

# An analysis of perceptions of disparity between Calton and Bearsden



**Word count (excluding titles, headings, diagrams, appendix and references): 3299**

## **Introduction**

In the 21<sup>st</sup> century there is growing disparity across the country due to numerous socio-economic factors. This is represented in population indicators such as life expectancy and is notable in urban areas such as greater Glasgow where there are significant differences in life expectancy across the area. For example, the ward of Calton has been widely reported as having the lowest life expectancy in Europe, at 54 years<sup>1</sup>. In comparison, in another part of greater Glasgow - Bearsden in East Dumbartonshire - life expectancy is 80.5 for men and 83.9 for women<sup>2</sup>. Whilst the Glasgow Centre for Population Health has shown that figures for Calton have improved to 67.8 years for men and 76.6 years for women<sup>3</sup> these figures remain lower than Bearsden. Population indicators such as life expectancy can lead to perceptions being held by the public about certain social, economic and environmental measures of disparity.

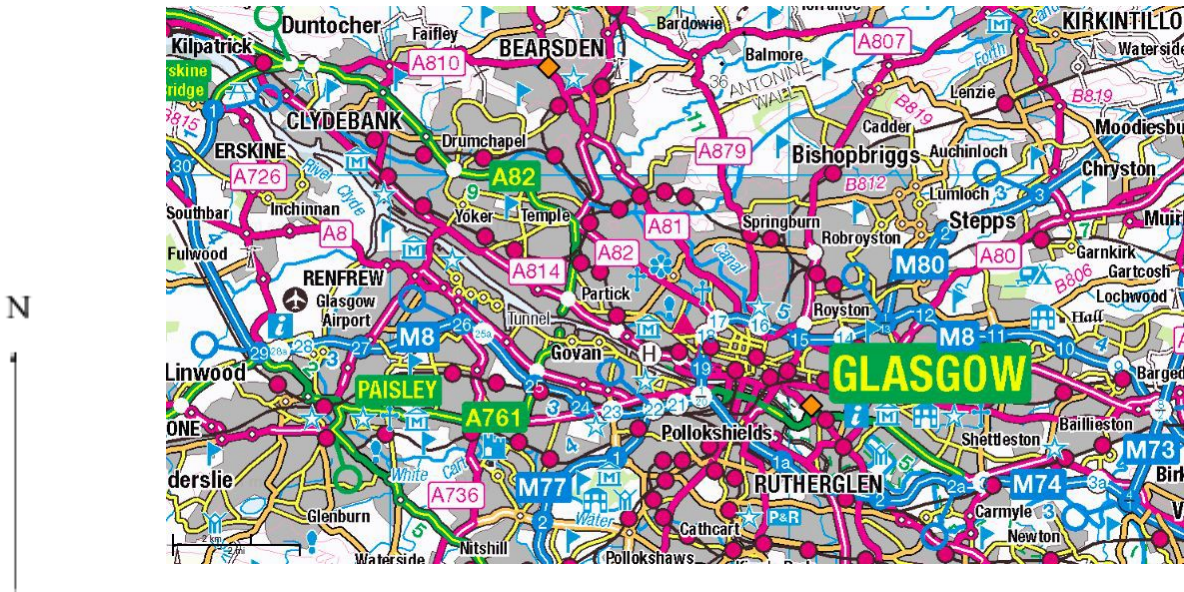
The purpose of this urban-based geographical study is to analyse perceptions of disparity between Calton and Bearsden and compare these perceptions to secondary data using various graphical and statistical techniques. No published work was found analysing perceptions of disparity between urban areas, providing relevance to the study.

Through research relating to analysis of various solutions combatting Japan's ageing population problems during the geographical issue section of the course, an interest in population and social issues developed. From this, the aim to analyse perceptions of disparity in these areas was created. Perception study results can be compared to significant secondary data to provide this analysis.



**Locations**

Map 1

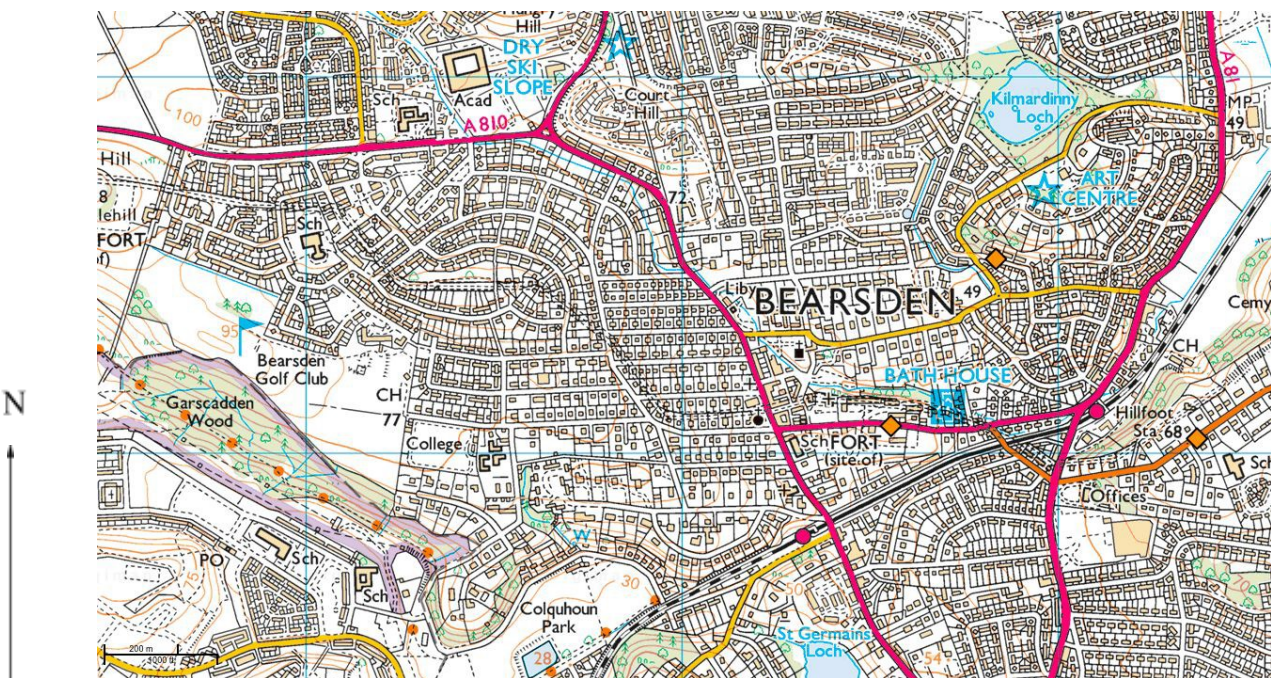


*(digimaps) showing the locations of Bearsden and Calton (indicated by orange quadrilaterals) in relation to each other - distance 7.4 miles*

As shown in Map 1, Calton and Bearsden are within Greater Glasgow; Bearsden is located 7.4 miles north west of Calton.

