# SECTION THREE

# DATA PRESENTATION

KEY CONTENT:

1. DATA PRESENTATION OF RESIDENTIAL DECAY

2. DATA PRESENTATION OF ENVIRONEMTAL SURVEY

3. DATA PRESENTATION OF PERCEPTION SURVEY

4. DATA PRESENTATION OF INDEX OF SERVICES AND AMENITIES

5. SECONDARY DATA

6. RELIABILITY OF DATA

It is difficult to compare or analyse raw data. The purpose of this section is therefore to demonstrate my results visually so that I can analyse them more conveniently in the next section. Also, some of my data may be biased due to various factors. In this section I will examine the reliability of my data with Mann Whitney U-Test.

## 1. Residential Decay

**Table 3.1 – Data Table for Residential Decay**

| Features | Z1 | Z2 | Z3 | Z4 |
|---|---|---|---|---|
| Deterioration of walls | 1 | 3 | 5 | 5 |
| Part peeling | 2 | 3 | 3 | 3 |
| Broken glass in windows | 7 | 7 | 7 | 7 |
| structural damage | 11 | 11 | 11 | 11 |
| Rotting timber | 8 | 8 | 8 | 8 |
| Broken gutters, etc | 7 | 7 | 7 | 7 |
| TOTAL | 36 | 39 | 41 | 41 |

Z1 = New Mina
Z2 = Old Mina
Z3 = Diagonal Mar
Z4 = Diagonal Mar

## 2. Environmental Survey

**Table 3.2 – Data table for Environmental Survey**

| Features | z1 | z2 | z3 | z4 |
|---|---|---|---|---|
| Landscape Quality | 4 | 4 | 8 | 8 |
| Derelict Land | 5 | 10 | 10 | 10 |
| Litter/Vandalism | 0 | 0 | 8 | 8 |
| Industrial workshop premises | 5 | 10 | 10 | 10 |
| Noise | 5 | 5 | 5 | 5 |
| Air pollution | 0 | 10 | 10 | 10 |
| Recreational Amenities | 2 | 2 | 4 | 4 |
| Traffic flow | 6 | 6 | 6 | 6 |
| Total | 27 | 47 | 61 | 61 |

**Diagram 3.1 – Bar Chart for Residential Decay**



Residential Decay overall results
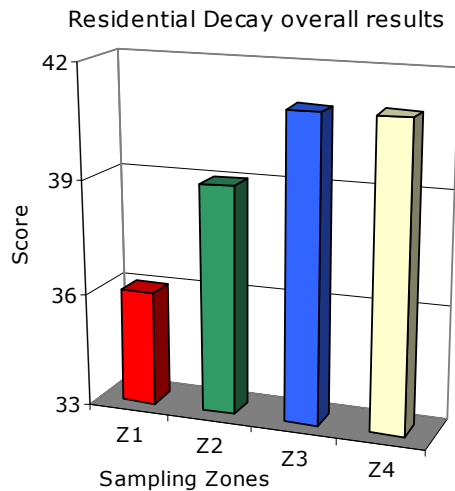
**Diagram 3.2 – Bar Chart for Environmental Survey**



Environmental Survey overall results
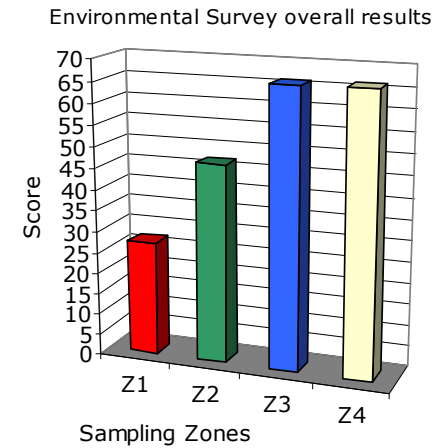
I used Bar Charts for Environmental Survey and Residential Decay Survey because Bar Charts can demonstrate visually the difference between the zones and clarify trends better than do tables.

