Sample M

Pearson

Appendix 7: Independent investigation mark sheet

Pearson Edexcel Level 3 Advanced GCE in Geography			9GE0/04
Centre na[redacted]			
Candidate[redacted]			
Title of Independent Investigation	HOW DOES QUALITY OF LIFE IN THE WARD OF HAVERING CENTRAL COMPARE WITH THE WARD OF NORTH HILLINGDON AND ST. MARGARETS?		
Mark awarded	65	Moderated mark (For Pearson use only)	

Assessment criterion	Total marks	Marks awarded	Moderator mark (For Pearson use only)
a- Purpose of the Independent Investigation	12	11	
b- Field Methodologies and Data Collection	10	10	
c- Data Representation, Analysis, Interpretation and Evaluation of Techniques and Methodologies used	24	23	
d- Conclusions and Critical Evaluation of the Overall Investigation	24	21	
Total marks	**70**	65	

Details of any additional advice/support given (e.g. for candidates with special considerations)

Candidate declaration – I can confirm that I have produced the attached work without assistance other than that which is acceptable under the guidelines given by the teacher. I confirm that the total numbers of words **is/is not*** in accordance with the word limit.

Signed candidate: [redacted]

Internal Assessor declaration – I can confirm tha[redacted]as conducted under the conditions laid out by the specification. I have authenticated the candidate's work and am satisfied that to the best of my knowledge the work produced is solely that of the candidate.

Assessor Na[redacted] Date: 27/3/18.

Assessor:

Additional Candidate declaration:

Signed candidate: [redacted]

By signing the above declaration you agree to your controlled assessment task(s) being used to support Professional Development, Online Support and Training of both Centre-Assessors and Edexcel Moderators. If you have any concerns regarding this please contact teachinggeography@pearson.com

Sample M

Purpose of the Independent Investigation (12 marks) (AO1: 4 marks, AO2: 4 marks and AO 3: 4 marks)			
Descriptor	**Mark range**	**Actual Mark**	**Comment**
No rewardable material.			
• Demonstrates isolated elements of geographical knowledge and understanding of location, geographical theory and comparative context, which are frequently irrelevant or inaccurate. (AO1) • May attempt to apply understanding to find links between the investigation's context and a broader geographical context but links are irrelevant with frequent inaccuracies. (AO2) • May attempt to investigate frequently irrelevant and narrow range of geographical sources in order to identify/obtain geographical information and data that is frequently inaccurate and only occasionally supports the investigation; the aim, question or hypothesis is generic or unlinked to research information, and provides an unfocused framework for investigation, with flawed consideration of manageability and/or scale; planned enquiry process is limited in clarity and structure. (AO3)	1–4		
• Demonstrates geographical knowledge and understanding of location, geographical theory and comparative context which is relevant but narrow or incomplete, and may include some inaccuracies. (AO1) • Applies understanding to find links between the investigation's context and a broader geographical context; links are mainly relevant and coherent but may include some inaccuracies. (AO2) • Investigates a range of mainly relevant geographical sources in order to identify/obtain mainly accurate geographical information and data that supports most parts of the investigation; research information is used to construct a generally valid aim, question or hypothesis that provides a mostly appropriate framework for investigation with some consideration of manageability and/or scale; planned enquiry process is adequately structured and clear. (AO3)	5–8		
• Demonstrates accurate and relevant geographical knowledge and understanding of location, geographical theory and comparative context throughout. (AO1) • Applies understanding to find coherent and relevant links between the investigation's context and a broader geographical context. (AO2) • Investigates a wide range of relevant geographical sources in order to identify/obtain accurate geographical information and data that support the investigation; research information is used to construct a justified aim, question or hypothesis that provides an appropriate framework for investigation at a manageable scale; planned enquiry process is logically structured and comprehensive. (AO3)	9–12	11	* An excellent understanding of theory & wider context * Thought out aims which are linked to wider context.

Sample M

Field Methodologies and Data Collection (10 marks) (AO3: 10 marks)			
Descriptor	**Mark range**	**Actual Mark**	**Comment**
No rewardable material.			
• An inappropriate balance between range and depth of methods chosen to collect data and information relevant to the geographical focus. (AO3) • A sampling framework is absent or is not relevant to the topic being investigated. (AO3) • No consideration of either frequency or timing of observations. (AO3) • Research planning shows limited understanding of the ethical dimensions of field research methods. (AO3) • Poor quality data and information as a result of inaccurate use of methods with low levels of accuracy/precision. (AO3)	1–3		
• Chooses methods to collect data and information relevant to the geographical topic. (AO3) • A sampling framework is considered but may not be technically valid or successfully implemented. (AO3) • Consideration of either frequency or timing of observations. (AO3) • Research planning shows understanding of the ethical dimensions of field research methods, which may be generic or incomplete. (AO3) • Data and information collected using methods with inconsistent accuracy/precision. (AO3)	4–7		
• Chooses appropriate methods to collect a range of data and information relevant to the geographical topic. (A03) • Designs a valid sampling framework explicitly linked and appropriate to the geographical focus being investigated. (AO3) • Considers both frequency and timing of observations. (AO3) • Research planning shows appropriate and relevant understanding of the ethical dimensions of field research methods. (AO3) • Obtains reliable data and information as a result of consistent use of methods with high levels of accuracy/precision. (AO3)	8–10	10	* Wide range of techniques * Fantastic understanding of sampling, frequency & timing. * Understanding of ethical dimensions

Sample M

Data Representation, Analysis, Interpretation and Evaluation of Techniques and Methodologies used (24 marks) (AO3: 24 marks)			
Descriptor	**Mark range**	**Actual Mark**	**Comment**
No rewardable material.		Marks	
• Indiscriminate use of geographical skills to deconstruct data; connections used to show the statistical/ geographical significance of data are unsupported or linked to flawed evidence. (AO3) • Provides a flawed or incomplete appraisal of techniques and methodologies used including: o ethical dimensions of field research o utility and validity of chosen methodologies. (AO3) • Any attempt to synthesise research findings is incoherent; conclusions may be attempted but are frequently flawed and unsupported or linked to irrelevant evidence. (AO3) • Conclusions, if attempted, are simplistic and generic; may attempt to support conclusions with frequently irrelevant references to fieldwork data or information; responses are presented in a manner that is unclear and/or technically inaccurate. (AO3)	1–6		
• Uses geographical skills, which may not be the most appropriate, to deconstruct data in order to show connections that lack support from evidence and the statistical/ geographical significance of data, which may be incomplete and lack accuracy. (AO3) • Provides a narrow or imbalanced appraisal of techniques and methodologies used including: o ethical dimensions of field research o utility and validity of chosen methodologies. (AO3) • Synthesises research findings in a superficial manner to form some rational conclusions that are occasionally supported by evidence which might be limited or incomplete. (AO3) • Communicates conclusions that are supported by fieldwork data or information which are occasionally relevant; responses are presented in a manner which may be occasionally incoherent and is sometimes technically accurate. (AO3)	7-12		

Sample M

Data Representation, Analysis, Interpretation and Evaluation of Techniques and Methodologies used *continued*			
Descriptor	**Mark range**	**Actual Mark**	**Comment**
• Uses appropriate geographical skills to deconstruct data in order to show partially evidenced connections and mostly accurate statistical/geographical significance of data. (AO3) • Provides a generally balanced appraisal, that may lack detail in some aspects of techniques and methodologies used including: o ethical dimensions of field research o utility and validity of chosen methodologies. (AO3) • Synthesises research findings coherently to form rational conclusions that are mostly supported by evidence. (AO3) • Communicates conclusions that are supported by mostly relevant fieldwork data or information presented in a manner which is appropriate and mostly technically accurate. (AO3)	13–18		
• Uses appropriate geographical skills to deconstruct data in order to show evidenced connections and accurate statistical/geographical significance of data. (AO3) • Provides detailed and balanced appraisal of techniques and methodologies used including: o ethical dimensions of field research o utility and validity of chosen methodologies. (AO3) • Synthesises research findings coherently to form rational evidence-based conclusions. (AO3) • Communicates convincing conclusions that are supported by the clear and technically accurate presentation of relevant fieldwork data or information. (AO3)	19–24	23	* Wide range of complex & appropriate techniques. * Balanced appraisal of validity. * Concluding conclusions backed by evidence.

