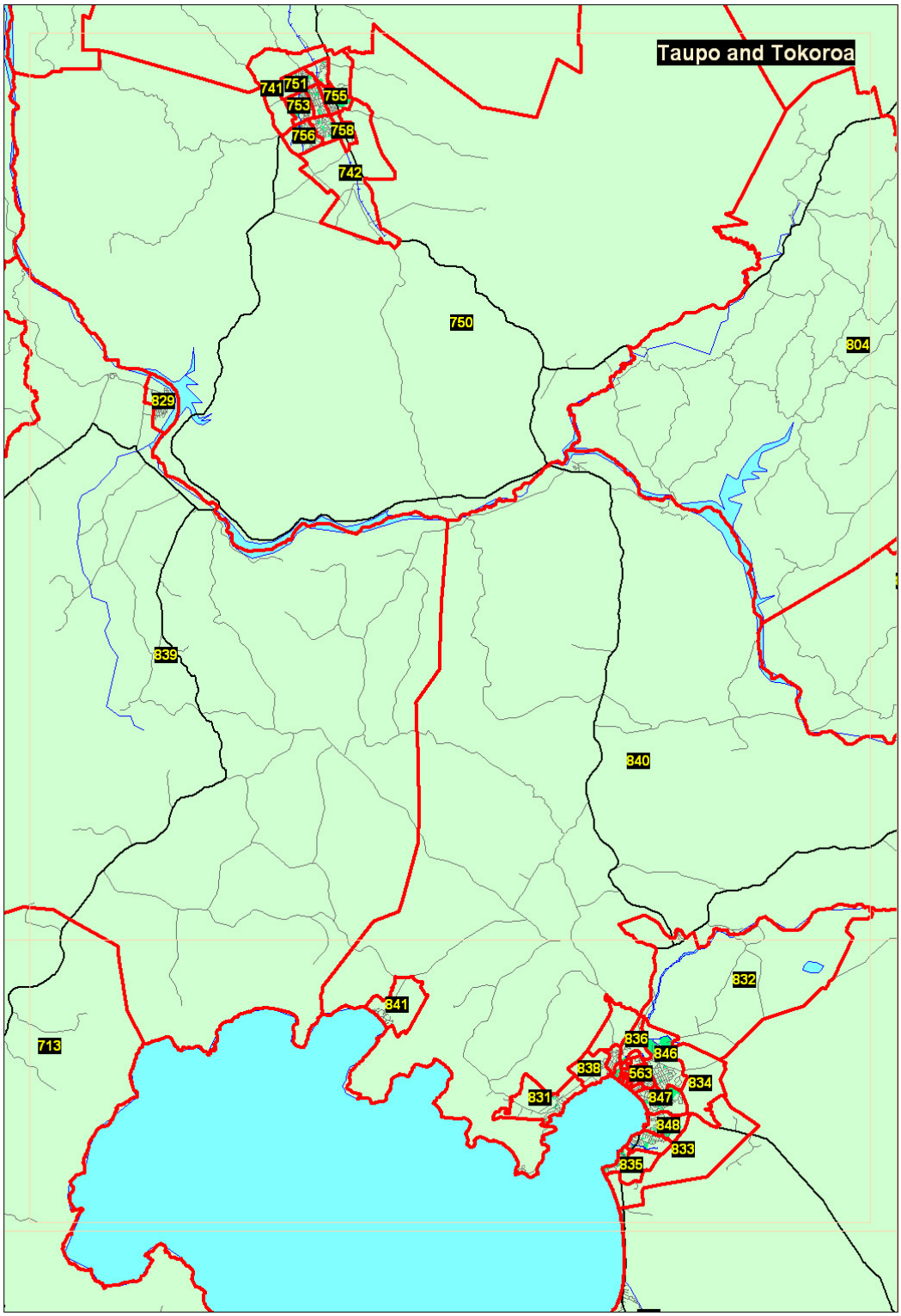
Waikato Regional Transportation Model Waikato Zone System	**Regional Model Zones – Window Cambridge and Surrounds**	**Figure 13**



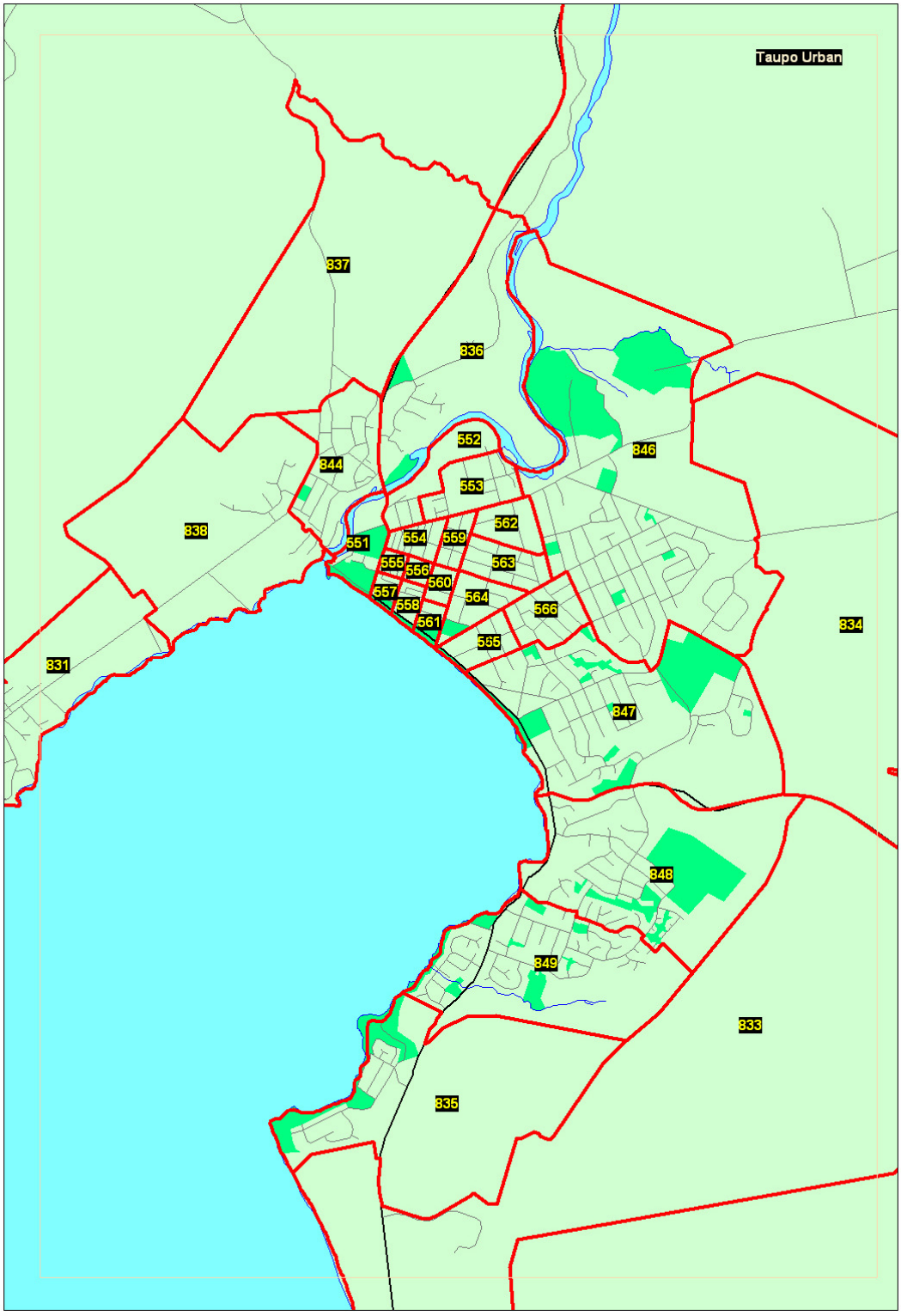
Waikato Regional Transportation Model