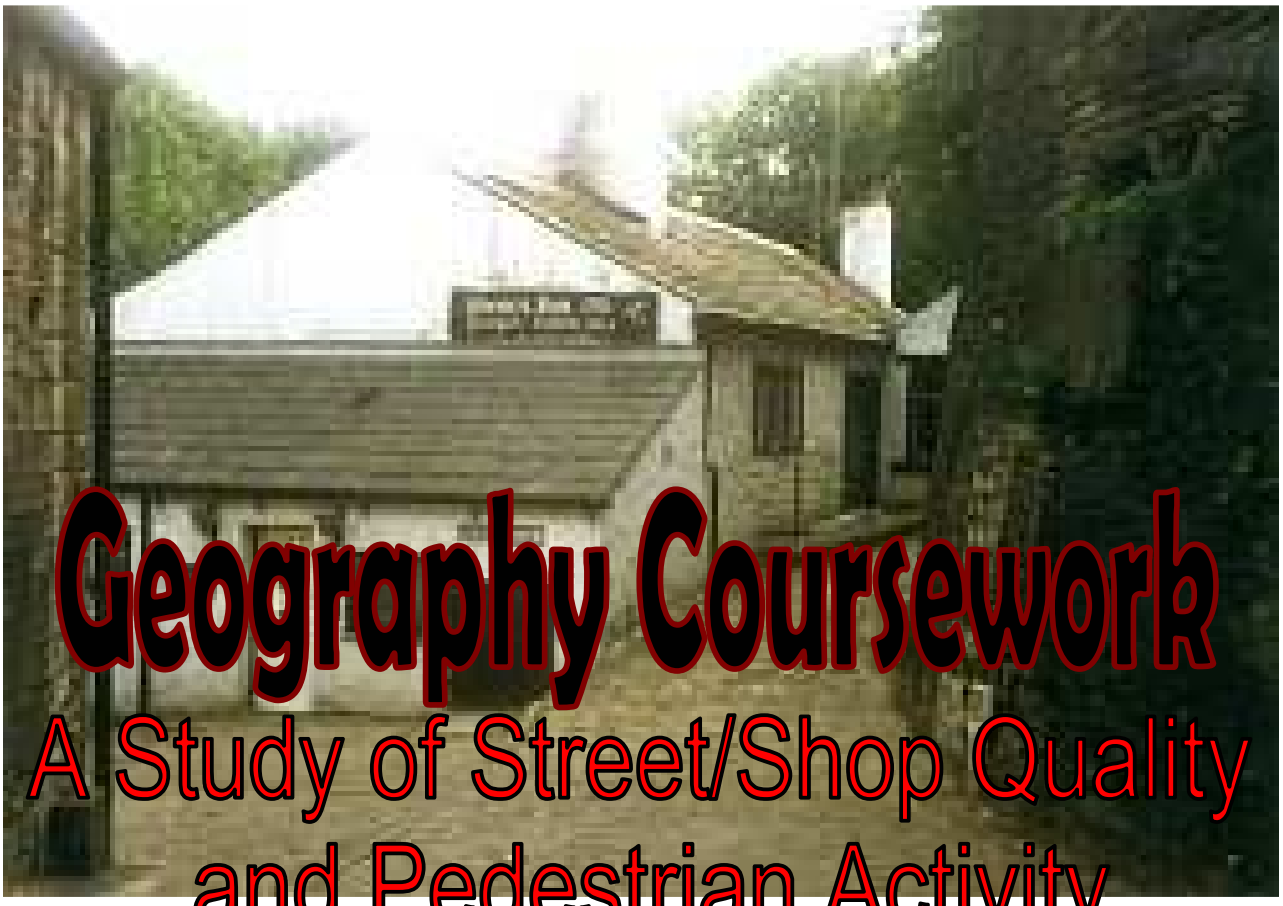


Geography Coursework

A Study of Street/Shop Quality and Pedestrian Activity in Halifax

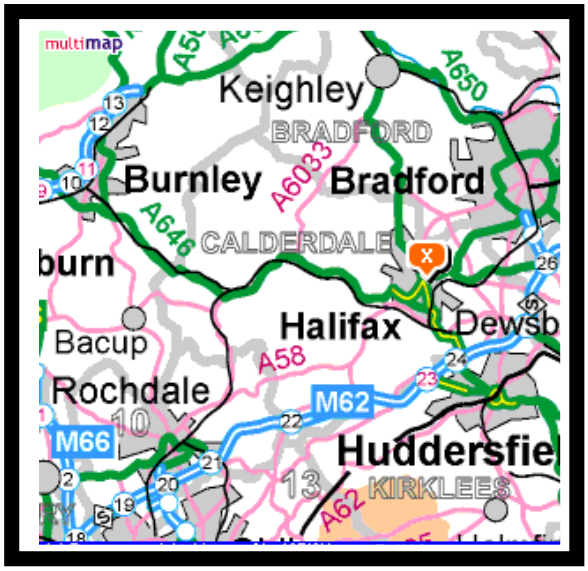
Ben Greenbank 10A

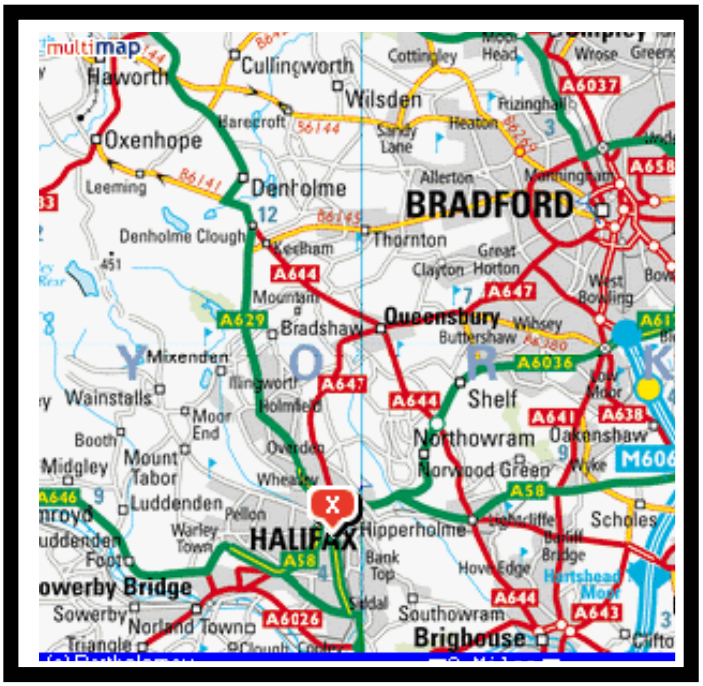
Contents

The following sources were used in the making of this project

www.bbc.co.uk/schools/gcsebytesize
www.s-cool.co.uk
Understanding GCSE Geography