Sample M

Conclusions and Critical Evaluation of the Overall Investigation (24 marks) (AO1: 4 marks, AO2: 4 marks and AO 3: 16 marks)			
Descriptor	**Mark range**	**Actual Mark**	**Comment**
No rewardable material.			
• Demonstrates isolated elements of geographical knowledge and understanding of location, geographical theory and comparative context, which are frequently irrelevant or inaccurate. (AO1) • May attempt to apply understanding to find links between the investigation's conclusions and a broader geographical context, but these may be inaccurate or irrelevant. (AO2). • Synthesis of research findings is indiscriminate and only occasionally coherent. (AO3) • Appraisal of the reliability of evidence and validity of conclusions is imbalanced and frequently narrow or flawed. (AO3) • A simplistic, undeveloped argument is expressed through flawed or largely incoherent lines of reasoning that demonstrate use of an unfocused enquiry process. Uses limited accurate geographical terminology. (AO3) • Conclusions, if attempted, are simplistic; may attempt to support conclusions with limited links to evidence and concepts which are frequently irrelevant. (AO3)	1-6		
• Demonstrates geographical knowledge and understanding of location, geographical theory and comparative context, which are occasionally relevant and accurate. (AO1) • Applies understanding to find links between the investigation's conclusions and a broader geographical context with limited coherence. (AO2). • Synthesis of research findings is limited, but makes some coherent points. (AO3) • Appraisal of the reliability of evidence and validity of conclusions is imbalanced and includes some minor flaws. (AO3) • A simplistic argument is expressed through lines of reasoning, with some coherence that demonstrate use of an inconsistently structured enquiry process. Uses some accurate geographical terminology. (AO3) • Conclusions are simplistic, but occasionally supported with some relevant links to evidence and concepts. (AO3)	7-12		

Sample M

Descriptor	Mark range	Actual Mark	Comment
• Demonstrates mostly accurate and relevant geographical knowledge and understanding of location, geographical theory and comparative context. (AO1) • Applies understanding to find largely coherent and relevant links between the investigation's conclusions and a broader geographical context. (AO2) • Synthesises most aspects of the research findings in a largely coherent manner. (AO3) • Provides a mainly appropriate appraisal of the reliability of evidence and validity of conclusions. (AO3) • A developed argument which considers a relevant selection of factors in an uneven manner and which is expressed through logical lines of reasoning that are clear, but not fully developed and demonstrates a use of an appropriately structured enquiry process. Uses mostly accurate geographical terminology.(AO3) • Conclusions are mostly supported by drawing together a selection of mostly relevant evidence and concepts linked to the investigation. (AO3)	13-18		
• Demonstrates accurate and relevant geographical knowledge and understanding of location, geographical theory and comparative context throughout. (AO1) • Applies understanding to find coherent and relevant links between the investigation's conclusions and a broader geographical context. (AO2) • Synthesises research findings coherently and comprehensively. (AO3) • Provides a balanced appraisal of the reliability of evidence and validity of conclusions. (AO3) • A balanced and concise, well-developed argument is expressed through sustained logical lines of reasoning that demonstrates use of a structured and comprehensive enquiry process. Uses accurate geographical terminology throughout. (AO3) • Convincing conclusions that are fully supported by drawing together a selection of relevant evidence and concepts linked to the entire purpose of the investigation. (AO3)	19-24	21	✓ Developed conclusions supported by evidence ✓ Balanced & well developed argument throughout ✓ Excellent structure + understanding of enquiry process

Sample M

Pearson

Pearson Edexcel Level 3 Advanced GCE in Geography			9GE0/04
Centre nan [redacted]		Centre numbe [redacted]	
Candidate [redacted]		Candidate nu [redacted]	

Assignment	Mark awarded	Comments [*NB: Comment box expands as you start entering text*]
Independent Investigation		
TOTAL	65 /70	

Teacher declaration I declare that: • any assistance which goes beyond general guidance has been recorded and taken into account when marking the work; • otherwise, apart from general guidance given in line with the parameters set out in the specification, the work is solely that of the candidate concerned; • the work was completed under the required conditions; • signed candidate declarations will be kept on file.	**Candidate declaration** I declare that, apart from collaboration with other candidates and general guidance from the teacher, where these are acceptable within the parameters of the specification, this is my own unaided work.
Assessor name [redacted] Date: 27/3/18	**Candidate signed:** [redacted] Date: 27/3/18
Assessor signe	

Additional candidate declaration

By signing this additional declaration you agree to your work being used to support Professional Development, Online Support and Training of both Centre-Assessors and Pearson Moderators. If you have any concerns please email: emgeography@pearson.com

Candidate signed: [redacted]	Date: 27/3/18

Sample M

Sample M

Appendix 5: Geography independent investigation form

Pearson

Sample M

Candidate r [redacted]	Candidate num [redacted]	Examination Series JUNE 2018
Centre nam [redacted]		Centr [redacted]

Investigation title
How does quality of life in the ward of Northumberland compare to the city of York Thirkleam and St. Margarets?

How the title links to specification content
Regenerating places - there are significant variations in the lived experience of place (4A 5)

Planned investigation hypothesis or question/sub-questions
The hypothesis is that quality of life will be higher in the ward of York Thirkleam and St. Margarets, because it is a more affluent area. I hope the investigation will be able to answer: how do these areas differ in quality of life? why do these places differ in quality of life and what factors determine quality of life?

Investigation focus – indication of how the enquiry will enable the candidate to address their investigation title and explore their theme in relation to the chosen geographical area.
I am interested in how and why places are different for people in regards to their life experience. I hope to investigate why quality of life is different and how it changes from places very near each other (in the same city).

Planned methodology – indication of qualitative and/or quantitative techniques including primary and, if relevant, secondary data collection techniques, indication of the planned sampling strategy or strategies.
Seven streets in each ward will be assessed, via footfall and traffic counts, strength and weakness descriptions, photographs, maps and environmental impact assessments. On top, census data will be used (secondary) for education, employment, house price and crime.

Individual/[redacted] data collection
(Delete as appropriate)

Teacher's approval and comments
Excellent thought put into what you want to investigate and how you will collect the data. You are collecting a large amount of primary data - is 3000-4000 words enough to analyse this effectively?

Teacher signatur [redacted]

Date 10/06/2017

Sample M

Sample M

How does the quality of life in the ward of Hounslow Central compare to the ward of North Twickenham and St. Margaret's?

Sample M

Sample M

Contents

Sample M

Sample M

Introduction

Context and literature review

Human "quality of life" is a term that has received a large amount of attention in recent years. It is a marker of how well people live. However, what quality of life truly is, or how one can determine 'quality' is complex. In the journal article "Assessment of the quality of life in cities", it is concluded that quality of life is a term difficult to pin down, but the article states that "most researchers would argue that [quality of life] is a multidimensional construct...and that it reflects personal values...It can therefore be said to reflect how well individual needs are fulfilled in various fields of life" (Risser, et al, 2006). But, this definition prompts more questions, as what does it really mean to be fulfilled by our needs? This investigation seeks to compare the quality of life, using selected measures, between two electoral wards from different London boroughs and come to a judgment about what may determine people's quality of life in each place, why quality of life may differ in each place and what factors determine the quality of life in each place.

Many authors have looked at different ways in evaluating certain aspects of 'quality of life', such as socio economic inequalities. In the article "Issues in the Conceptualisation and Measurement of Socioeconomic Background: Do Different Measures Generate Different Conclusions?" the author investigates whether different use of factors when measuring quality of life can determine different understandings.

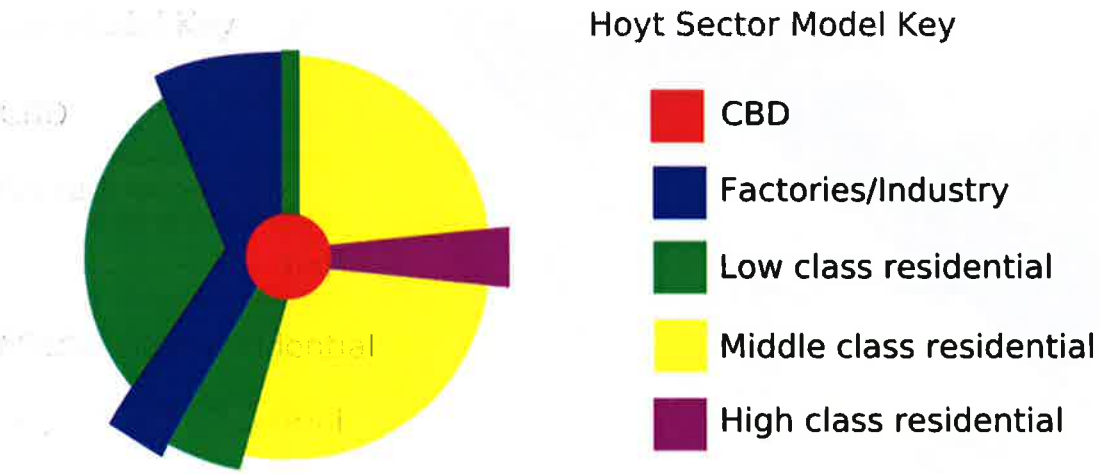


Figure 1.1 **the Hoyt Sector Model**

Much geographical theory is relevant to this investigation, including the sector model, created by the economist Homer Hoyt in 1932. This theory states that economic sectors of a city are developed by transport routes.