*Individual areas are shown in detail below.*

Map 2

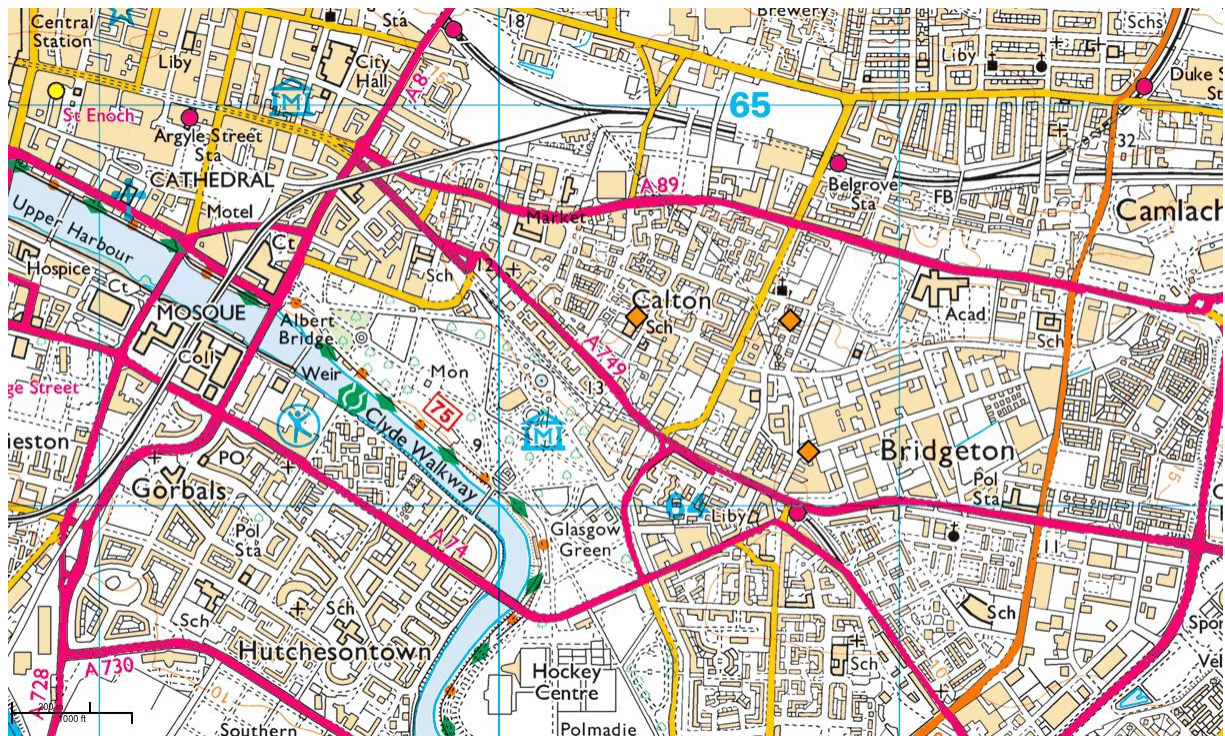


*(digimaps) of Bearsden. Orange quadrilaterals indicate the sites where the environmental quality surveys for Bearsden were carried out.*



## Map 3

N



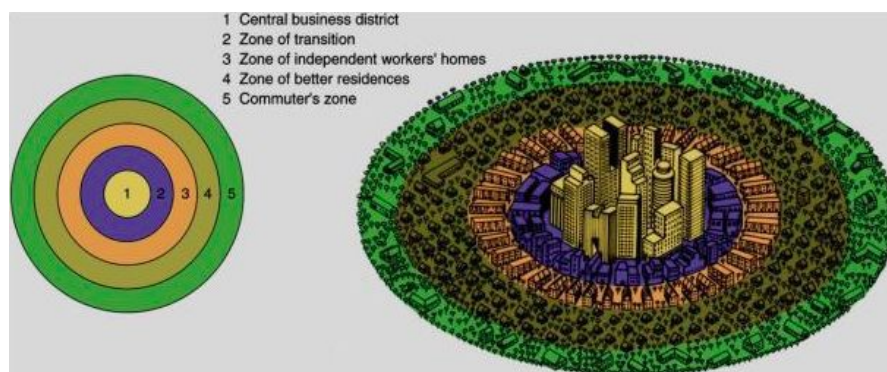
*(digimaps) of Calton. Orange quadrilaterals indicate the sites where the environmental quality surveys for Calton were carried out.*

### Urban Sociology

There are several urban models which have been created to assist our understanding of the way in which cities exist and develop. By applying these urban models to Glasgow, the antecedent of the perceptions can be contextualised.

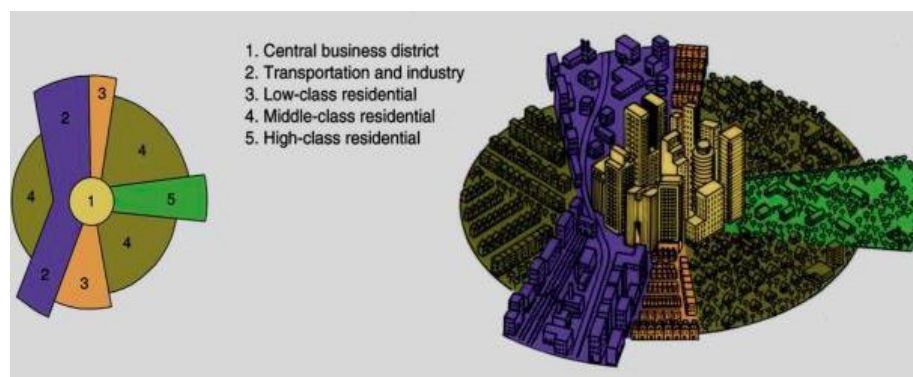
In relation to the Concentric Zone Model developed by Ernest Burgess (figure 1), Calton is located in in zone 2 -the zone of transition. Bearsden is located in zone 5 commuter's zone, within the greater Glasgow area. However, this model is too simplistic to apply to the majority of cities because of its homogeneity. Alternative models must therefore be considered to give a more realistic depiction of the urban model of Glasgow.

Figure 1-concentric zone model developed by Burgess



The sector model was developed by Homer Hoyt (figure 2), and he stated “the entire city is considered as a circle and the various areas as sectors radiating out from the centre of that circle”<sup>4</sup> as noted by Chauncy D. Harris and Edward L. Ullman in their research, ‘Nature of Cities’.<sup>4</sup>

Figure 2- sector model developed by Hoyt



Calton is located in zone 3; low-class residential. Bearsden is located in zone 5; high-class residential. When considered alongside maps, this model is more applicable to Calton than the concentric model as Calton spreads out from the CBD along a transect. Furthermore, whilst Bearsden does not spread from the CBD, Glasgow’s west end lies within zone 5 of the sector model and Bearsden is located at the peripheral of this zone. This shows the sector model is more applicable to the city of Glasgow and the areas of Bearsden and Calton, than the concentric zone model.

## Population Indicators

The estimated populations of Calton and Bearsden are 27,460<sup>5</sup> and 27,237<sup>6</sup> respectively. However, despite their relative proximity and similar estimated populations their population indicators differ dramatically (table 1).

Table 1: Selected population indicators for Calton and Bearsden

Area	Life expectancy male/female	Percentage of the population under 16	Percentage of the population over 65	Percentage of the population from an ethnic minority
Bearsden	80.1/84.4	18.2%	21.3%	8.6%
Calton	67.8/76.6	11.4%	6.4%	12.1%

## Definition of disparity

According to the Cambridge Dictionary disparity is a “lack of equality in a way that is not fair”. In a geographical context disparity is relevant within social geography as disparity is present within communities in relation to many factors e.g. income level. Professor Dorling of the University of Oxford indicates this through research into social inequality in his book *‘Geography: ideas in profile’*<sup>7</sup>. Disparity may also be caused by these factors as disparity in one form can lead to greater disparity across other aspects.

## Hypotheses

The following hypotheses were applied to analyse people's perceptions of social, economic and environmental disparity between the areas of Calton and Bearsden.

1. People's perceptions will reflect social disparity between the two areas and perceptions of social disparity will differ dramatically.
2. People's perceptions will reflect economic disparity between the two areas and perceptions of economic disparity will differ dramatically.
3. People's perceptions will reflect environmental disparity between the two areas and perceptions of environmental disparity will differ dramatically.
4. There will be no significant difference between the observed and expected frequencies of people's perceptions based on expected frequencies being equal for all parts.

## Methodology

To gather data of perceptions of disparity between Calton and Bearsden, a perception study made up of pre-prepared statements was issued to 100 members of the public. Participants were told the names, estimated population sizes and distance between the two settlements. Each individual was asked to respond to these statements using the scale below (figure 3). A statement example is "I expect the population of Calton to have a higher proportion of over 65s than the population of Bearsden".

Figure 3: perception study scale

Strongly agree

Agree

Disagree

Strongly disagree





The statements were phrased in this way so the gathered data could be investigated and processed in comparison with the secondary data. This gathered data gives relevant insights into perceptions of these areas which can be used to carry out analysis and identify relationships. To ensure the reliability of the data, 100 responses were gathered using approaches including social media and emails. However, the majority of responses were from 'Facebook friends' therefore reducing the reliability of the data and creating bias as the demographic is unrepresentative of the general public.

If further research was conducted, data would be from a larger group to increase reliability of the data. Furthermore, a numerical scale would be used to reduce the literal structure of the perception study as this may have influenced results, whereas a numerical scale may reduce this unintended bias.