The Wider Worlds

Location of Halifax



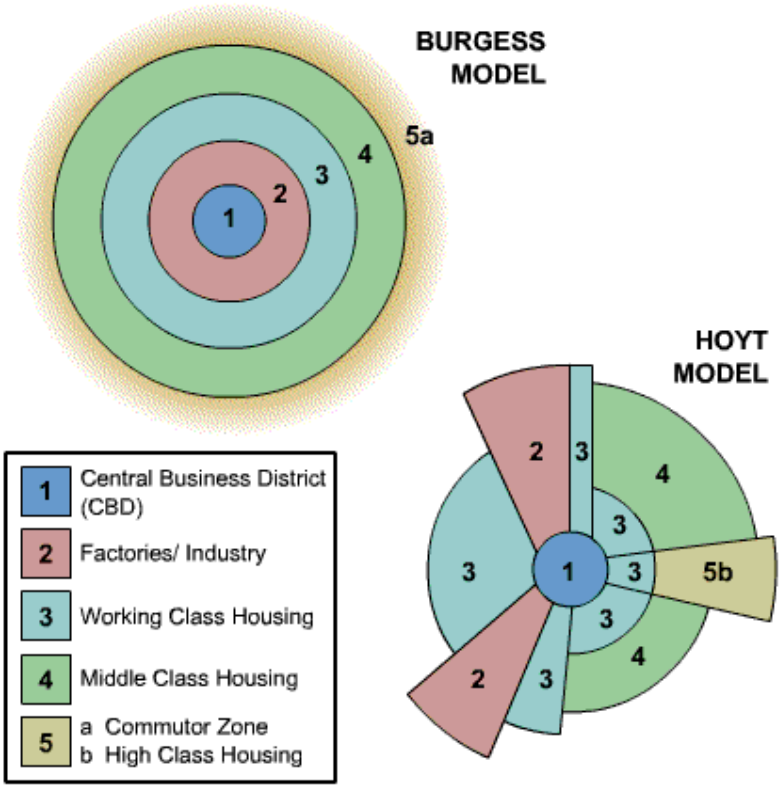


Halifax is situated about the centre of the British Isles in West Yorkshire. It is about half way between Leeds and Manchester. There are good motorway links to Halifax from the M62 and the M1. The above maps show Halifax at different elevations. Neighbouring towns to Halifax are Bradford and Huddersfield.