Waikato Zone System	**Urban Model Zones – Window Cambridge Urban**	**Figure 14**



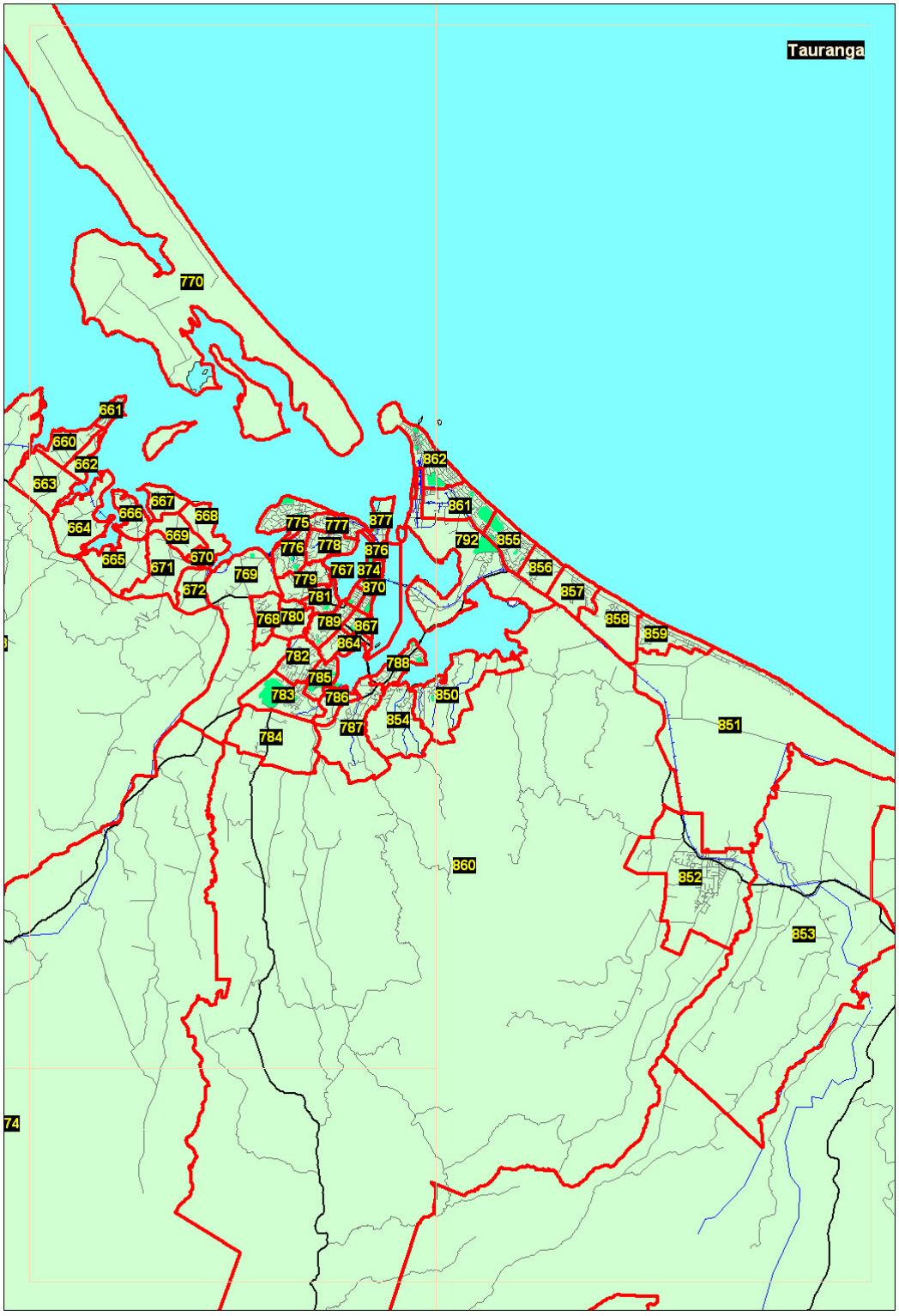
Waikato Regional Transportation Model	**Urban Model Zones – Window Te Awamutu**	**Figure 15**
Waikato Zone System		