To gather perceptive data on environmental disparity, six environmental quality surveys were conducted by looking at Google Street View and satellite images in Apple App 'Find my friend' using the criteria below (figure 4). Air pollution is measured by Glasgow City Council and their readings were used in this survey. The air pollution monitors nearest to the chosen streets were used for this data.

Figure 4 (Field Studies Council) environmental quality index used in all 6 sample sites

Urban Studies- An Environmental Quality Index			
Area			
	Hint	Score	
<b>Paving and Road</b>			
• No damage or broken paving, no uneven slabs, road surface in good repair	10		
• Some paving damaged, road showing some signs of need of repair	5		
• 50% or more paving or road surface in need of repair	0		
<b>Litter</b>			
• Completely clean, no litter	10		
• Some litter but not obtrusive	8		
• Litter over 10% of the area	5		
• Litter over 25% of the area	0		
<b>Dereliction</b>			
• Little evidence of dereliction	5		
• Extensive dereliction	2		
• Massive dereliction (Danger to children, cars, etc.)	0		
<b>Street furniture</b> (includes bollards, telephones, street lighting, litter bins, pillar boxes and road signs)			
• All items in good working order and maintenance	10		
• Some items in need of maintenance	5		
• A lot of items in need of maintenance	3		
• 100% derelict	0		
<b>Advertisements</b>			
• No advertisements in the street	5		
• Over 15 advertisements per 100m of street	0		
<b>Air pollution</b>			
• No pollution	5		
• Some pollution when wind is in right direction	4		
• Moderate pollution	2		
• Massive pollution-unbearable, unhealthy	0		
<b>Nuisance</b>			
• No appreciable noise	5		
• Some noise at certain times	4		
• Major noise problem	1		
• Intolerable noise	0		
<b>Landscape/Vegetation</b>			
• One mature tree or 3 shrubs per 20m of pavement	10		
• One mature tree or 3 shrubs per 40m of pavement	8		
• One mature tree or 3 shrubs per 80m of pavement	4		
• Less than one tree/shrub per 100m of pavement	0		
<b>Traffic parking</b> (parking should be carried out at different times of the day ideally to assess the total situation)			
• No parked cars	5		
• Up to 4 parked cars per 100m of street	3		
• Over 10 parked cars per 100m of street	0		
Note: 1 commercial van = 1.5 cars 1 lorry = 2 cars 1 articulated lorry = 3 cars			
<b>Traffic safety</b> (vehicles and pedestrians)			
• Complete segregation of traffic and people- no danger	10		
• Cul-de-sac or play street	8		
• Light traffic in both directions	6		
• Moderate traffic	4		
• Heavy traffic	2		
• Major through route -very heavy traffic	0		
<b>Building Condition</b> (walls and roof)			
• All buildings well maintained	5		
• Half the buildings in the street well maintained	3		
• Over 20% of the buildings semi-derelict (very poor structural order, ready for demolition and clearance)	0		
<b>Condition of boundary walls and fences</b>			
• All in well maintained condition	5		
• 20% need maintenance	3		
• Over half in need of repair and maintenance	0		
<b>General Housekeeping</b> (condition of gardens, forecourts, cleanliness of paintwork, windows and curtains)			
• All well maintained and tidy	5		
• All in reasonable condition	4		
• 25% badly maintained	2		
• Over 50% badly maintained	0		
<b>Total Environmental Quality Score = _____</b>			



This involved ranked data with quantitative values assigned to each factor. Factors including dereliction and building condition were chosen to gain insights into aspects of environmental quality. 'Worse or 'prevalent' factors were given a lower scoring and vice versa. Three sites were chosen in each area by randomly selecting locations from maps of the area meaning reliability and relative importance remains valid. The environmental quality index is comprehensive and coherent hence providing greater clarity to the research. Reliability is further ensured by maintain the same well-established criteria in each location as a control variable.

However, an environmental quality survey remains subjective and open to bias, reducing the reliability of the data. Moreover, whilst the basis of this study is to analyse perceptions of disparity, the restricted number of survey results may provide an unreliable depiction due to certain influencing factors e.g. Parked cars will vary depending on the time of day that the Satellite image on the Apple App was taken which may mean the results are unreliable.

If further research was carried out, several more environmental quality surveys would be carried out to improve reliability and give a wider perception of environmental quality in the area and provided greater basis for statistical research.

Much of the collected data will be supported through the use of secondary data. Several relevant sources of information have been chosen to analyse the perceptions of disparity between Calton and Bearsden. Much of this secondary data has been produced by government bodies deemed to provide reliable evidence of disparity. For example, census data collated by the UK government has been used to determine relationships and compare data related to the primary data. This allows for testing of the significance of perceptions of disparity.

However, this reliance on secondary data can create problems. For example, by using this secondary data there is a possibility data may be out-of-date meaning it is unreliable due to potential inaccuracies that may exist. Furthermore, secondary data can lack the quality needed for research as the information was originally collated for a different purpose. This may mean it is not suitable for this research thus reducing validity and relevance.

If further research was carried out a greater spread of data would be gathered from a wider range of sources to minimise the impact of antiquated data.

## Results

All statistical evidence within results taken from:

[https://www.cldplanning.com/site/assets/files/7292/area\\_profile\\_for\\_east\\_dunbartons\\_hire\\_dec\\_2014.pdf](https://www.cldplanning.com/site/assets/files/7292/area_profile_for_east_dunbartons_hire_dec_2014.pdf)

[http://www.understandingglasgow.com/assets/0002/1237/Calton\\_and\\_Bridgeton.pdf](http://www.understandingglasgow.com/assets/0002/1237/Calton_and_Bridgeton.pdf)

[http://www.understandingglasgow.com/assets/0003/4563/Calton\\_and\\_Bridgeton.pdf](http://www.understandingglasgow.com/assets/0003/4563/Calton_and_Bridgeton.pdf)

<https://www.glasgow.gov.uk/CHttpHandler.ashx?id=3710&p=0>

<http://simd.scot/2016/#/simd2016/BTTTTFTT/9/-4.0000/55.9000/>

**Hypothesis 1- People's perceptions will reflect social disparity between the two areas and perceptions of social disparity will differ dramatically.**