Introduction

Urban Morphology

Two main models are used to show the land use in more economically developed countries such as England, they are both shown below.



1. CBD – The central business district is the commercial centre of the city. There are usually no houses here because the land values are too high. Buildings are tall and packed together to avoid huge land costs.
2. Factories / Industry – This area is filled with poorer quality housing and run down factories. In some areas the inner city as the section is known has been renovated by the local council and can be a desirable place to live.
3. Working Class Housing – Often this area is terraced housing and poorer people live here.
4. Middle Class Housing – Often estates of detached or semi-detached houses.
5. Commuter Zone / High Class Housing - Often people live in villages on the outskirts of the city and travel to work from here. High class housing can also be found in this area.

The Central Business District (CBD)
The CBD is the area with the highest land price, which is only affordable to businesses.

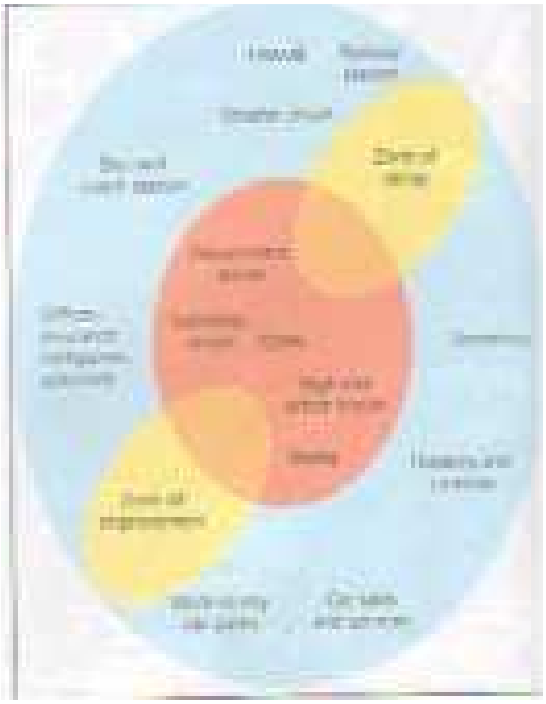
Industry is located around this in the zone of transition . In many cities, such as London's docklands before the council gave it a grant, this area is empty and in need of renewal.

Beyond the zone of transition are the rings of residential housing. As people became wealthier they could afford to live further out of town, in bigger houses, with larger gardens. The houses closest to the centre originally would have housed the workers for the inner city industries who may have worked in the mills. Many British cities still have many of these terraced houses remaining.

The CBD is the commercial heart of the city. It can be recognised by the large gatherings of people and tall buildings. It has very good communication links for instance the bus and train stations are usually situated here.

The CBD is the top of the shopping hierarchy and is home to the biggest department stores and the most famous chain shops. Land is very expensive here as big companies compete to get the most expensive land. On the edge of the CBD are the Specialist stores such as those selling musical instruments and newsagents.

Big offices and bank headquarters are built in the CBD as it is easiest for employees to access. These are usually high rise office blocks or the upper floors above shops. The CBD is also the centre of culture and entertainment with cinemas, nightclubs and restaurants.



The diagram on the left shows the core and frame of the CBD

The Rural-Urban Fringe
The rural urban fringe is the area beyond the suburbs and it lies at the edge of the built-up area next to the countryside.

The growth of cities has caused urban sprawl outwards into the countryside, engulfing small villages, and farms and woodland. The land on the rural-urban fringe is wanted for housing, business parks, out of town shopping centres etc…

The two Hypotheses will need to be studied in more de tail

Does the amount of pedestrian activity decrease with distance from the PLVI ?

It is believed that the above statement is true an attempt is going to be made to prove the above statement to be true. Higher quality department stores are built closer to the PLVI and these shops attract more customers. The Peak Land Value Intersect (PLVI) is the area of land in the centre of the town where land values are highest. The department and chain stores are usually situated here because of the high number of pedes trians and good road links to the area. The stores near the PLVI attract more customers and so there will be more pedestrian activity here. Specialist shops, which attract fewer customers, can't afford to build near the PLVI and so they build further away.