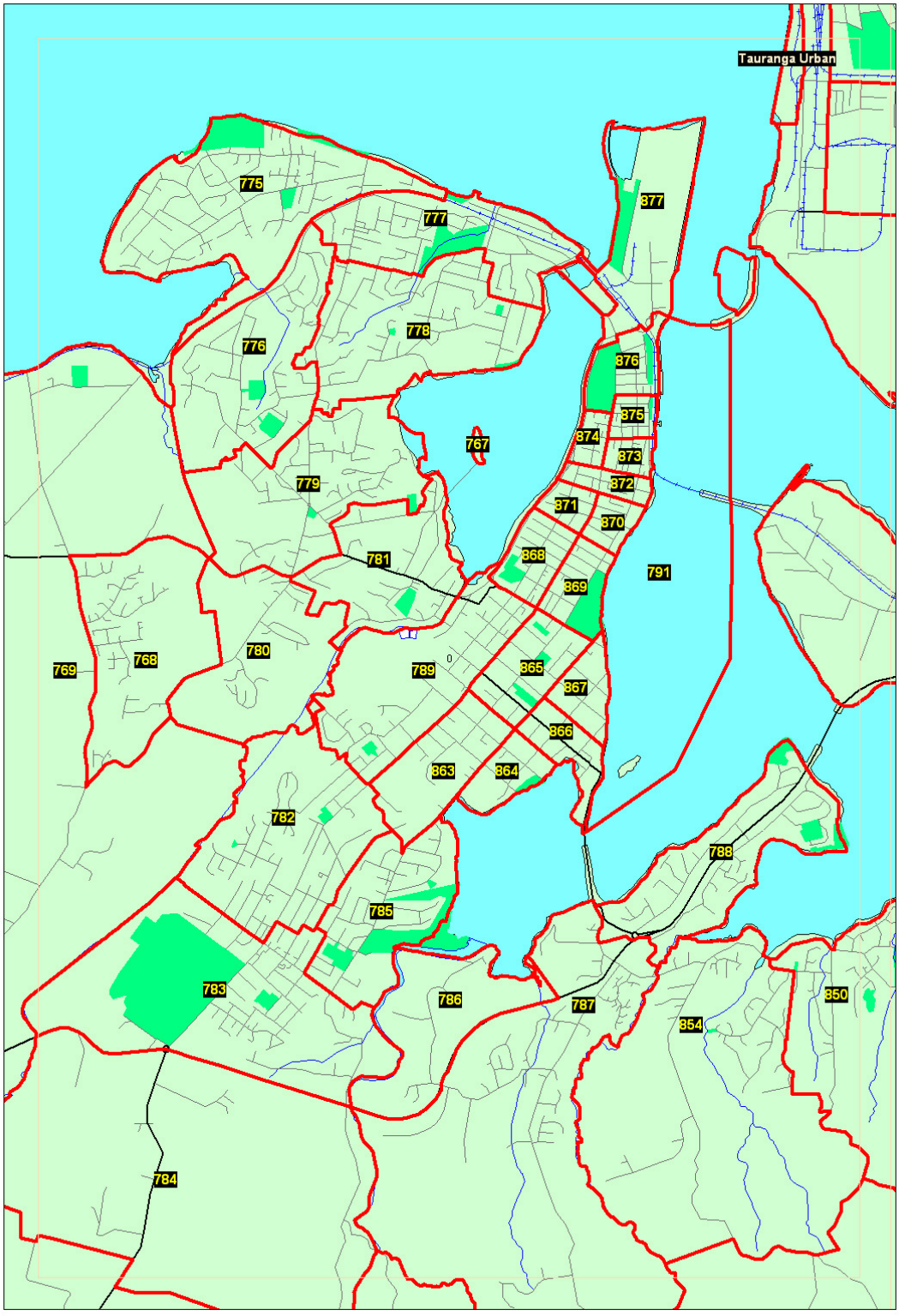
Waikato Regional Transportation Model	**Regional Model Zones – Window Taupo and Tokoroa**	**Figure 16**
Waikato Zone System		



Waikato Regional Transportation Model Waikato Zone System	**Regional Model Zones – Window Taupo Urban**	**Figure 17**



Waikato Regional Transportation Model Waikato Zone System	**Regional Model Zones – Window Tauranga**	**Figure 18**



Waikato Regional Transportation Model	**Regional Model Zones – Window Tauranga Urban**	**Figure 19**
Waikato Zone System		