Graph 1-

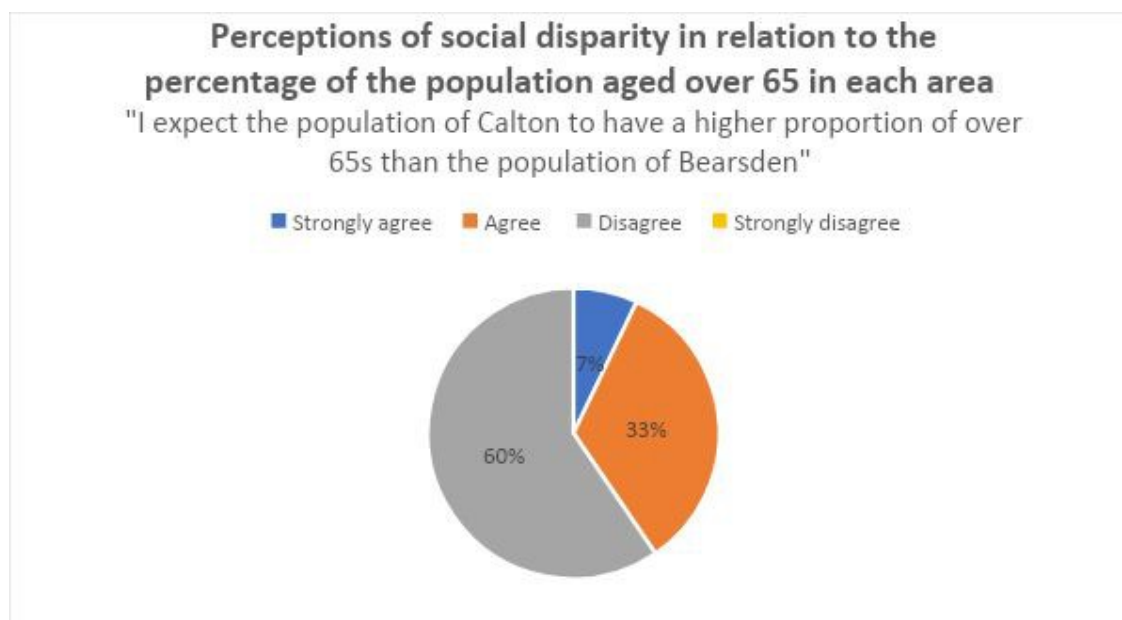


Table 2 -

**Statistical Evidence of proportion of over 65s in the population**

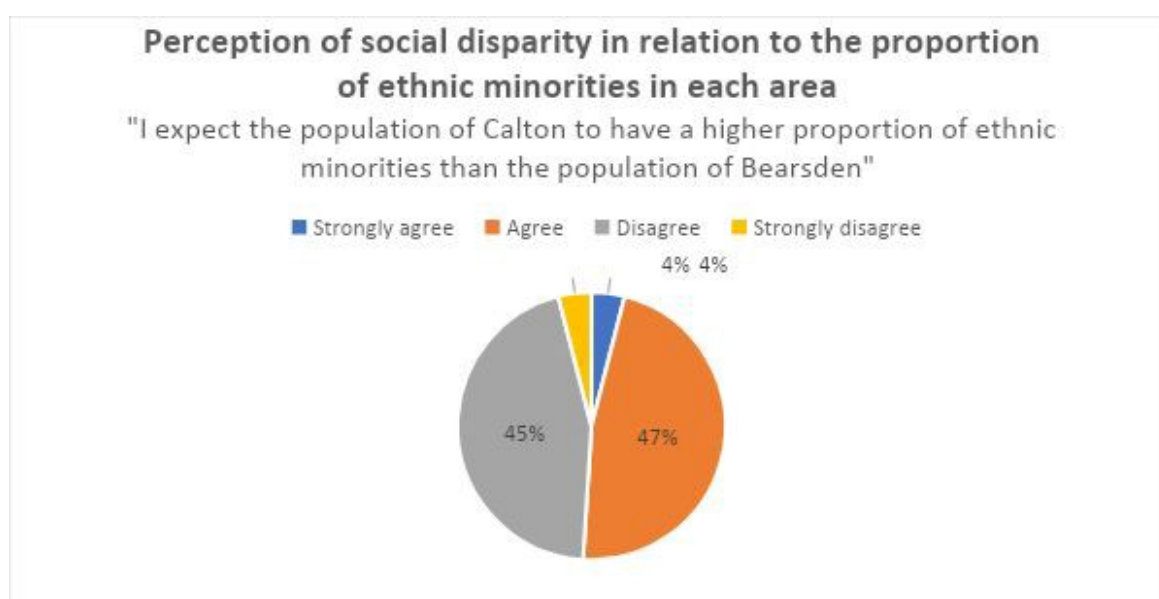
	<b>Carlton</b>	<b>Bearsden</b>
<b>% of population over 65</b>	11.9	21.3
<b>% of population below 65</b>	88.1	78.7

Census 2011

**Analysis**

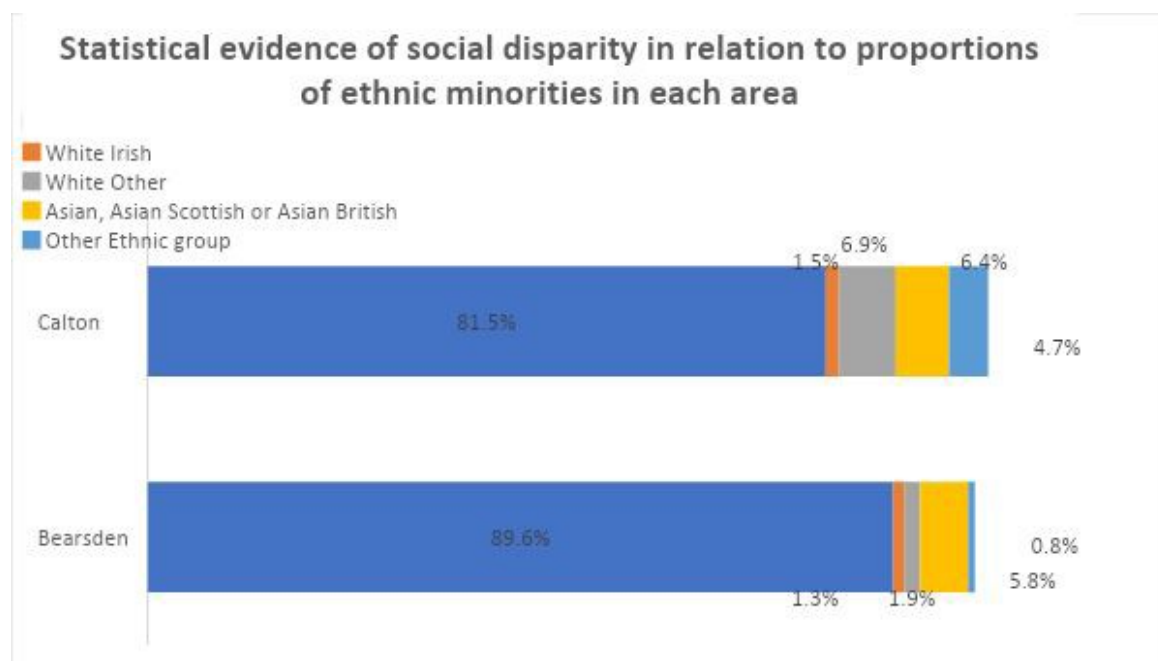
As shown in graph 1, the majority of people, 60%, disagreed with the statement "I expect Calton to have a higher proportion of over 65s than Bearsden". This means that a smaller percentage of the population of Calton was perceived to be over 65 than the population of Bearsden. In table 2 statistical evidence shows that this is true as in Bearsden 21.3% of the population is aged over 65 whereas in Calton 11.9% of the population is aged over 65. This means the perception that a higher percentage of the population is aged over 65 in Bearsden than in Calton is based on evidence, hence this perceived disparity is robust.

Graph 3-





Graph 4-



### Analysis

As shown in graph 3 there is a near-equal split between the percentage of people who perceive there to be a greater proportion of ethnic minorities in Calton and in Bearsden.

However as shown in graph 4, the percentage of the population from an ethnic minority in Calton and Bearsden is 19.5% and 9.75% respectively. This shows there is disparity between the proportion of the population in each area from an ethnic minority along with a large disparity between people's perceptions and reality. However, it must be noted that in both areas the percentage made up by White Scottish and other White British is over 80% for each area meaning that people's perceptions do not reflect social disparity in this instance.

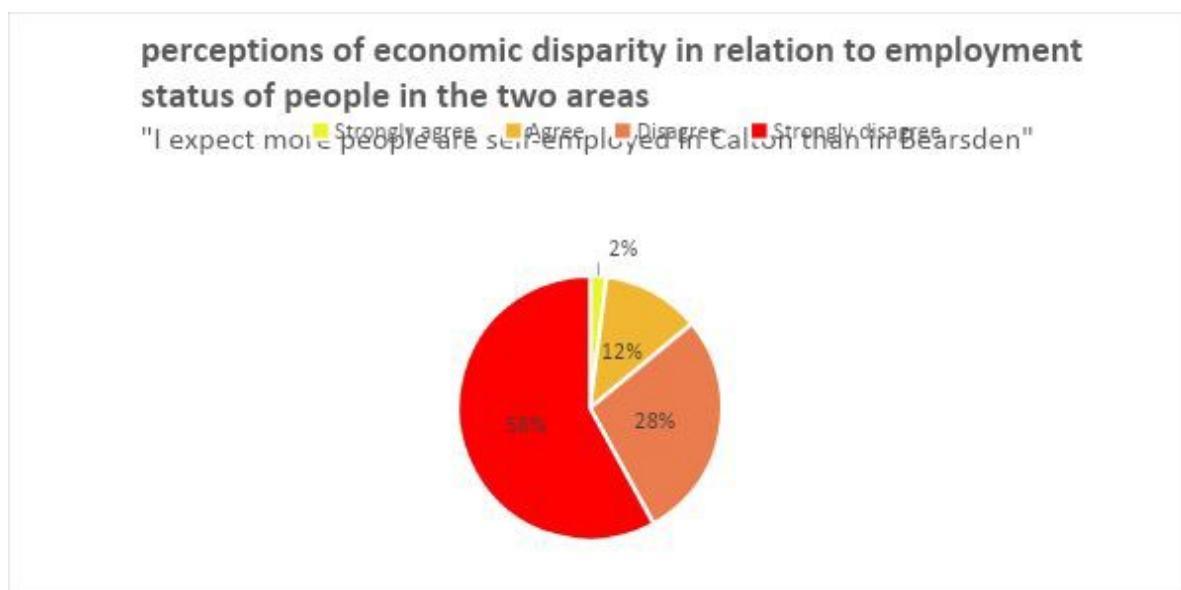
### Evaluation

In conclusion hypothesis 1 must be rejected as people's perceptions do not reflect social disparity evidenced in the secondary data. However, people's perceptions of social disparity do differ dramatically. On one hand, the perceptions gathered do reflect social disparity for example in terms of the number of people aged 65+ reflect data in table 2. Moreover, perceptions do differ dramatically as evidenced in graph 3 where 47% of the respondents agreed with the statement whereas 45% disagreed with the statement showing drastic disparity in responses. Conversely, people's perceptions do not accurately reflect social disparity between as evidenced in graph

