Evaluating manipulations

… A strength of this manipulation is that tabular data is converted in geo-referenced spatial data which can then be compared with other spatial data (1). A second benefit of creating different layers is that I am able to turn them on and off so that my map is not too crowded and busy. I can display only the information that I required for a certain observation (2). For example, when I was looking to see how many students drive to school, I was able to turn off the layer showing the students who come to school on the bus. This data was not necessary for my manipulation and therefore it was useful to turn it off. A weakness is that if data is entered incorrectly it cannot be identified using the address locator and therefore will not be shown on the map and cannot be included in the analysis (3)…

The next thing I did was to create 2 buffer zones … A strength of this manipulation is that I could visually see the area that is included and create various buffers that could be turned on and off as needed for analysis (4). However, the buffer does not take into account the topography of the land or the road network. Impassable features such as the Waimapu and Waikareao Estuaries that fall within the buffer zones. Students would not be able to cross … therefore the distance that they would need to travel would be far greater than that indicated by the buffer zones… The buffers do not account for the road layout either as the K Road motorway is a national highway that cannot be crossed (5), which would mean that students would need to go around, adding much distance onto their commute. Therefore, a student may live within 2km of the school as the crow flies, but Manhattan distance, it may be more than that, and therefore make it unrealistic to expect students to walk or cycle to school from that location. This can cause inaccuracies in the findings…

Proposing a solution to a geographic problem

From my analysis, there is definitely a shortage of parking at our school. … A solution to this problem could be for students to apply for a parking permit with strict criteria and to charge these students to park at school (6). The criteria would be based on whether the student had alternative ways of getting to school. The criteria could be that students who live within 3km of school cannot get a permit. From Map 4 on my layout, you can see that there are 24 students who drive to school but they could walk as they live close enough to the school. There are also 10students who drive to school who could cycle to school. This would reduce the number of cars trying to park at school. By enforcing these permits, these students are not hindered from getting to school as they have another option of getting to school. From Map 3 and Table 2, you can see that 9% and 4% of students walk and cycle respectively and therefore there is no reason why students who drive from this zone could not also walk or cycle (7)…

Charging students for the permit would also reduce the number of students who wish to park at school so taking the bus … may be a cheaper option. As one can see from Table 2 and Map 3, 23% of students living in other suburbs of Tauranga use the bus … students who drive from these areas can also use the buses to get to school. This would further reduce the pressure on the parking at school. This solution would help to reduce the number of people wanting to use the car parks and prevent cars parking on the grass or parking illegally as in Graph 1 and Table 2 on the layout. Solutions to this problem need to consider how much car parking and who has priority rights to it. Investment in

further car parking at school is not really a priority consequently … An alternative could be to only allow year 13 students this privilege. An advantage of this solution is it would be clear who was permitted to park at school and this would also reduce the pressure on parking. This may result in a waste of parking space if there were insufficient students opting for permits which might occur if students were charged. It could be difficult to police as well (8)… A total ban on students bringing cars to school would immediately solve the problem and only exemption given for students who have no alternative method of getting to school. This currently accounts for 48 students. This would be the easiest from the point of view of administration and would not disadvantage students who currently have no other way of getting to school. As well as the limited space available it is crucial that students who clearly need the parking are considered in any alternative. This would be included on the permit proposed in the solution which has a wider focus than other alternatives and is fairer, making more effective used of this limited resource… … Walking buses could be encouraged, and the "push play" ethos fostered throughout the school to get more students who live closer to school walking to school. This would be an innovative solution (9)… Map 4 on my layout, shows that 24 students drive to school could walk to school as they live within the 3km buffer. ..