Sample M

Location

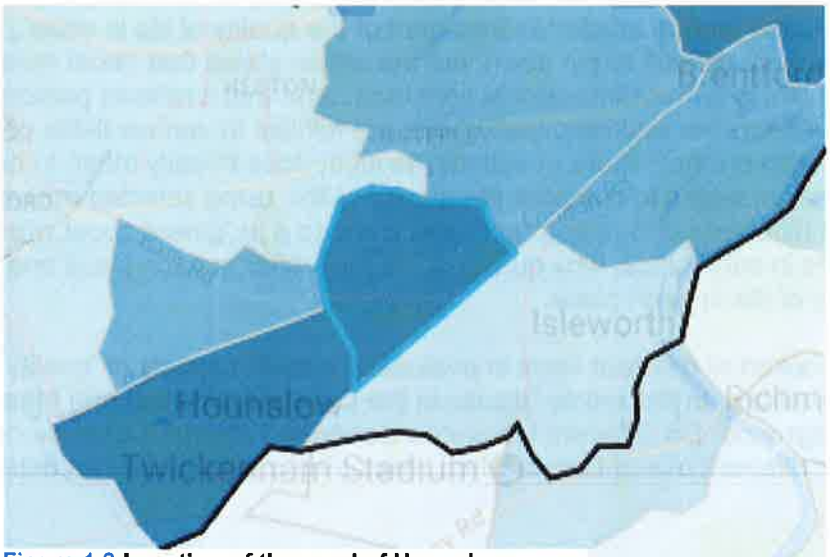


Figure 1.2 **Location of the ward of Hounslow Central (London Data Store, 2011)**

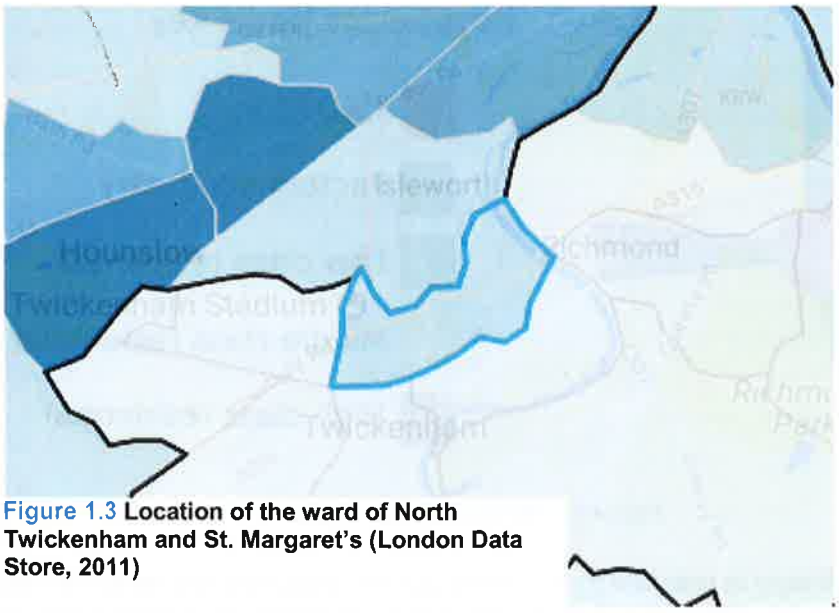


Figure 1.3 **Location of the ward of North Twickenham and St. Margaret's (London Data Store, 2011)**

The aim of this investigation is to compare the quality of life between the ward of North Twickenham and St. Margaret's and the ward of Hounslow Central. North Twickenham and St. Margaret's is considered a prosperous and affluent area where many people have high paying jobs. On the other hand, Hounslow Central is often considered a deprived and neglected part of London in need of regeneration. The journal article "measuring differences in rural urban development: the case of unemployment" (Stanef, 2012) indicated strongly how distinct two places can be, which partly influenced the aim of this investigation to compare two wards and study their differences, rather than looking at the quality of life from just one.

Sample M

Aims and Hypothesis

To fairly conclude upon the quality of life of each place, statistics on education, employment, house price and crime rate will be gathered. As well as this, an overview of seven streets in each ward will be carried out, which will include environmental impact assessments (EIAs), traffic counts, footfall counts and photographs. Primary data such as this is a vital part of the investigation, because the appearance of place indicates levels of investment of an area (i.e. wealth), as well as a place's value. Furthermore, interviews will be carried out in the high street that lies within each ward (Crown Road for the ward of North Twickenham and St. Margaret's and Hounslow High Street for the ward of Hounslow Central). Interviews are a vital part of this investigation, because the nuances in what people may think and feel about where they live could provide more reliable indicators about each area than statistics. On top, face to face contact with the population of each ward is important in understanding a 'sense of place'.

The title of this investigation is 'How does the quality of life compare from the ward of Hounslow central to the ward of North Twickenham and St. Margaret's?'. The hypothesis is that ultimately quality of life will be higher in the ward of North Twickenham and St. Margaret's, because there are less obvious signs of deprivation and there is less obvious poverty. This hypothesis was developed in reference to differing political governance (as each ward belongs to different boroughs). It was also developed by the influence of Homer Hoyt's theory of the sector model (see figure 1.1), which links to economic sectors of areas, of which can be applied to both wards. Hounslow is just South of the A4 corridor, which goes through Brentford and Isleworth - typically deprived areas. However, St. Margaret's is by the A316, which goes through Fulham, Richmond and Twickenham - typically affluent areas. The economic sectors that have developed in each borough that each ward belongs to are quite different. Within Hounslow borough (attached to the ward of Hounslow Central), Hounslow Local Economic Assessment Executive Summary concluded there are "high incidence of both employment and business units in transport-related sectors; sectors linked to the creative industries; and in some head office functions (defined broadly). It tends to have a lower than average incidence of both employment and business units in retail; manufacturing; and public sector services" (London Borough of Hounslow, 2008). However, within Richmond borough (attached to the ward of North Twickenham and St. Margaret's) London Borough of Richmond upon Thames Local Economic Assessment concluded "The high level of self-employment is reflected in the occupation profile of the workforce with 15% classified as 'Corporate Managers', the largest occupation category. The other main occupations reflect the sectoral structure of the economy. They are: Culture, Media and Sport occupations; Caring Personal Service Occupations; Administrative Occupations; Teaching & Research Professionals; and Elementary Administration and Service Occupations." Occupations within Richmond borough are evidently better paid than in Hounslow.

clear links to wider context

To help answer the investigation's title 'How does the quality of life compare from the ward of Hounslow central to the ward of North Twickenham and St. Margaret's? The investigation will hope to explore and answer the questions: how do these places differ in quality of life? Why do these places differ in quality of life? And ultimately, what factors determine quality of life? This investigation is relevant to the Edexcel A level specification, specifically the section 4A.5 (there are significant variations in the lived experience of place).

Sample M

Sample M

Figure 2.1 Location of streets assessed in the Ward of North Twickenham and St. Margaret's (Google Maps, 2017)

clear parameters

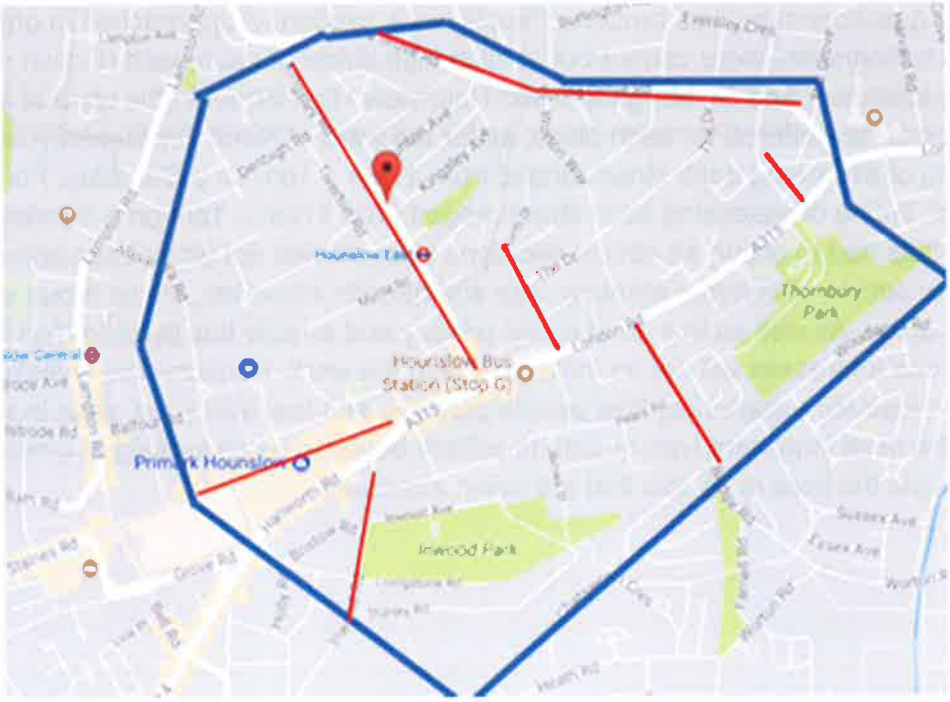


Figure 2.2 Location of streets assessed in the Ward of Hounslow Central (Google Maps, 2017)

Sample M

PRIMARY DATA

Traffic count

The sampling method used here was stratified, as each street was chosen from a selection on a map of each ward. Figures 2.1 and 2.2 above show the ward area surveyed and each red line shows the roads assessed. For one minute, the number of vehicles passing a certain point on a road was recorded on a tally. The time of day differed for each place, as for the ward of North Twickenham and St. Margaret's, timing of assessing each street ranged from 12pm – 2pm on a Saturday. For the ward of Hounslow central, timing of assessing each street ranged from 12pm – 2pm on a Sunday. Traffic data is relevant to the investigation, as high levels of traffic may indicate more noise, pollution and stress, which affects quality of life.