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# 3. Perception Survey

**Table 3.3 – Perception Survey Positive Features**

| Positive Features | Zone 1 | Zone 2 | Zone 3 | Zone 4 |
|---|---|---|---|---|
| Rich | 0 | 0 | 3 | 3 |
| Safe | 0 | 0 | 3 | 3 |
| Friendly/Relaxed | 0 | 0 | 3 | 3 |
| Improving | 1 | 3 | 3 | 3 |
| Community Atmosphere | 3 | 2 | 2 | 1 |
| Attractive | 0 | 0 | 3 | 3 |
| **Total** | **4** | **5** | **17** | **16** |

**Table 3.4 – Perception Survey Negative Features**

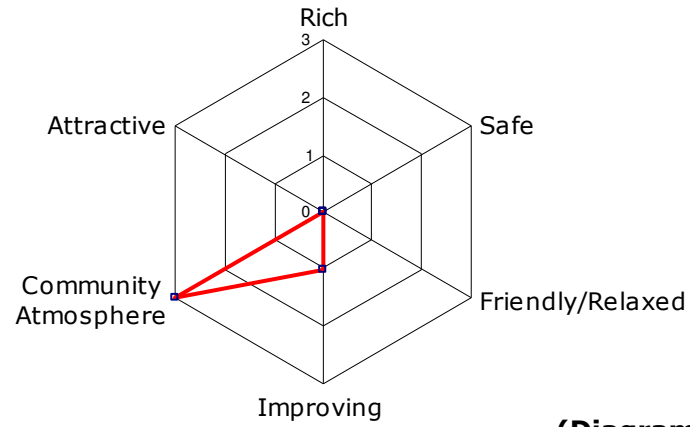| Negative Features | Zone 1 | Zone 2 | Zone 3 | Zone 4 |
|---|---|---|---|---|
| Poor | - 3 | - 2 | 0 | 0 |
| Dangerous | - 3 | - 1 | 0 | 0 |
| Declining | 0 | 0 | 0 | 0 |
| Risk of crime | - 3 | - 1 | 0 | 0 |
| Unattractive area | - 3 | - 1 | 0 | 0 |
| Vandalised | - 2 | - 1 | 0 | 0 |
| **Total** | **- 14** | **- 6** | **0** | **0** |

**Justifications for using Radar Charts:**

☐ Demonstrate visually how each feature makes up the final score

☐ Clarify multi-features better than do tables

☐ Permit a visual check of the contrast between each zones

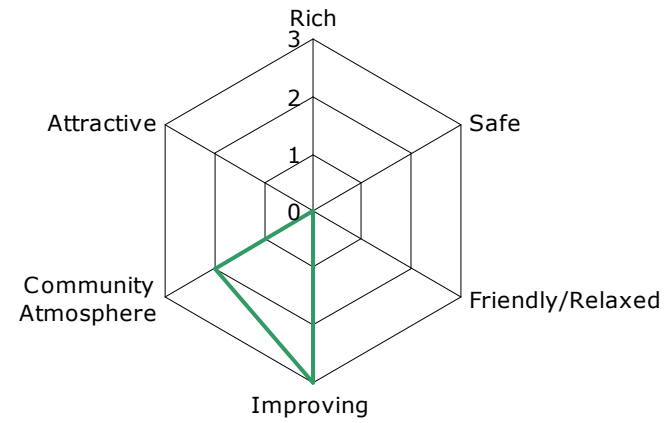☐ Add emphasis to significant features

**Liminations of Radar Charts:**

☐ 0 score is not clearly demonstrated

☐ Fails to reveal proportions or patterns

☐ Difficult to present data with a wide range
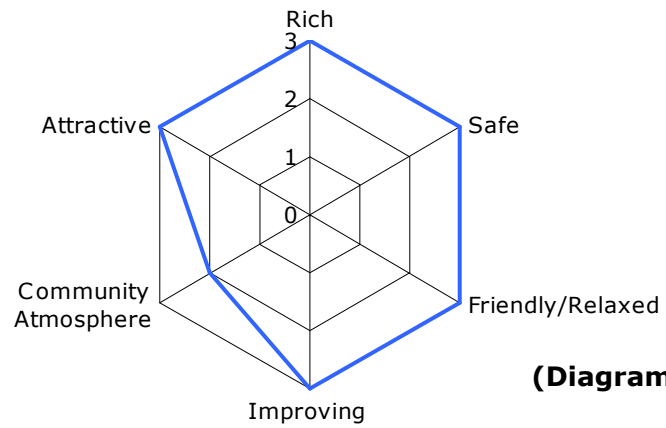
**Positive Features Zone 1**