A possible anomaly to this in Halifax is the bus station which is away from the CBD but attracts large numbers of people trying to catch a bus. The bus station doesn't need to attract impulse buyers and so is built away from the PLVI. The land which the bus station is built on is also much cheaper.

Pedestrian activity was chosen because it was thought to give a strong correlation with few anomalies. To measure pedestrian activity grouped data is going to be used. The number of pedestrians travelling past the designated spots in five minutes will be recorded. Spearman's rank and scatters graphs will then be used to find any possible trends and also it will be possible to spot any anomalies.

Does the Quality of Shops/Streets decrease with distance from the PLVI?

The above hypothesis was chosen because of the variation it offered and the large scope for information. It is believed that the above statement is true an attempt is going to be made to prove the above statement to be true. The shops built in the area near to the PLVI are richer shops and so can afford to make their shop fronts more presentable. The quality of shops is higher near to the PLVI because the low grade specialist shops can't afford the land values and so department stores, who can afford the land values, are built near the PLVI. The larger amounts of people will mean more litter bins and so a decrease in litter will be seen near to the PLVI. There will be less vacant lots because the lots nearer to the PLVI are in higher demand and so it is unlikely for the area to be vacant.

A possible anomaly to this is Sainsbury's supermarket which is situated in a retail park on the edge of the CBD; however it will have a very appealing appearance because Sainsbury's is a rich chain store with many sh ops around the UK. The store is very large and it is much cheaper to build on the edge of the CBD than near to the PLVI. There is also more room for parking on the edge of the CBD than next to the PLVI.

To measure shop/street quality the shop/street in qu estion will rating on a scale of 1-5 with five being the best. The categories will be shop appearance, litter, vacancies, safety for pedestrians and type of shops. An average mark will be found for each spot and the data shown in scatter graphs and spearman's rank.

The weather on the day was very sunny and there was no road works etc… preventing any data from being collected .

The group set off from school at 9am and walked from Crossley Heath School to the Halifax CBD on foot. For safety reasons all roads encountered were crossed with the aid of a member of the Crossley Heath staff .

Collection of Data

The Data collection methods will now be explained thoroughly

Does the Quality of Shops/Streets decrease with distance from the PLVI ?

On the 9th of June 2003, 32 survey points, selected beforehand, were studied for their shop/street quality they were all graded on a scale of 1 -5 in the following categories: amount of litter, the shop type, safety for pedestrians, the amount of vacant lots and the appearance of the shops. These five categories were chosen because they were deemed to be the most important factors to take into account when considering the shop and street quality. 32 points were chosen because the points covered the CBD thoro ughly and gave large number of results from which to draw conclusions

After travelling by foot to the CBD the survey began at 10am and lasted until 3:15pm. The only problem encountered was that some streets contained very few shops and so shop appearance/ shop quality was very hard to judge. There were no streets however that did not contain any shops.

The data collected was recorded on a table like the one below . The average mark was found and recorded on the booking sheet as a rating.

Point	Litter	Shop Type	Safety	Vacant	Appearance	Rating
1	5	4	2	4	4	3.8
2	4	2	3	4	3	3.2
3	3	4	4	3	2	3.2
4	4	1	5	2	2	2.8
5	5	3	4	5	1	3.6
6	2	1	3	3	1	2
7	4	2	5	4	1	3.2

The score allocation was as follows

Litter
1. No Bins, Much Litter
5. Many Bins, No Litter, Road Sweeper

Shop Type
1. Low Order Convenience Stores
3. Specialist Stores
5. High Order Chain Stores

Safety
1. Busy Main Road
3. Not Busy, No Pelican
5. Precinct

Vacant
1. Many Vacant
3. 1 or 2 Vacant
5. No Vacancies

Appearance
1. Damaged, Very Scruffy
5. Well Maintained

The points studied are shown on the next page

Does the amount of pedestrian activity decrease with distance from the PLVI ?