Pedestrian Footfall Count

The sampling method used here was stratified, as each street was chosen from a selection on a map of each ward. Figures 2.1 and 2.2 above show the ward area surveyed and each red line shows the roads assessed. For one minute, the amount of people passing a certain point on a road was recorded on a tally. The time of day differed for each place, as for the ward of North Twickenham and St. Margaret's, timing of assessing each street ranged from 12pm – 2pm on a Saturday. For the ward of Hounslow central, timing of assessing each street ranged from 12pm – 2pm on a Sunday. Footfall data is relevant to this investigation and it may appear first that more pedestrian footfall means greater business activity or availability of services. However, depending on the actual street, the amount of footfall may indicate stress and lower quality of life, if a place is extremely busy.

Questionnaires

The sampling for questionnaires was random. People were 'randomly' approached in order to interview. The questionnaires were carried out at each high street of each ward (Crown road in the ward of North Twickenham and St. Margaret's and Hounslow High Street in the ward of Hounslow Central). The time of day differed for each place, as for the ward of North Twickenham and St. Margaret's, timing of assessing each street ranged from 11am – 1pm on a Saturday. For the ward of Hounslow central, timing of assessing each street ranged from 11am – 1pm on a Sunday. A consideration of bias had to occur, so ethical decisions were carried out when interviewing. This meant going up to people of different ethnicity, age and gender. However, ethnic group was not recorded in the survey. As well as this, to maintain privacy and ensure this investigation is ethical, people's names and addresses will not be included within the work. Because this investigation is about people and their life experience, how people perceive and feel about the place in which they live is probably the most important type of data to collect, because when looking at quality of life, one needs to understand the lives of people that are being assessed.

Sample M

Example Questionnaire

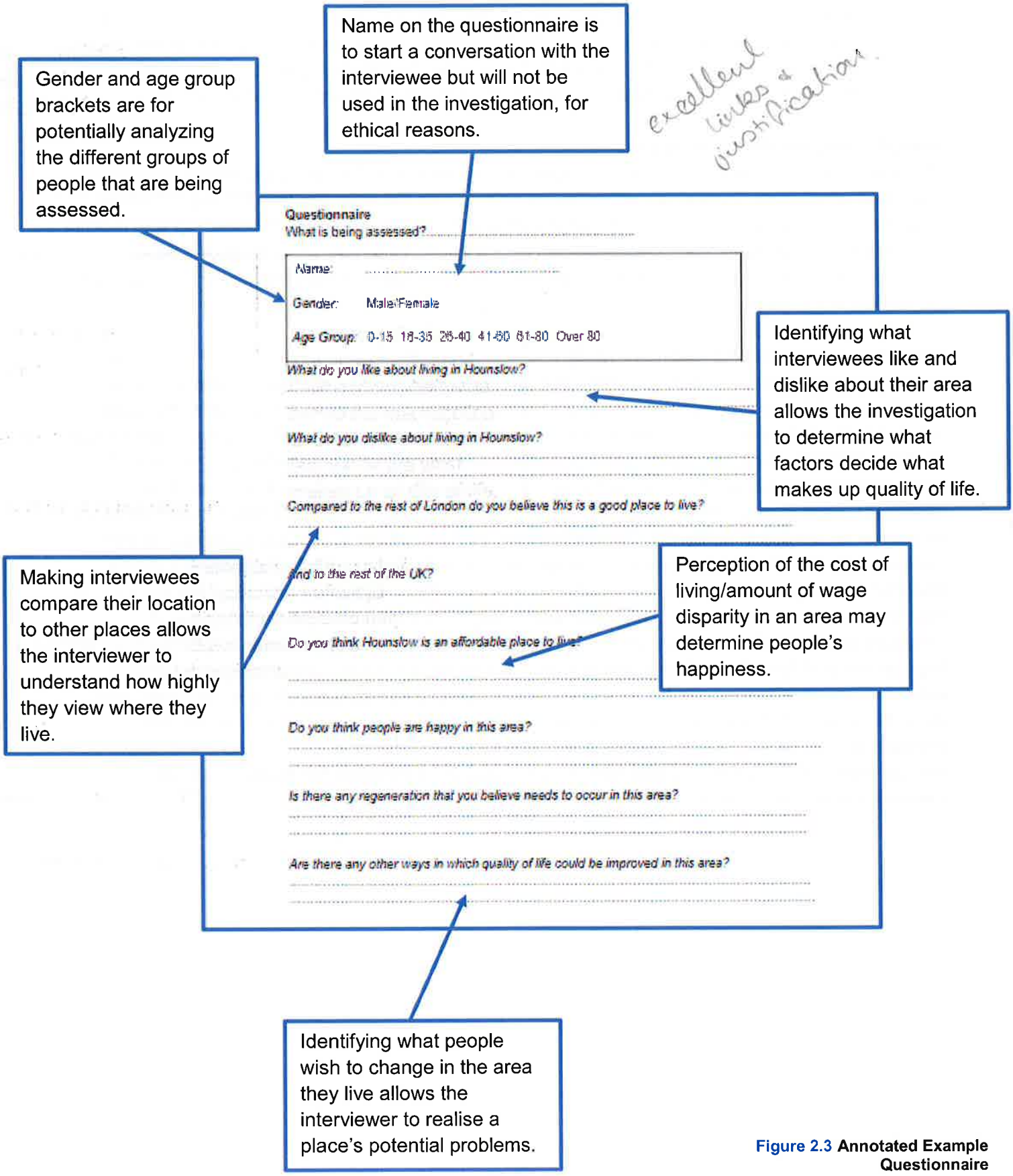


Figure 2.3 Annotated Example Questionnaire

Sample M

Description of area

The sampling method used here was stratified, as each street was chosen from a selection on a map of each ward. Figures 2.1 and 2.2 above show the ward area surveyed and each red line shows the roads assessed. General description of each street was recorded. The time of day differed for each place. For the ward of North Twickenham and St. Margaret's, timing of assessing each street ranged from 12pm – 2pm on a Saturday. For the ward of Hounslow central, timing of assessing each street ranged from 12pm – 2pm on a Sunday. To be able to record the general 'feel' of each area.

Strengths and Weaknesses of area

This is a list of each street's supposed strengths and weaknesses. The sampling method used here was stratified, as each street was chosen from a selection on the map. Figures 2.1 and 2.2 above show the ward area surveyed and each red line shows the roads assessed. This method was used in conjunction with the description of each area to record the general 'feel' of each place. Listing strengths and weaknesses is useful, because it may allow comparisons and connections to be made between different streets.

Environmental Impact Assessment (EIA)

The sampling method used here was stratified, as each street was chosen from a selection on a map. Figures 2.1 and 2.2 above show the ward area surveyed and each red line shows the roads assessed. At each street seven qualities were assessed (design, condition of buildings, maintenance, condition of land, vandalism, traffic, parking, noise, safety, smell, size of outside land, number of trees, availability of parks, litter, maintenance of roads, proximity to transport and proximity to amenities). Each quality was phrased into a statement (e.g. "safe for people"), which was then given an answer as a score of agree (2), Generally agree (1), Average (0), Generally disagree (-1) and Disagree (-2). The time of day differed for each place. For the ward of North Twickenham and St. Margaret's, timing of assessing each street ranged from 12pm – 2pm on a Saturday. For the ward of Hounslow central, timing of assessing each street ranged from 12pm – 2pm on a Sunday. A consideration of bias has to occur, as this data is based on opinion (e.g. whether one thinks there are large amounts of litter or small amounts of litter.). Therefore, the same person carried out all EIA surveys. EIAs were carried out, because the appearance and atmosphere of place often says a lot about the quality of life of people. For example, if there is a large amount of noise or smell of pollution. On top, things such as evidence of maintenance or amount of litter on the street may indicate low level or high-level investment from the council. Something like levels of council investment may help to understand why quality of life differs.

Detailed understanding

Sample M

Example Environmental Impact Assessment

Scores are based on opinion, which is a problem, because it may contain bias. However, the same person carried out all EIAs, so there is consistency in the data.

Environmental Quality Survey

What is being assessed? .....

