Section 4
Interpretation and QWC

Vertical Zoning – Hypothesis: *'In the Central Business District there will be evidence of Vertical Zoning'*

Within the CBD the streets analysed showed that the lowest floors were used for commercial purposes – 58 out of 60 ground floors were used for commercial purposes (*Figures 3a.1 and 3a.2*). This is due to the fact that the shops need to be accessible to their customers, the public. The first and second floors were mainly used for storage and offices (*Figure 3a.6* 17.2% - storage and 5% office, *Figure 3a.7* 32.5% - storage and 25% offices). This is because the shops below needed somewhere other than the shop floor to store their goods and these floors are cheaper (due to inaccessibility) so attract businesses wanting cheaper offices.

However, into the suburbs, on West Street and Jolyffe Park Road, all floors were used for housing (*Figure 3a.3*), people who work in and around the CBD need somewhere to live that has easy access to the CBD.

In our investigation into Vertical Zoning in the CBD we didn't come across any obvious anomalies; as our data showed what we expected, the trends were the same on each street close to the PLVI and each street in the suburbs (*Figures 3a.1-3a.4*).

The data collected for Vertical Zoning is linked to the traffic count data because the more traffic there is, the more people present therefore allowing there to be more commercial businesses. Therefore the higher the traffic count, the higher the use of commercial floors there were (*Figure 3a.5 and 3b.1* show this).

The data showed that the hypothesis was correct because Vertical Zoning was evident on the streets within the CBD, the pie charts and annotated photographs show this, so the explained hypothesis in section 1 was satisfied. Also our data showed that all floors in the suburbs were used for housing meaning that along with evidence of Vertical Zoning housing was prominent in the CBD.

Traffic Count – Hypothesis: *'The further away from the PLVI the lower the traffic count will be'*

The first count at the PLVI itself was high at 32 cars in two minutes, then at 150m from the PLVI it dropped staying low until 350m away, at which point it rose. It then stayed fairly low until 600m, when it rose until it reached a peak at 750m with a count of 50. It then dropped to 2 cars in two minutes and stayed low until our last count 950m from the PLVI (*Figure 3b.1*).

The count was fairly high at the start due to the fact that that near to the PLVI there are lots of attractions in the town centre for visitors who were in their cars. Then in the suburbs the count was very low due to the fact that the only vehicles present were those of residents whose numbers are much lower than those of visitors.

There were some anomalies in our results for differing reasons. The first was the fourth count, 150m from the PLVI only 2 vehicles were counted, this was because Ely Street where the count was taken was a one way road leading out of the CBD meaning it wasn't

widely used (*Figure 3b.3b*). Our other main anomalies were the counts 650m – 750m from the PLVI. These counts were very high (above 40) because it was a main road into the CBD and it was a very busy junction (*Figure 3b.4*).

The data showed that there wasn't much of a link between the traffic count and distance from the PLVI meaning that the original hypothesis was proven to be false, this was shown by our Spearman's Rank result of -0.14943609 (*Figure 3b.2*). Therefore the trend was negative but it was far too low to prove our prediction to be true, this was due to the anomalies aforementioned.

Car Park Analysis – Hypothesis: *'The further away from the PLVI the car park is the lower the number of parking spaces there will be'*

Within 600m of the PLVI the number of spaces were generally high as shown by car park 2, 213m away, where 252 spaces were counted (*Figure 3c.1 and Figure 3c.3*). Then further away, 730m+ from the PLVI the number of spaces recorded were low – 21 at the car park 1850m away (*Figure 3c.1*). However there wasn't much of a trend due to the high amount of anomalies.

There were generally more spaces closer to the PLVI due to the fact that there are more leisure activities and attractions there, such as shopping and visiting tourist attractions. There needed to be more spaces to hold all of the cars people arrive in. There were much lower numbers of spaces in the suburbs as the majority of vehicles were residents' who park outside their home not in car parks.

There were quite a few anomalies with the major one of these being the Maybird Shopping Centre. This contained 850 spaces yet was 1000m from the PLVI (*Figure 3c.1*). It had the most spaces as it is an attractive 'out of town' retail park with many big brand shops such as 'Boots' and 'Next'. This meant there were no trends as it was a huge anomaly breaking any pattern we had in the results.