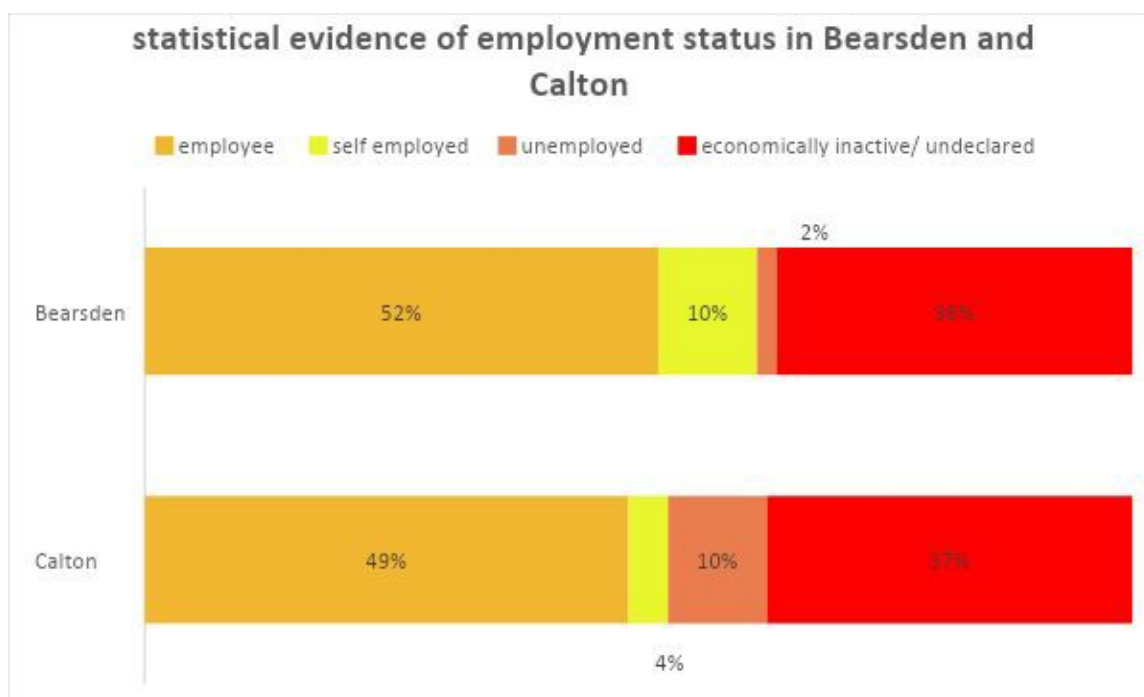
3 which demonstrated a higher proportion of people expected the population of Calton to have a higher proportion of ethnic minorities than the population of Bearsden. Overall hypothesis 1 must be rejected as whilst perceptions of social disparity do differ dramatically, people’s perceptions do not reflect social disparity between the two areas. can either this heading go on the page below.

Hypothesis 2- People’s perceptions will reflect economic disparity between the two areas and perceptions of economic disparity will differ dramatically.

Graph 5-



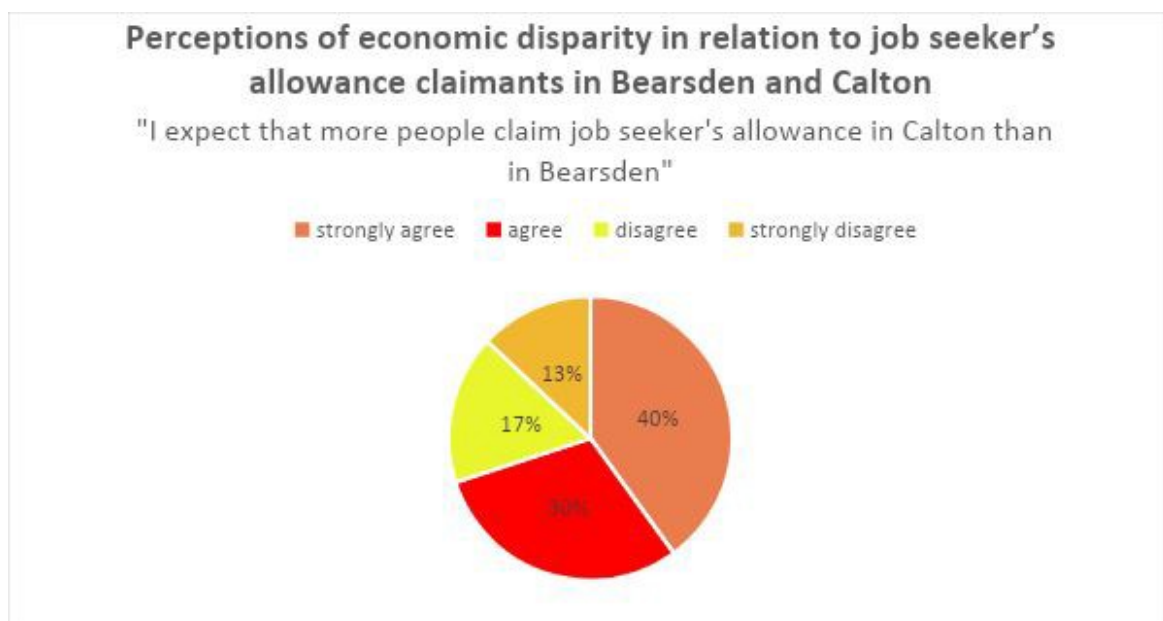
Graph 6-



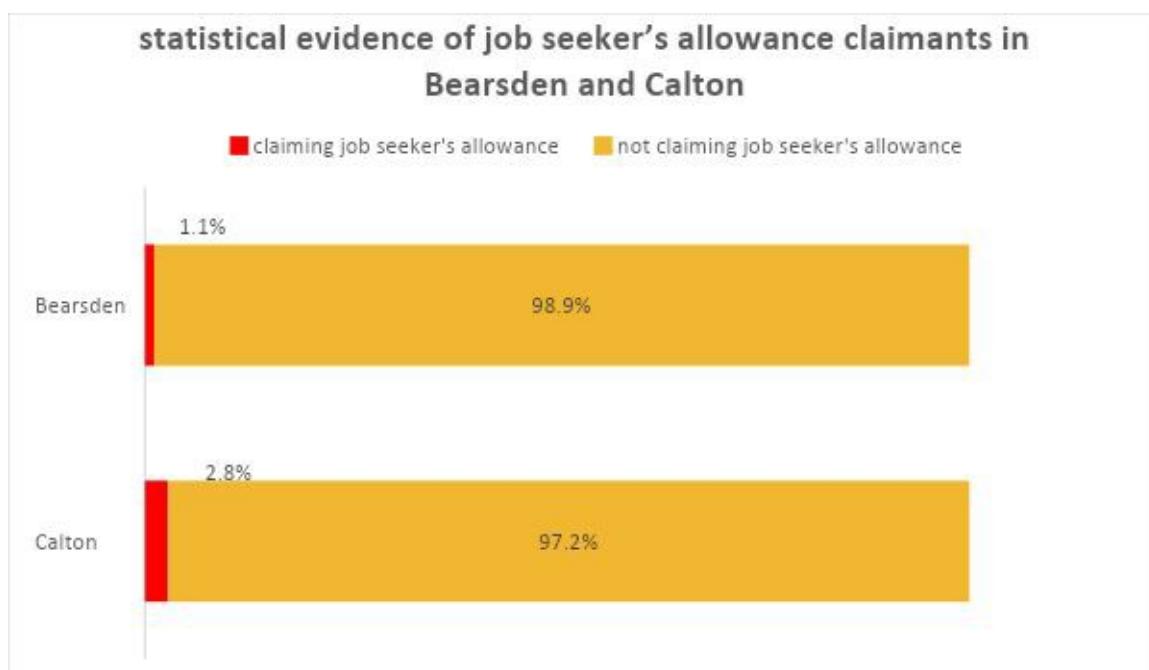
## Analysis

As shown in graph 5 the majority of people, 58%, strongly disagree with the statement "I expect more people are self-employed in Calton than in Bearsden". However, the percentage of people who are self-employed in Calton is relatively similar to the percentage of people who are self-employed in Bearsden at 4% and 10% respectively. This means there is a large disparity between people's perceptions of economic disparity and statistical evidence. This means people's perceptions do not reflect economic disparity in this instance.