Qualities being assessed	Agree -2	Generally agree -1	Av. 0	Generally disagree -1	Disagree -2	Qualities being assessed
Well designed/Pleasing to the eye						Poor designed/ Ugly
In good condition						In poor condition
Evidence of maintenance						Poorly maintained
Outside - land, gardens or open space in good condition						Outside - No gardens or land or in poor condition
No vandalism evident						Extensive Vandalism
Roads have no traffic congestion						Streets badly congested
Parking is easy; garages or spaces provided						Parking is very difficult
No traffic noise						High noise volume from
Safe for people						Dangerous for people
No smell from traffic or other pollution						Obvious smell from traffic pollution
Large gardens/open spaces outside houses						No gardens/ open space opens to street
Trees and shrubs visible						No greenery
Public parks in easy distance						No public parks easily accessible
No litter						A lot of litter
Roads well maintained						Roads poorly maintained
Close to public transport						Long way from public transport
Close to shops, amenities and services						Remote from shops, amenities and services

Score (Max. 34) =

Assessing environmental quality is useful, because it indicates investment in surroundings, which in turn indicates wealth of an area.

Proximity to services (e.g. Transport) and amenities allows people to be better connected.

Figure 2.4 Annotated Example Enviromental Impact Asessment

Sample M

SECONDARY DATA

Education

The sampling method used here was stratified, because the data was chosen specifically. Census data was gathered on the site London Data Store's ward profile. Secondary data is useful, because it allows access to statistics and figures that are harder to find when interviewing. Figures on education are particularly useful, because education levels reflect the skill force of a population. A greater skilled population means there are more job opportunities for individuals, more jobs being created due to developing ideas and a more engagement within society (e.g. politically aware).

Employment

The sampling method used here was stratified, because the data was chosen specifically. Census data was gathered on the site London Data Store's ward profile. Secondary data is useful, because it allows access to statistics and figures that are harder to find when interviewing. Figures showing type of employment and levels of it also reflect skills of the working population. Furthermore, more people in work means less people in poverty and a greater spread of wealth.

Average House Price

The sampling method used here was stratified, because the data was chosen specifically. Census data was gathered on the site checkmystreet.co.uk. Secondary data is useful, because it allows access to statistics and figures that are harder to find when interviewing. Secondary data can also give a better insight into the demographics of place. Data on house prices reflects affordability of an area, but also it's wealth, as if there is demand for housing then prices stay high.

Crime Rate

The sampling method used here was stratified, because the data was chosen specifically. Census data was gathered on the site checkmystreet.co.uk. Secondary data is useful, because it allows access to statistics and figures that are harder to find when interviewing. Secondary data can also give a better insight into the demographics of place. Data on crime rate may indicate how safe people feel in an area. As well as this, amount of crime also reflects levels of deprivation.

Sample M

Chapter 2 Data Presentation (Ward of North Twickenham and St. Margaret's)

PRIMARY DATA

Each road assessed has an Environmental Impact Assessment (EIA) in the form of a radar diagram, a description, a map, an annotated photo, a strengths and weaknesses table and a footfall and traffic count displayed as proportional flow diagrams. For the high street of the ward (Crown Road) there is also a land use survey in the form of a bar chart and questionnaire data. At the end of the section, there is also a column chart showing Footfall and Traffic counts for each road, where a mean has been calculated and a radar diagram with all EIA data from the wards where again a mean has been calculated.

Figure 3.1 Location of streets assessed in the Ward of North Twickenham and St. Margaret's (Google Maps, 2017)

Sample M

ST. PETER'S ROAD

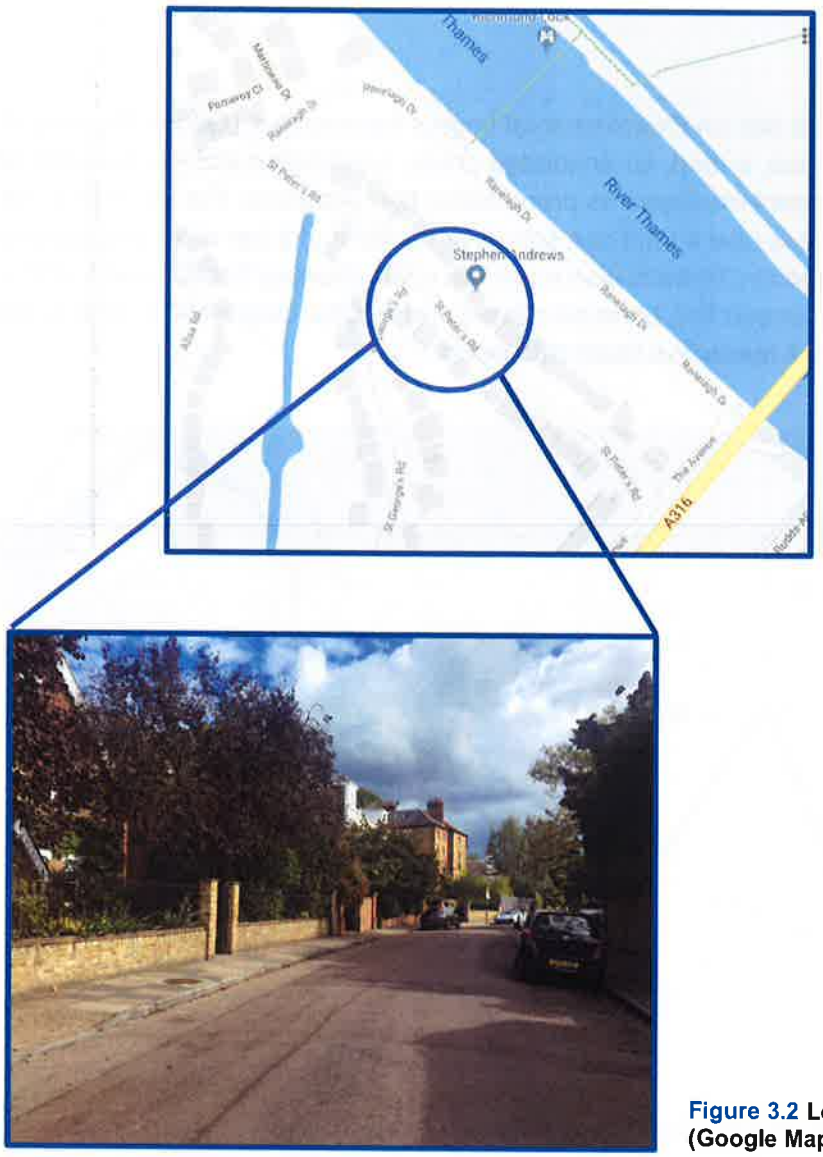


Figure 3.2 **Location of St. Peter's Road (Google Maps, 2017)**

Description

St. Peter's Road is situated next to the Thames and is near Richmond. The road is close to services such as a pub and corner shops. The Road is also not far from St. Margaret's high Street. Houses on this road are very large and gated.