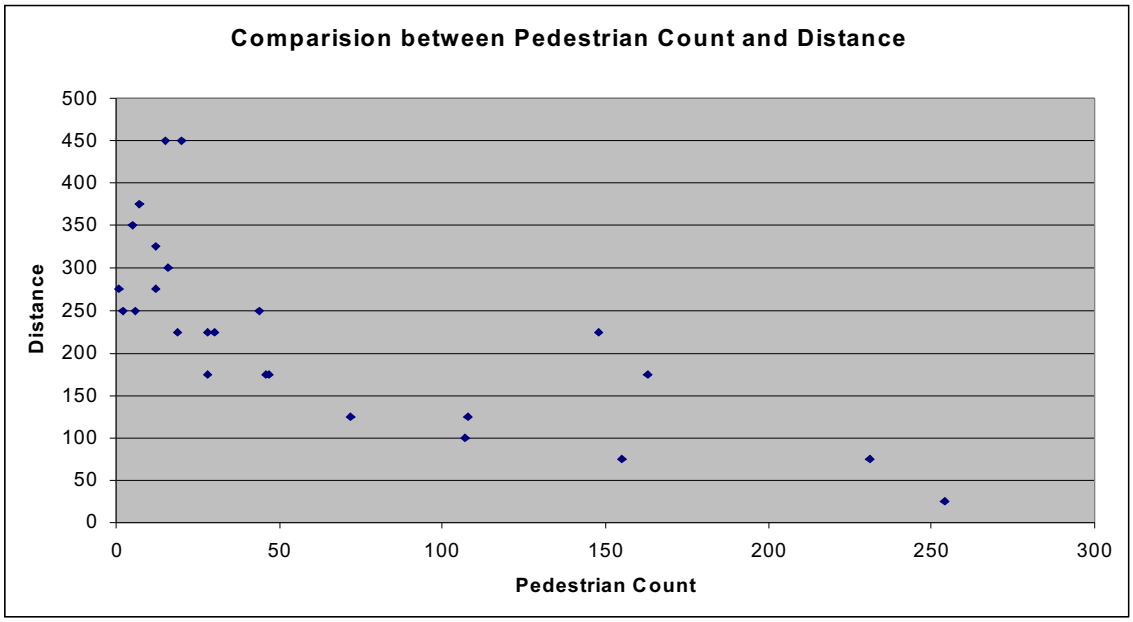
On the same day a five minute pedestrian count was taken of one hundred different spots around the Halifax CBD . The CBD was split up into four areas and one or two spots designated to each pupil. For safety reasons pupils worked in groups of two or three. The data was recorded on a tally chart and each pupil handed their data in to the teacher at the end of the fifteen minute period from 1:00 to 1:15. The collection of the data was done in a short space of time to ensure that the results were fair i.e. There would more people at 4:00pm than at 9:00am, so all results were taken at a similar time.

Only people who passed on the same side of the road as the pupil were counted and in precincts all of the pedestria ns passing the pupil in the precinct were counted.

Presentation of Data

Does the amount of pedestrian activity decrease with distance from the PLVI?

Scatter Graph



25 points were picked from the results table and were used to form the scatter graph above.

The raw data is shown on the previous page with the results used in the above scatter graph highlighted in blue.

The graph shows a quite strong negative correlation between distance and pedestrian count. There is only one minor anomaly, which is highlighted in red above. It does not really fit the trend but is not a major anomaly.

The graph shows that as distance from the PLVI increas es pedestrian activity decreases. This conclusion is accurate with the predictions made at the beginning of the project.

Isoline Map

The Isoline Map (which is shown overleaf) shows that the areas with the highest levels of pedestrian activity are nearest to the PLVI. This again is accurate with the predictions made. The Key shows the amount of pedestrian activity represented by the colour used.

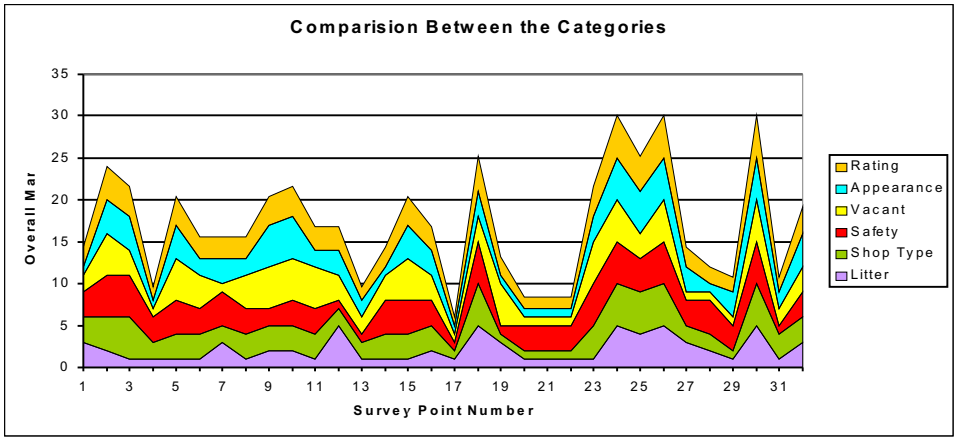
Spearman's Rank

The Spearman's Rank Correlation Coefficient is a way of measuring the correlation between two sets of data.