There was a link between traffic count and the car park analysis as the more vehicles around the more spaces needed in car parks. This is shown when 650m from the PLVI, the traffic count was 40 and the car park 620m away had 204 spaces in, both high figures in our surveys (*Figures 3b.1 and 3c.1*).

The data collected showed no link between the number of spaces in car parks and the distance from the PLVI, this is shown by the value collected from the Spearman's Rank of -0.044736842 (*Figure 3c.2*). Even though this value shows car parks were slightly larger closer to the PLVI it is an extremely weak link meaning there was basically no link at all. Therefore our data disproved our hypothesis.

Word Count for Section 4 – Interpretation and QWC: 808

Section 5
Evaluation

Vertical Zoning

By analysing four streets of varying distances from the PLVI it enabled us to make well rounded conclusions about whether Vertical Zoning was present within the CBD. The chosen streets allowed us to produce a stratified sample which was therefore representative of the CBD.

The problem that occurred with our survey was that on West Street there were far more buildings than on any of the other roads that we surveyed. There were more buildings because it was a residential road with the terraced and tightly packed houses (*Figure 3a.10*). Due to the fact we didn't count a set number of buildings on each road more were analysed on some streets than were on others leading to a disproportionate representation. Another problem with our survey was that we didn't sample enough roads to get reliable results. Finally some of our results may have been inaccurate due to human error as we had to guess what was on some upper floors.

Therefore the pie charts (*Figures 3a.5 – 3a.7*) may be inaccurate. Due to the representation of West Street, the pie charts show more housing than there should be in the CBD. Therefore our conclusion that housing was prominent in the CBD may be false.

To improve our results we could've analysed more streets making conclusions more reliable. If we had more time we could have also asked building owners what was on the upper floors, this would've improved accuracy as it would have stopped certain streets majorly affecting our data; also the data would cover the entire CBD. These improvements would increase the accuracy and validity of our data and therefore our conclusions.

Traffic Count

Our traffic counts were taken from the PLVI all the way into the suburbs at intervals of 50m each. This allowed for a significant distance between readings for the count to change. This method allowed us to collect data that represented the whole CBD while making changes notable.

The problems that occurred with our method were that firstly; we only went away from the PLVI in one direction, therefore meaning that the data only showed one half of the CBD. Also we took traffic counts from different times throughout the morning meaning that traffic was heavier around 9am during rush hour when we started but lighter at 11am when we finished.

Therefore the data (*Figures 3b.1 and 3b.2*) may be inaccurate and have false correlations. Our conclusions could be false as we didn't collect data representing the entire CBD and the validity could be questioned due to the times the recordings were taken at.

If we wanted to improve the results we should have taken 10 readings going in each direction from the PLVI with regular intervals then taken the mean of the counts at each distance. Also we should've focused on the traffic count all at once so the times the readings were taken would be closer together allowing for less of an impact on the data by the time of day. This would've helped improve the validity of our conclusions.

Car Park Analysis

By analysing every car park in the CBD, with varying directions and distances from the PLVI we collected data that represented the CBD as a whole. Also as we counted the amount of spaces ourselves we were able to get a more accurate number that the rounded one situated on signs outside some car parks.

Because the car parks were spread out across the whole of the CBD, one was 1850m away (*Figure 3c.1*), it was a very time consuming exercise. The disadvantage of this was it may have compromised the other surveys leading to invalid data elsewhere. Also we had to rush to count the spaces in some car parks meaning we may have miscounted some spaces, therefore our data may have been inaccurate.

Because we were rushing to collect some data we may have miscounted the spaces therefore meaning that certain results may be incorrect (*Figure 3c.1*) and thus the correlation figure may be false (*Figure 3c.2*). Therefore this could have led to the conclusions regarding the results being wrong.

To improve the survey we could've chosen to survey less car parks meaning we would've had time to count each car park accurately and precisely. We could've chosen which car parks to study by making sure that they were at regular intervals from the PLVI so there would still be a representation of the CBD as a whole. This would then lead to increased accuracy and thus more valid conclusions.

Word Count for section 5 - Evaluation: 643