Sample M

Traffic and Footfall counts

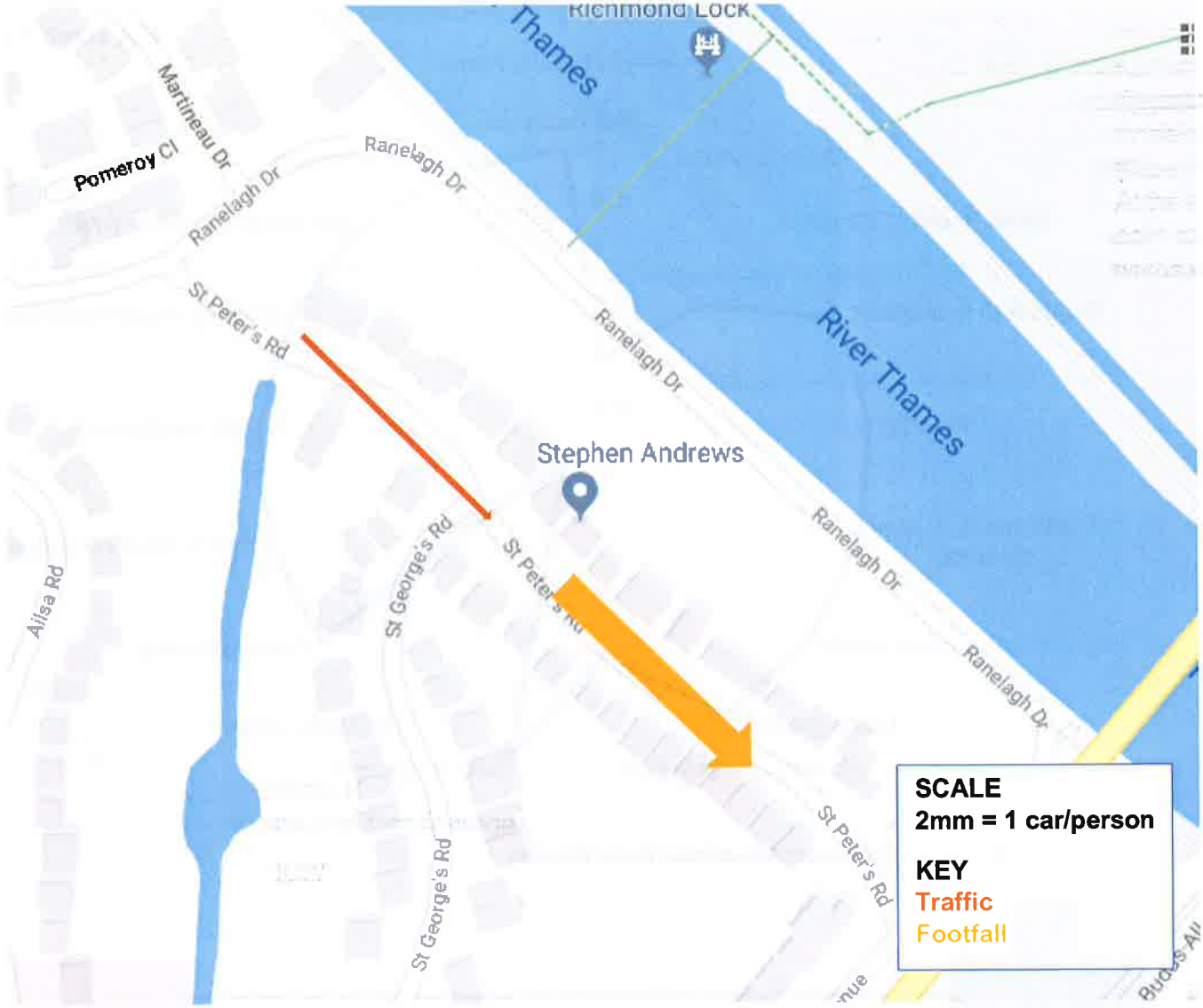


Figure 3.3 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 1 car

Footfall: 5 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

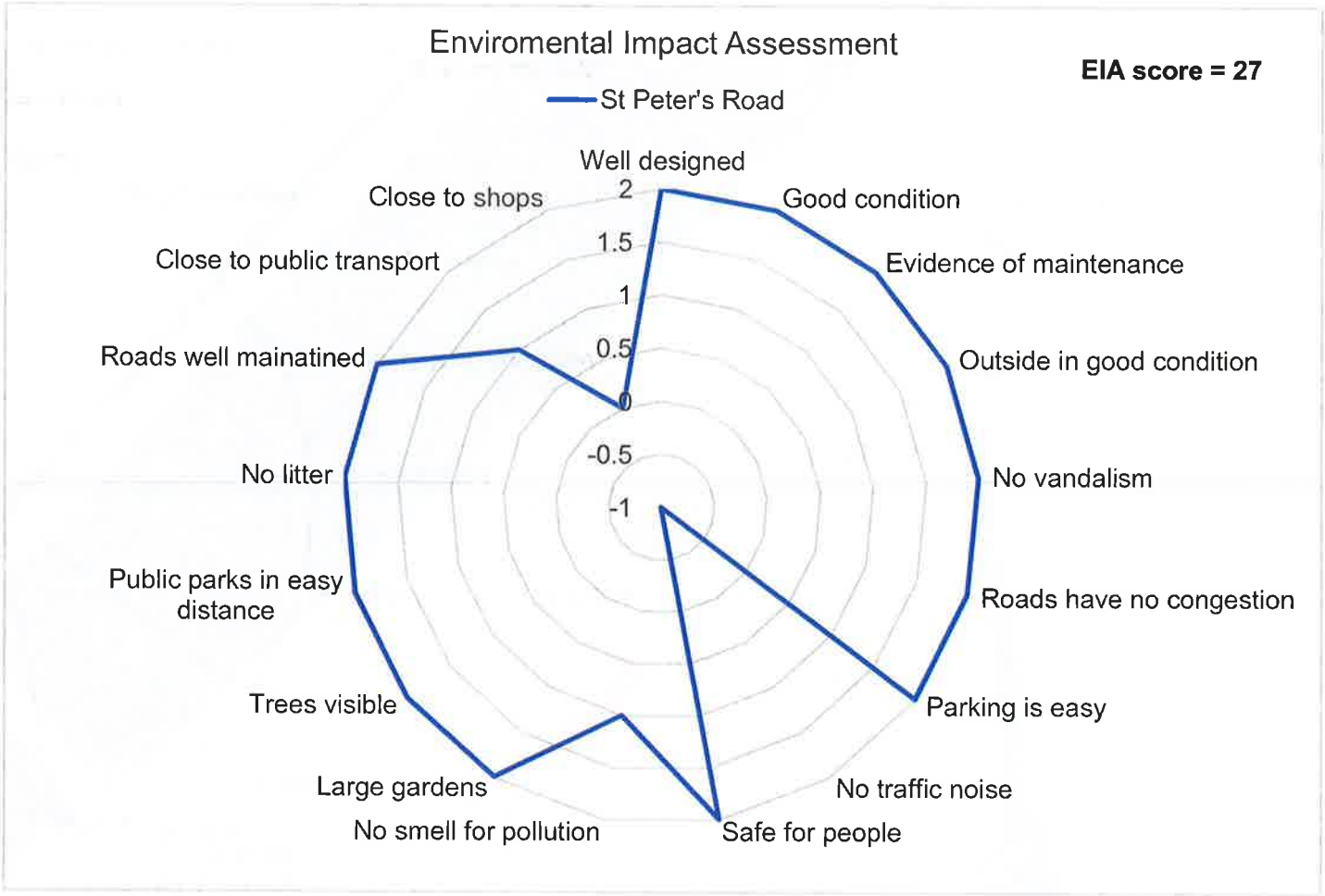


Figure 3.4 **Environmental Impact Assessment Radar Diagram**

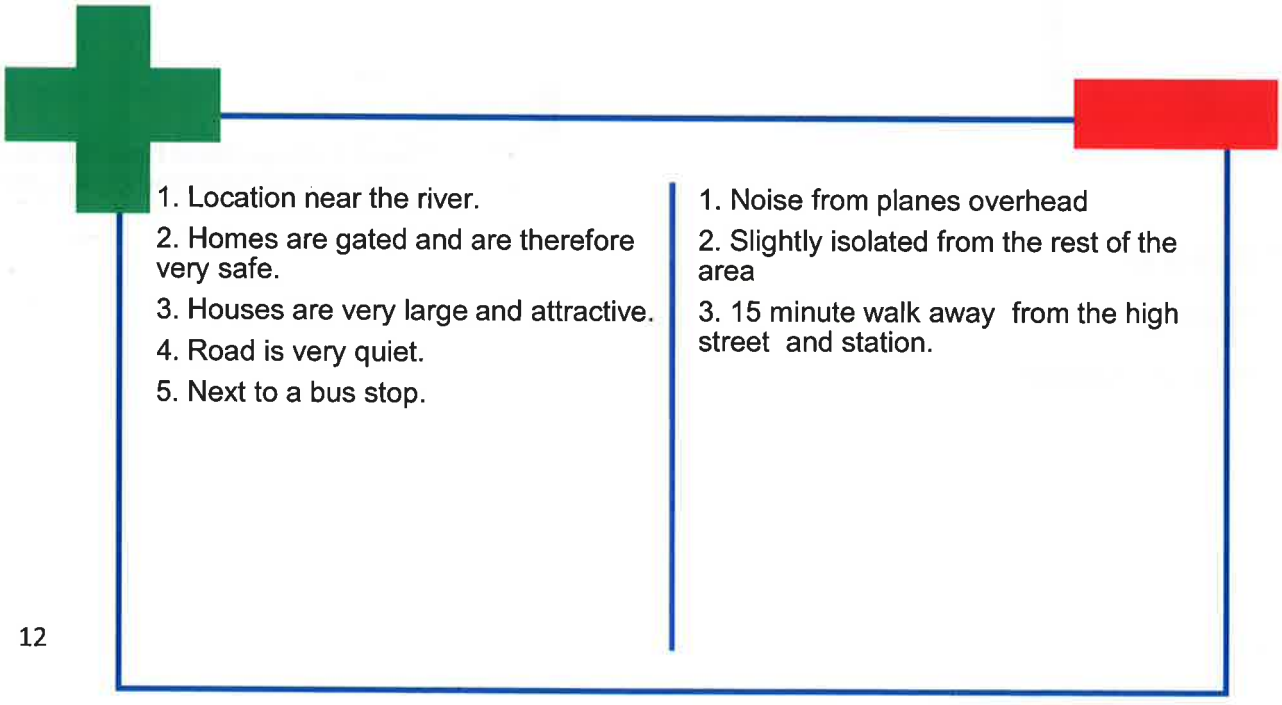


Figure 3.5 **Strengths and weaknesses**

Sample M

ALISA AVENUE

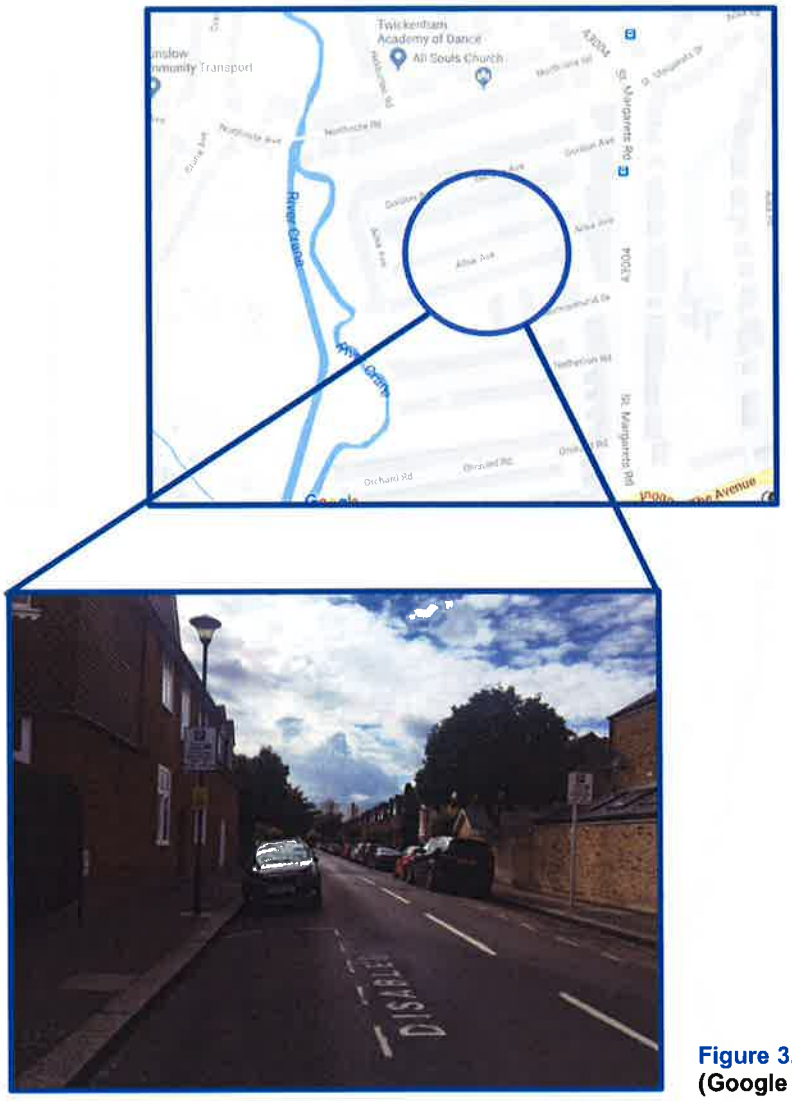


Figure 3.6 Location of Alisa Avenue (Google Maps, 2017)

Description

Alisa Avenue is a small road, which leads off a main road, heading into Hounslow. The road itself is quiet, with no traffic, as it is a dead end. At the end of the road there is a doctor's surgery and a pub.