Spearman's Rank has been used to calculate the correlation between pedestrian count and distance from the PLVI. The result given was a strong negative correlation of -0.811. This means that as distance from the PLVI decreases the level of pedestrian activity increases. The significance of this result is 99.9% significant. This can be calculated from the graph on the previous sheet.

The is accurate with the prediction made earlier that as distance from the PLVI decreases the level of pedestrian activity increases because the chain stores nearest to the PLVI attract the most customers and so there is more pedestrian activity near to the PLVI.

Does the Quality of Shops/Streets decrease with distance from the PLVI ?



The above graph shows that when a particular point had a high score for litter it also had a good score on the other four categories. For example point 21 scored quite lowly on all categories and all the bars are similar length whereas point 24 scored highly and all its bars are of s imilar length.

This means that there is a strong correlation between the five categories selected i.e. if the point's scores a three on one category it is likely to score 2 , 3 or 4 on the other categories.

Photographs

HORTON STREET

Poor Appearance

Low order goods, poor restaurant

Cars- poor safety for pedestrians

WOOLSHOPS

Appealing shop front

Prescient area, good safety

Evaluation

Does the amount of pedestrian activity decrease with distance from the PLVI ?

On reflection the methods of data collection were reasonably reliable , however it was necessary to rely on the judgement of others a nd therefore it cannot be certain that the data is entirely accurate. It is impossible for a single person to take the data and to still ensure a fair test i.e. the data could not be recorded by a single person at the same time or on the same day. 100 pieces of information were collected, which is definitely enough to draw accurate conclusions. No problems, such as road works or closed streets, were encountered getting the data. If the survey were to be repeated a different location would be used e.g. Manch ester or Leeds to see if similar results were found in a different town or city. Also the results could be taken at 5.00pm in Halifax to get a variation of results.

It is thought that the results collected were very accurate and that they would have shown a similar correlation if take at a different time. The relationship was very strong (-0.0811 on the spearman's rank). The Scatter graph, Isoline Map and Spearman's Rank all support the prediction that there will be more pedestrian activity near the PLVI t han further away from the centre. None of the pieces of evidence went against the predictions made at the start of the project.

The conclusions that can be drawn from this are that higher quality department stores are built closer to the PLVI and these sh ops attract more customers. The Peak Land Value Intersect (PLVI) is the area of land in the centre of the town where land values are highest. The department and chain stores are usually situated here because of the high number of pedestrians and good road links to the area. The stores near the PLVI attract more customers and so there will be more pedestrian activity here. Specialist shops, which attract fewer customers, can't afford to build near the PLVI and so they build further away. Therefore there is m ore on average pedestrian activity decreases with distance away from the PLVI

Does the Quality of Shops/Streets decrease with distance from the PLVI ?

The methods used were reliable when compared to the rest of the data in this project, however another persons perception of the same street may be different and so the results collected may vary when compared to a different persons results. The only problem encountered was that some streets contained very few shops and so shop appearance/shop quality was ver y hard to judge. There were no streets however that did not contain any shops. Enough points (25 points) were studied however it would have been better if more categories had been chosen for example number of floor i.e. shops nearer to the PLVI would have more floors because of the land values and because they are bigger and better shops so can afford more than one floor. That is what would be done if the survey was repeated.

The results are accurate because each point was studied in enough detail and a mark given and considerable thought. The raw data supports the predictions and there aren't any results that don't support the theory.

The results provide enough evidence to reach the following conclusion, The shops built in the area near to the PLVI are r icher shops and so can afford to make their shop fronts more presentable. The quality of shops is higher near to the PLVI because the low grade specialist shops can't afford the land values and so department stores, who can afford the land values, are buil t near the PLVI. The larger amounts of people mean more litter bins and so a decrease in litter will be seen near to the PLVI. There are be less vacant lots because the lots nearer to the PLVI are in higher demand and so it is unlikely for the area to be v acant. Therefore shop/street quality decreases with distance away from the PLVI.