**(Diagram 3.3)**

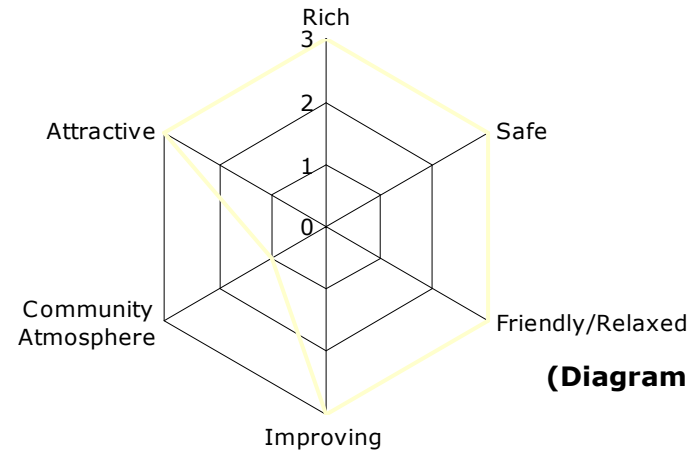**Positive Feature Zone 2**
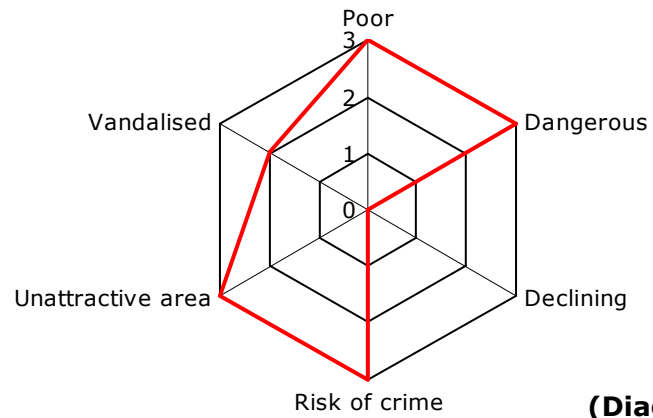