Sample M

Traffic and Footfall Counts

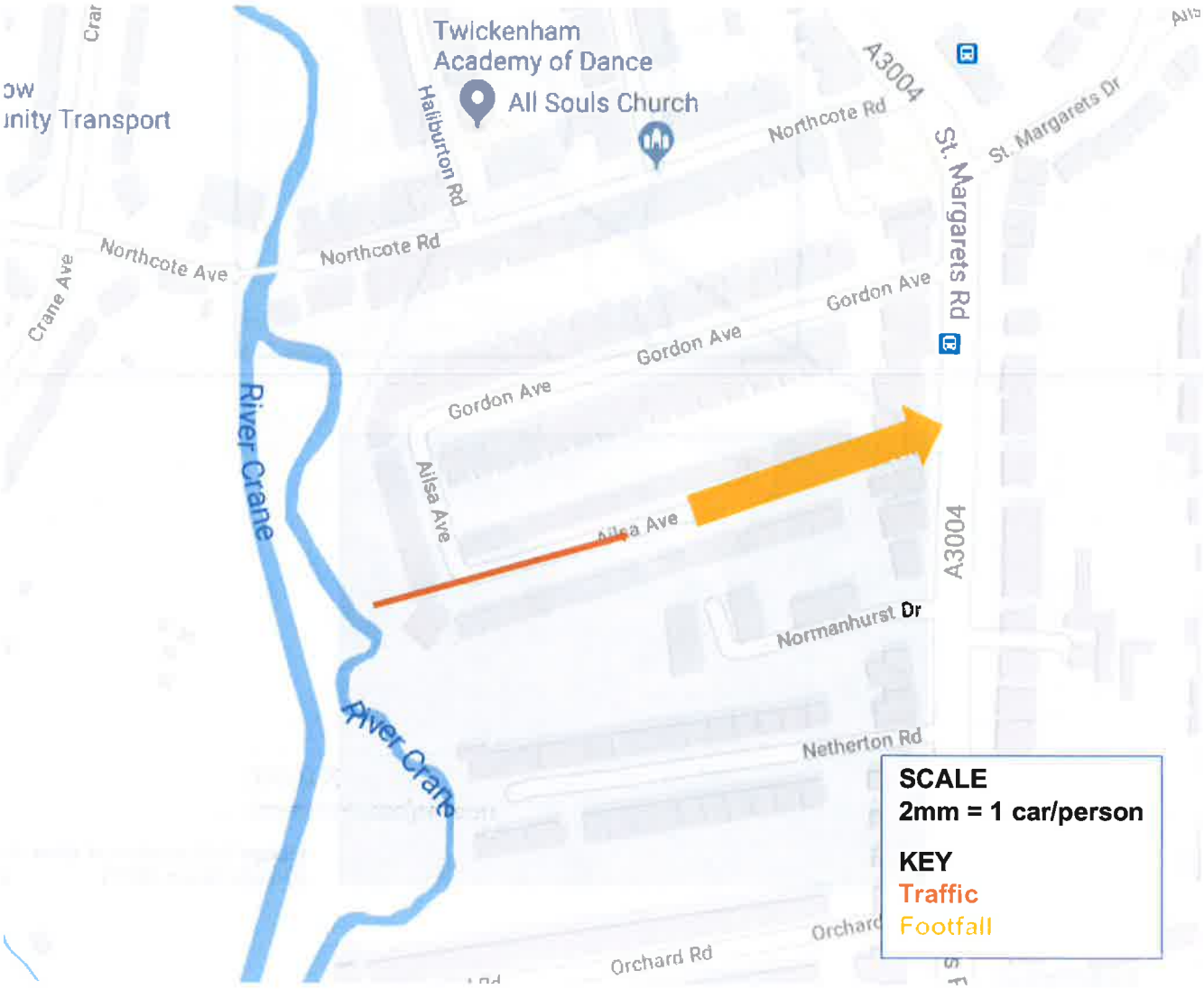


Figure 3.7 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 1 car

Footfall: 5 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

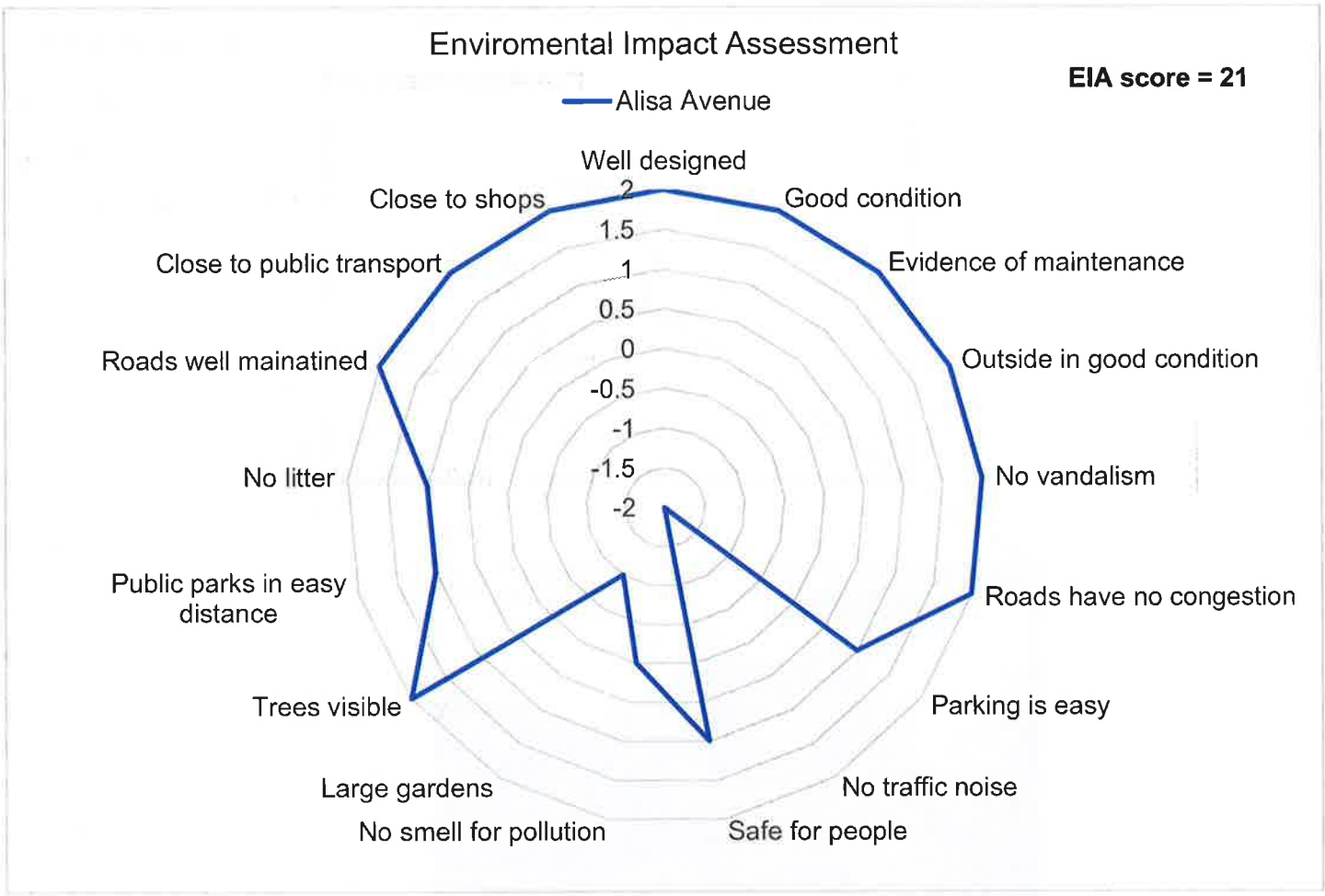


Figure 3.8 **Environmental Impact Assessment Radar Diagram**

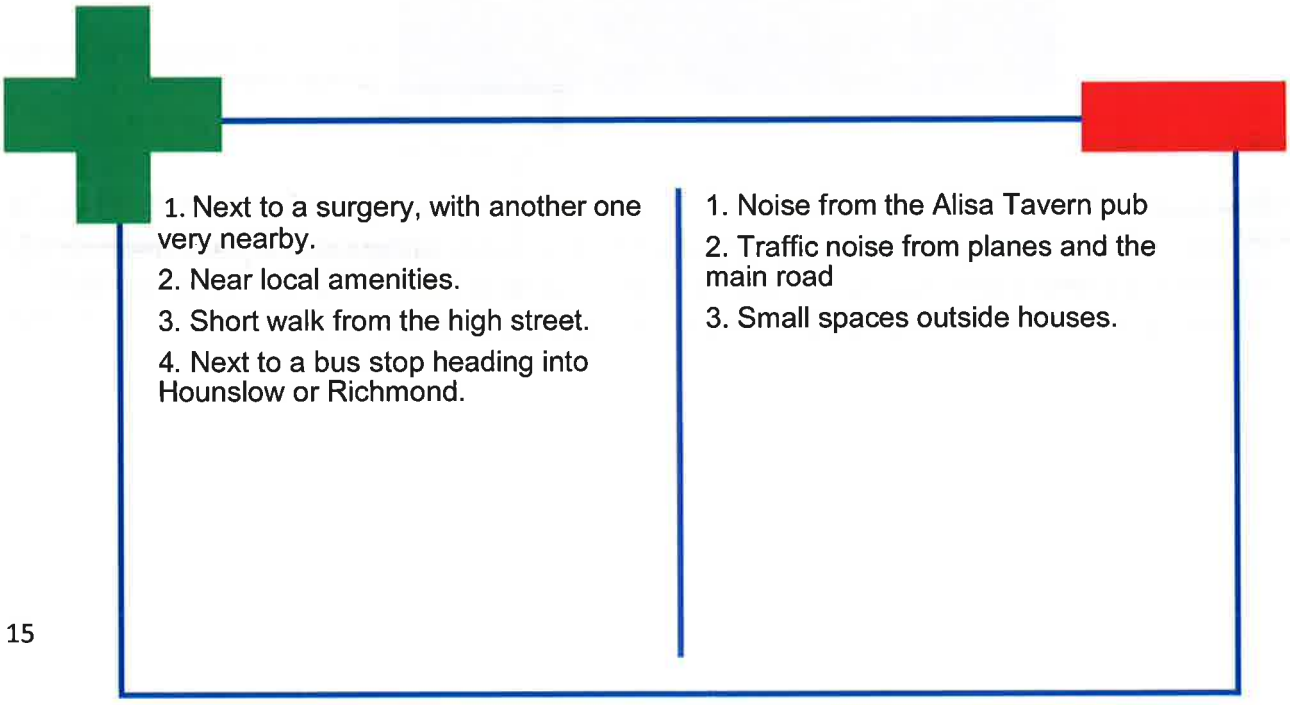


Figure 3.9 **Strengths and weaknesses**

Sample M

CRANEFORD WAY

Figure 3.10 Location of Craneford Way (Google Maps, 2017)