Graph 7-



Graph 8-





## Analysis

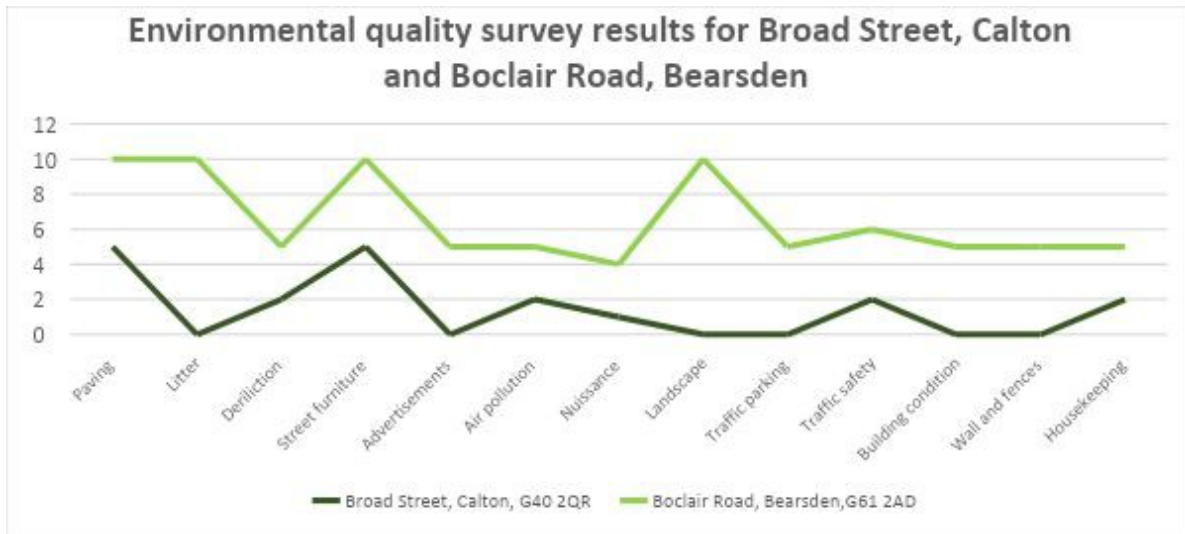
As shown in graph 7, when asked if they expect more people to claim job seeker's allowance in Calton than in Bearsden, 40% of people strongly agreed with the statement and 30% agreed. This means the majority of people are in agreement to a certain degree. Graph 8 shows there is a higher percentage of people claiming job seeker's allowance in Calton than in Bearsden. However, it must be noted there is only a slightly higher percentage of people claiming it in Calton than in Bearsden as the difference in percentage between the two is only of 1.7%. This shows people's perceptions of job seeker's allowance claimants areas show a greater disparity between the two areas than actually exists based on the secondary data. This means people's perceptions do reflect economic disparity however these perceptions may be of a greater disparity than what actually exists; people expect there are more job seeker's allowance claimants in Calton than there actually are.

## Evaluation

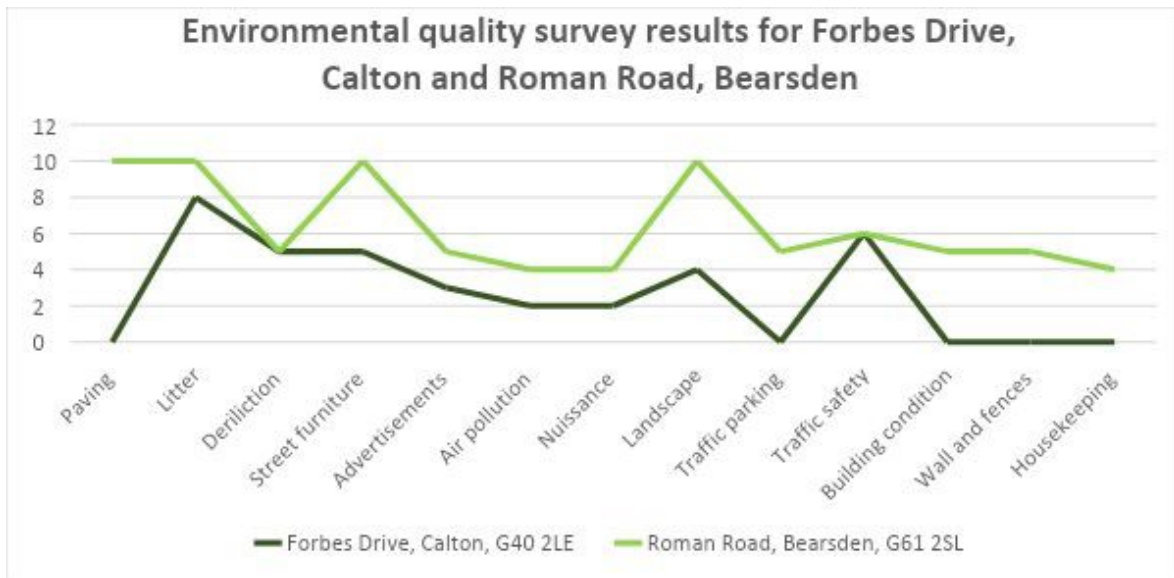
In conclusion hypothesis 2 must be rejected as overall people's perceptions do not reflect economic disparity evidenced in the secondary data. However, people's perceptions of economic disparity do differ dramatically. On one hand, the perceptions gathered do reflect economic disparity in relation to the perception of the disparity, in terms of the percentage of people who believe there are more people claiming job seeker's allowance in Calton than in Bearsden as more people perceive that this is true (graph 7). This is based on statistical evidence (graph 8). Moreover, perceptions do differ dramatically as 23% of people disagree with the statement that more people are self-employed in Calton than in Bearsden in comparison to 19% of people who either strongly agree or agree with the statement. Conversely, people's perceptions do not accurately reflect economic disparity as evidenced in as 58% of people strongly disagreed that there are more self-employed people in Calton than in Bearsden however there is only a difference of 6% between the percentage of people self-employed in each area (graph 6) which shows that people's perceptions are prejudice and more extreme than the data shows. Overall hypothesis 2 must be rejected as whilst the perceptions of economic disparity do differ dramatically, people's perceptions do not reflect economic disparity between the two areas.