**(Diagram 3.4)**

**Positive Features Zone 3**



**(Diagram 3.5)**

**Positive Features Zone 4**
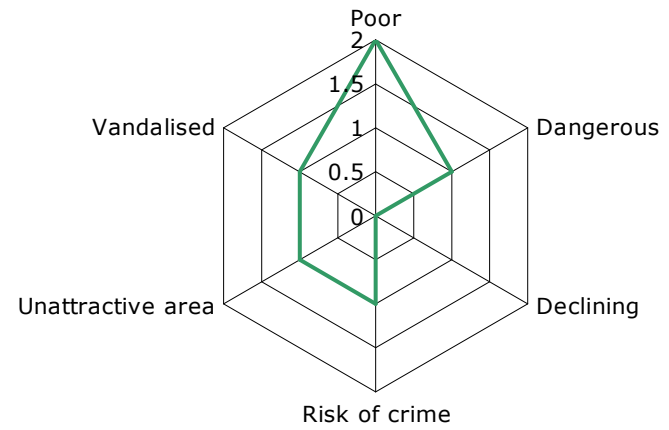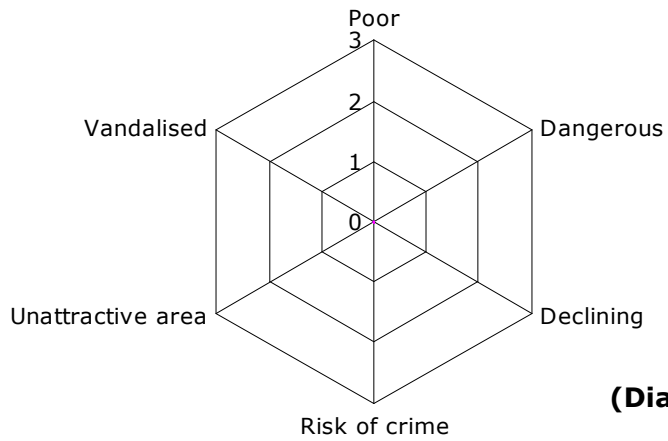


**(Diagram 3.6)**

**Negative Features Zone 1**
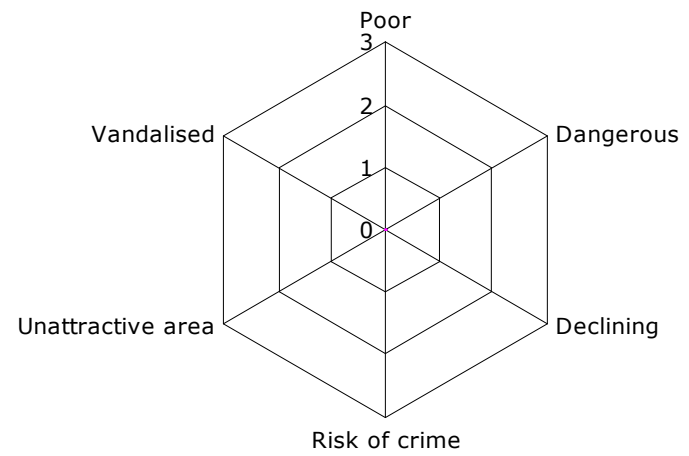
(Diagram 3.7)



**Negative Features Zone2**

(Diagram 3.8)



**Negative Features Zone 3**

(Diagram 3.9)



**Negative Features Zone 4**

(Diagram 3.10)

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## 4. Index of Services

**Table 3.5 - Service Number Count**

| Services | Z1 | Z2 | Z3 | Z4 |
|---|---|---|---|---|
| Gentrified service | 0 | 0 | 148 | 148 |
| Local service | 37 | 43 | 42 | 42 |
| Community Centre | 13 | 0 | 0 | 0 |
| Financial institution | 0 | 2 | 1 | 1 |
| Government institution | 1 | 0 | 0 | 0 |
| Immigrant services | 1 | 0 | 0 | 0 |
| Parking | 0 | 1 | 1 | 1 |
| Services for poverty | 2 | 0 | 0 | 0 |
| Work shops | 1 | 4 | 0 | 0 |
| Total number | 55 | 50 | 192 | 192 |

**Table 3.6 - Service Percentage**

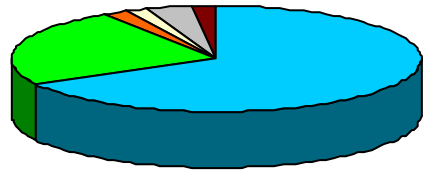| Services | Z1 | Z2 | Z3 | Z4 |
|---|---|---|---|---|
| Gentrified service | 0 | 0 | 77 | 77 |
| Local service | 67 | 86 | 22 | 22 |
| Community Centre | 24 | 0 | 0 | 0 |
| Financial institution | 0 | 4 | 0.5 | 0.5 |
| Government institution | 1.8 | 0 | 0 | 0 |
| Immigrant services | 1.8 | 0 | 0 | 0 |
| Parking | 0 | 2 | 0.5 | 0.5 |
| Services for poverty | 3.6 | 0 | 0 | 0 |
| Work shops | 1.8 | 8 | 0 | 0 |
| Total number | 100 | 100 | 100 | 100 |

### Justification for using Pie Charts

☐ Display relative proportions of each service

☐ Size of the circle can be made proportional to the total quantity it represents

☐ Summarise a large data set in visual form

☐ More straightforward than other types of graphs

### Disadvantages

☐ Do not easily reveal exact values
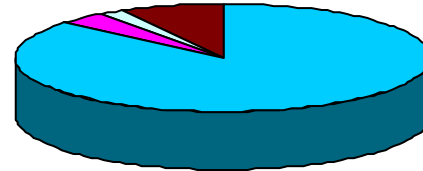
☐ Difficult to compare differences between each zone

**Services Z1**



| | |
|---|---|
| ■ | Gentrified service |
| ■ | Local service |
| ■ | Community Centre |
| ■ | Finantial institution |
| ■ | Government institution |
| □ | Immigrant services |
| □ | Parkings |
| □ | Services for poverty |
| ■ | Work shops |