**Hypothesis 3- People’s perceptions will reflect environmental disparity between the two areas and perceptions of environmental disparity will differ dramatically**

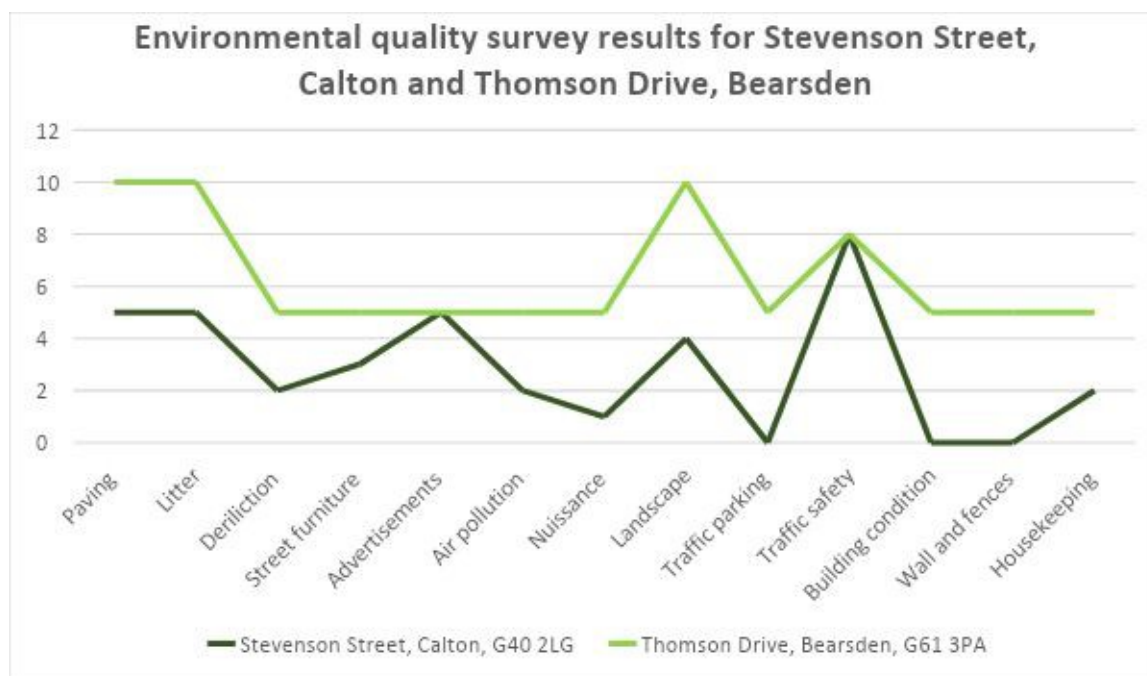
Graph 9-



Graph 10-



Graph 11-

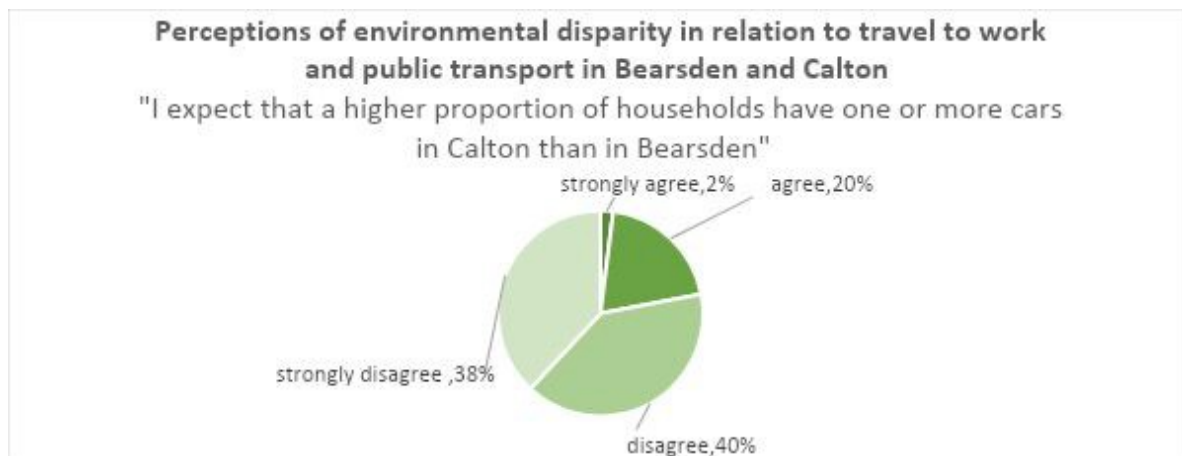


### Analysis

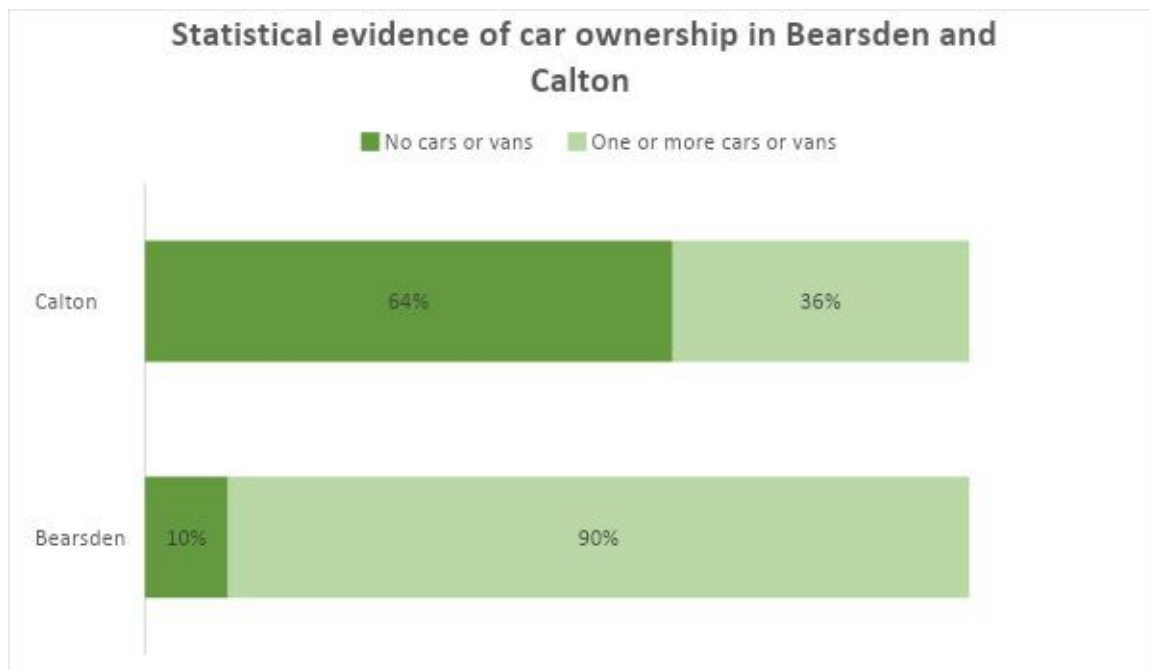
Boclair Road, Bearsden was deemed to have the best environmental quality with an overall score of 85/90 (graphs 9, 10, 11). Broad Street, Calton had the lowest overall environmental quality score of 22/90. Cumulatively, the streets in Bearsden scored more highly than the streets in Calton, revealing that clear environmental disparity exists. Whilst this can be said it must be noted that for several factors, streets from both areas were ranked the same. For example, traffic safety in Stevenson Street, Calton and Thomson Drive, Bearsden were both given 8 points (graph 11). Graph 10 shows that both Forbes Drive, Calton and Roman Road, Bearsden gained a 6 for traffic safety. When graph 10 and 11 are considered alongside each other this shows that Stevenson Street, Calton ranks more highly than Roman Road, Bearsden for traffic safety. This shows that whilst overall the streets selected in Bearsden rank more highly than the streets selected in Calton, in some cases Calton scores more highly than Bearsden. This shows that whilst environmental disparity is there are some anomalies which do not link with this disparity.



Graph 12-



Graph 13



### Analysis

As shown in graph 12, 78% of people either disagreed or strongly disagreed with the statement "I expect that a higher proportion of households have one or more cars in Calton than in Bearsden" meaning the majority of people are in disagreement to a certain degree. Graph 13 shows that the majority of people have one or more cars in Bearsden at 90% whereas 36% of people have one or more cars in Calton. Whilst geographical location and proximity to the city centre may have an influence on this, e.g. the further from the city centre the greater need for a car, it can be said that this indicates disparity.

Whilst car ownership remains much lower within the city as indicated by the statistics for Calton, air pollution in Calton is higher than in Bearsden (graphs 9, 10, 11). This reveals the environmental disparity faced by the people of Calton as whilst a minority have a car, they are exposed to much higher air pollution. This means that people's perceptions do reflect environmental disparity.

### **Evaluation**

In conclusion hypothesis 3 must be accepted as overall perceptions do reflect environmental disparity evidenced in the secondary data and the environmental quality surveys. On one hand the environmental quality surveys (graph 9,10,11) show the extent of the disparity in terms of exposure to air pollution and traffic safety faced by those who live in Calton compared to those in Bearsden. This adds to this environmental disparity as whilst those in Calton contribute less to air pollution based on car ownership alone, they are exposed to more air pollution than those in Bearsden who make a greater contribution to it. Furthermore, perceptions do differ dramatically as 22% of people agree or strongly agree that car ownership is higher in Calton than in Bearsden whilst 78% disagree or strongly disagree with the statement. Overall hypothesis 3 must be accepted as perceptions of environmental disparity do differ dramatically and this environmental disparity shown through the secondary data and environmental quality surveys is reflected in people's perceptions.

**Hypothesis 4- There will be no significant difference between the observed and expected frequencies of people's perceptions based on expected frequencies being equal for all parts.**

By applying chi-squared to perception study results the significance between observed and expected frequencies of people's perceptions (based on expected frequencies being equal for all parts) can be determined.

100 people were interviewed => the expected frequency = 25 based on  $n=4$ .

Hypothesis 4 can be taken as the null hypothesis.

"I expect the population of Calton to have a higher proportion of over 65s than the population of Bearsden"	Strongly agree	Agree	Disagree	Strongly disagree
Observed (O)	7	33	60	0
Expected (E)	25	25	25	25
(O-E)	-18	8	35	-25
(O-E) <sup>2</sup>	324	64	1225	625
(O-E) <sup>2</sup> / E	12.96	2.56	49	25
				$\sum(O-E)^2 =$ 89.52

<p>Degrees of freedom</p> <p>=n-1</p> <p>=4-1</p> <p>=3</p>	<p>The chi-squared result of 3.58 at 3 degrees of freedom exceeds both the 0.05 or 95% significance level of 7.81 and the 0.01 or 99% significant level of 11.34. The null hypothesis can therefore be rejected and replaced by the alternative hypothesis- that 'there is highly significant variation between the observed frequencies of people's perceptions and the expected frequencies of people's perceptions'.</p>
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"I expect the population of Calton to have a higher proportion of ethnic minorities than the population of Bearsden"	Strongly agree	Agree	Disagree	Strongly disagree
Observed (O)	4	47	45	4
Expected (E)	25	25	25	25
(O-E)	-21	22	20	-21
(O-E) <sup>2</sup>	441	484	400	441
(O-E) <sup>2</sup> / E	17.64	19.36	16	17.64
				$\sum(O-E)^2 = 70.64$

<p>Degrees of freedom</p> <p>=n-1</p> <p>=4-1</p> <p>=3</p>	<p>The chi-squared result of 70.64 at 3 degrees of freedom exceeds both the 0.05 or 95% significance level of 7.81 and the 0.01 or 99% significant level of 11.34. The null hypothesis can therefore be rejected and replaced by the alternative hypothesis- that 'there is highly significant variation between the observed frequencies of people's perceptions and the expected frequencies of people's perceptions'.</p>
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"I expect more people are self-employed in Calton than in Bearsden"	Strongly agree	Agree	Disagree	Strongly disagree
Observed (O)	2	12	28	58
Expected (E)	25	25	25	25
(O-E)	-23	-13	3	33
(O-E) <sup>2</sup>	529	169	9	1089
(O-E) <sup>2</sup> / E	21.16	6.76	0.78	43.56
				$\sum(O-E)^2$ =72.26

<p>Degrees of freedom</p> <p>=n-1</p> <p>=4-1</p> <p>=3</p>	<p>The chi-squared result of 72.26 at 3 degrees of freedom exceeds both the 0.05 or 95% significance level of 7.81 and the 0.01 or 99% significant level of 11.34. The null hypothesis can therefore be rejected and replaced by the alternative hypothesis- that 'there is highly significant variation between the observed frequencies of people's perceptions and the expected frequencies of people's perceptions'.</p>
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"I expect that more people claim job seeker's allowance in	Strongly agree	Agree	Disagree	Strongly disagree



Calton than in Bearsden"				
Observed (O)	7	31	33	29
Expected (E)	25	25	25	25
(O-E)	-18	6	8	4
(O-E) <sup>2</sup>	324	36	64	16
(O-E) <sup>2</sup> /E	12.96	1.44	2.56	0.64
				$\Sigma(O-E)^2 = 17.6$

<p>Degrees of freedom</p> <p>=n-1</p> <p>=4-1</p> <p>=3</p>	<p>The chi-squared result of 17.6 at 3 degrees of freedom exceeds both the 0.05 or 95% significance level of 7.81 and the 0.01 or 99% significant level of 11.34. The null hypothesis can therefore be rejected and replaced by the alternative hypothesis- that 'there is highly significant variation between the observed frequencies of people's perceptions and the expected frequencies of people's perceptions'.</p>
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"I expect that a higher proportion of households have one or more cars in Calton than in Bearsden"	Strongly agree	Agree	Disagree	Strongly disagree
Observed (O)	2	20	40	38
Expected (E)	25	25	25	25

(O-E)	-23	-5	15	13
(O-E) <sup>2</sup>	529	25	225	169
(O-E) <sup>2</sup> / E	21.16	1	9	6.76
				$\sum(O-E)^2$ =37.92

Degrees of freedom

=n-1

=4-1

=3

The chi-squared result of 37.92 at 3 degrees of freedom exceeds both the 0.05 or 95% significance level of 7.81 and the 0.01 or 99% significant level of 11.34. The null hypothesis can therefore be rejected and replaced by the alternative hypothesis- that 'there is highly significant variation between the observed frequencies of people's perceptions and the expected frequencies of people's perceptions.

## Analysis

For each statement from the perception study that was tested using the chi-square inferential statistical test, highly significant variation between the observed and expected frequencies of people's perceptions. In reality, this is expected as people will have highly differing perceptions and these chi-squared results confirm this. However, the high level of significance delivered for many of the statements clarifies the array of difference in perceptions. Overall, however this demonstrates that hypothesis 4 must be rejected as there is significant difference which highlights the array of perceptions of disparity.

## Overall Conclusion

Overall, it is inarguable that there is great social, economic and environmental disparity between the areas of Bearsden and Calton however people's perceptions of this disparity are not always accurate when compared with secondary data. However, people's perceptions are legitimised through the highly significant variation between observed and expected frequencies of responses to the perception study. This is evidenced in the perception study results which show throughout that perceptions of social, economic and environmental disparity differ dramatically.

When considering social disparity, it can be said that perceptions of social disparity do not reflect disparity exposed in the secondary data, in relation to ethnic minorities. What is shown is that people perceive there to be a higher proportion of ethnic minorities Calton than in Bearsden when in actual fact the figures of ethnic minorities between the two are similar. When considering economic disparity perceptions of economic disparity do not reflect disparity exposed in the secondary data in relation to claimants of job seekers allowance. The majority of people perceived there to be more claimants in Calton than in Bearsden when in actual fact there is only 2% difference between the two in terms of the percentage of benefit claimants. These two points highlight an interesting theme of stereotyping within social geography and reveal the false perceptions people have of areas such as Calton.

When considering environmental disparity, perceptions do reflect disparity exposed in the secondary data; Calton has far less car ownership but is exposed to more air pollution than those in Bearsden where car ownership is much higher due to its inner-city location. This reveals an even greater disparity between Calton and Bearsden.

Throughout the perception study results, perceptions of disparity differ dramatically as shown in the chi-squared statistical test which shows that there is highly significant variation between observed and expected frequencies of people's perceptions confirming that perceptions of disparity do differ dramatically.

Overall it must be said that the disparity evidenced throughout is only partially reflected in people's perceptions. On many occasions perceptions do not reflect disparity and it is evident that these perceptions have been subjected to prejudice or stereotyping. This reveals a wider problem in society highlighted through social geography of disparity highlighted throughout this study.

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## Diagrams

Otherwise stated below, all other diagrams are taken and adapted by the author of this study.

Map 1- <http://digimapforschools.edina.ac.uk>

Map 2- <http://digimapforschools.edina.ac.uk>

Map 3- <http://digimapforschools.edina.ac.uk>

Figure 1-

<https://planningtank.com/settlement-geography/burgess-model-or-concentric-zone-model>

Figure 2-

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Figure 4-

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