**(Diagram 3.11)**

**Services Z2**



| | |
|---|---|
| ■ | Gentrified service |
| ■ | Local service |
| ■ | Community Centre |
| ■ | Finantial institution |
| ■ | Government institution |
| □ | Immigrant services |
| □ | Parkings |
| □ | Services for poverty |
| ■ | Work shops |
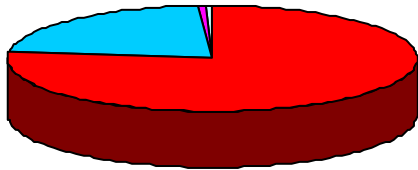
**(Diagram 3.12)**

Services Z3



| | |
|---|---|
| ■ | Gentrified service |
| ■ | Local service |
| ■ | Community Centre |
| ■ | Finantial institution |
| ■ | Government institution |
| □ | Immigrant services |
| □ | Parkings |
| □ | Services for poverty |

**(Diagram 3.13)**

**Services Z4**



| | |
|---|---|
| ■ | Gentrified service |
| ■ | Local service |
| ■ | Community Centre |
| ■ | Finantial institution |
| ■ | Government institution |
| □ | Immigrant services |
| □ | Parkings |
| □ | Services for poverty |
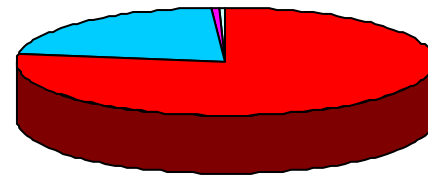
**(Diagram 3.14)**

## 5. Reliability of Data

Mann-Whitney U-Test tells us whether the differences between the two sets of sample data are truly significant.

Environmental Survey data set:
1.  Simplified table of data. The simplified table includes only scores. Categories are omitted since it is the overall score I am interested in.

| Z1 | 4 | 5 | 0 | 5 | 5 | 0 | 2 | 6 | Total: 27 |
|---|---|---|---|---|---|---|---|---|---|
| Z2 | 4 | 10 | 0 | 10 | 5 | 10 | 2 | 6 | Total: 47 |
| Z3 | 8 | 10 | 8 | 10 | 5 | 10 | 4 | 6 | Total: 61 |
| Z4 | 8 | 10 | 8 | 10 | 5 | 10 | 4 | 6 | Total: 61 |

2.  Instead of Z1, Z3, Z3 and Z4, I will label the four sets of data A, B, C and D.

| A | 4 | 5 | 0 | 5 | 5 | 0 | 2 | 6 | Total: 27 |
|---|---|---|---|---|---|---|---|---|---|
| B | 4 | 10 | 0 | 10 | 5 | 10 | 2 | 6 | Total: 47 |
| C | 8 | 10 | 8 | 10 | 5 | 10 | 4 | 6 | Total: 61 |
| D | 8 | 10 | 8 | 10 | 5 | 10 | 4 | 6 | Total: 61 |

3.   I will compare two sets of data at a time, and I will place all the data together in rank order, from lowest to highest. I will first compare A and C:

| Set of Data | C | C | C | C | C | A | C | A | A | A | C | A | C | A | A | A |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Score | 10 | 10 | 10 | 8 | 8 | 6 | 6 | 5 | 5 | 5 | 5 | 4 | 4 | 2 | 0 | 0 |

4.  I will inspect 'C' samples and count the total number of 'A' s preceding a C data. I will add up the total to find the $U$ number. I will repeat the process for A:

| Set | No. of 'C's Preceding each 'A' | Total ($U$) |
|---|---|---|

| A | 5 6 6 6 7 8 8    8 | 54 |

| Set | No. of 'A's Preceding each 'C' | Total ($U$) |
| --- | --- | --- |
| C | 0 0 0 0 0 1 4    5 | 10 |

5. I will take the smaller of the two $U$ numbers, 10, and look it up in a given table:
   The critical value from the table was 1.0; this means that the possibility of the difference environmental quality between the two occurring by chance is only 1.0 % i.e. the difference is significant and my results were very reliable.

6. I repeat the process to compare between B-C. 'C' and 'D' have the same score, so it is not necessary to find $U$ value for them separately

The same process is carried out for each one of my surveys. All of them were found reliable and I can therefore go on to analyse these data.