Description

Craneford Way is a curved road near Twickenham Station, which is right next to Heath field Gardens. It is also a short walk to the other side of Twickenham and Crane Park, which can be accessed by a bridge. It is a quiet street next to local shops and amenities.

Sample M

Traffic and Footfall Counts

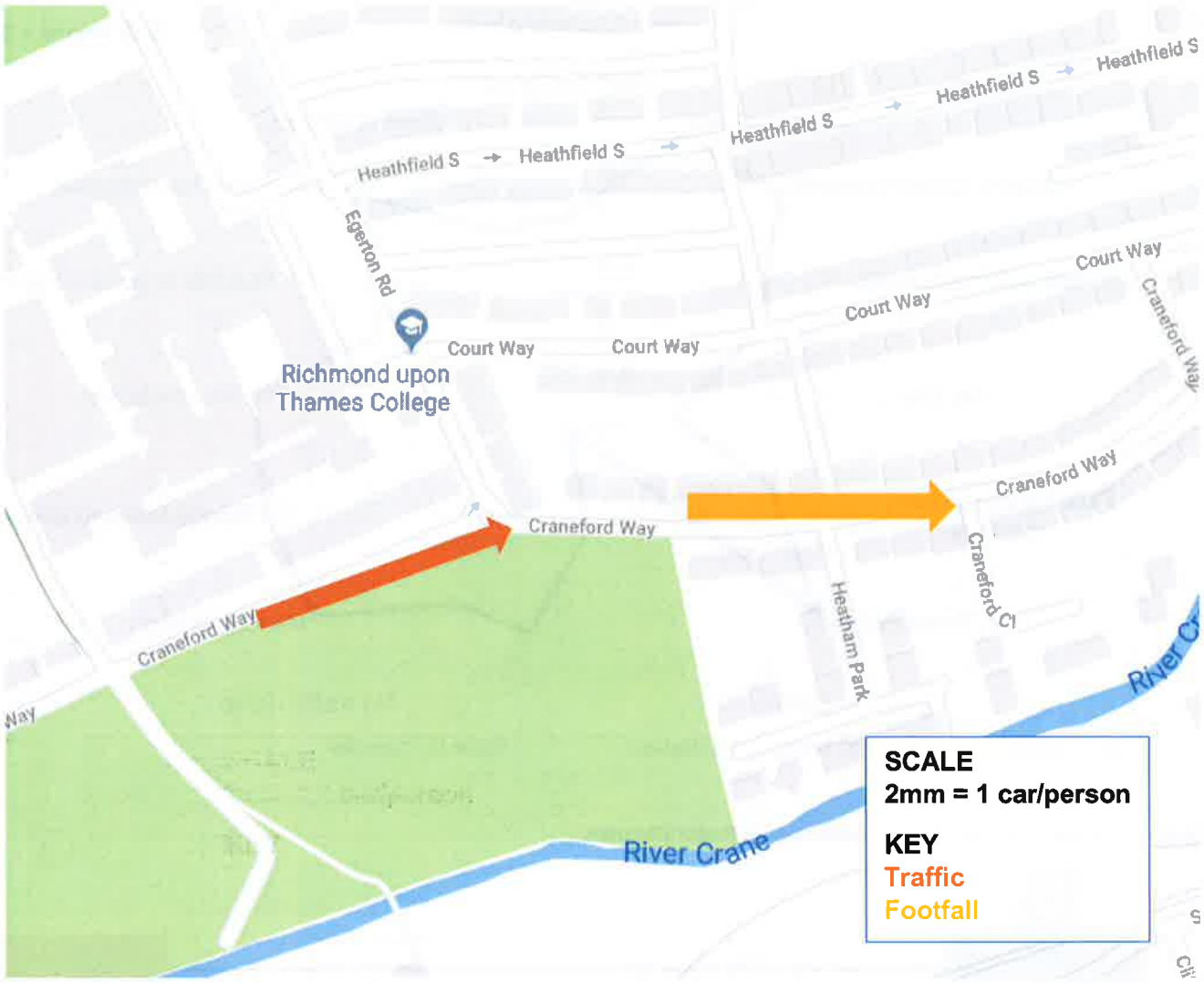


Figure 3.11 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 3 cars

Footfall: 4 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

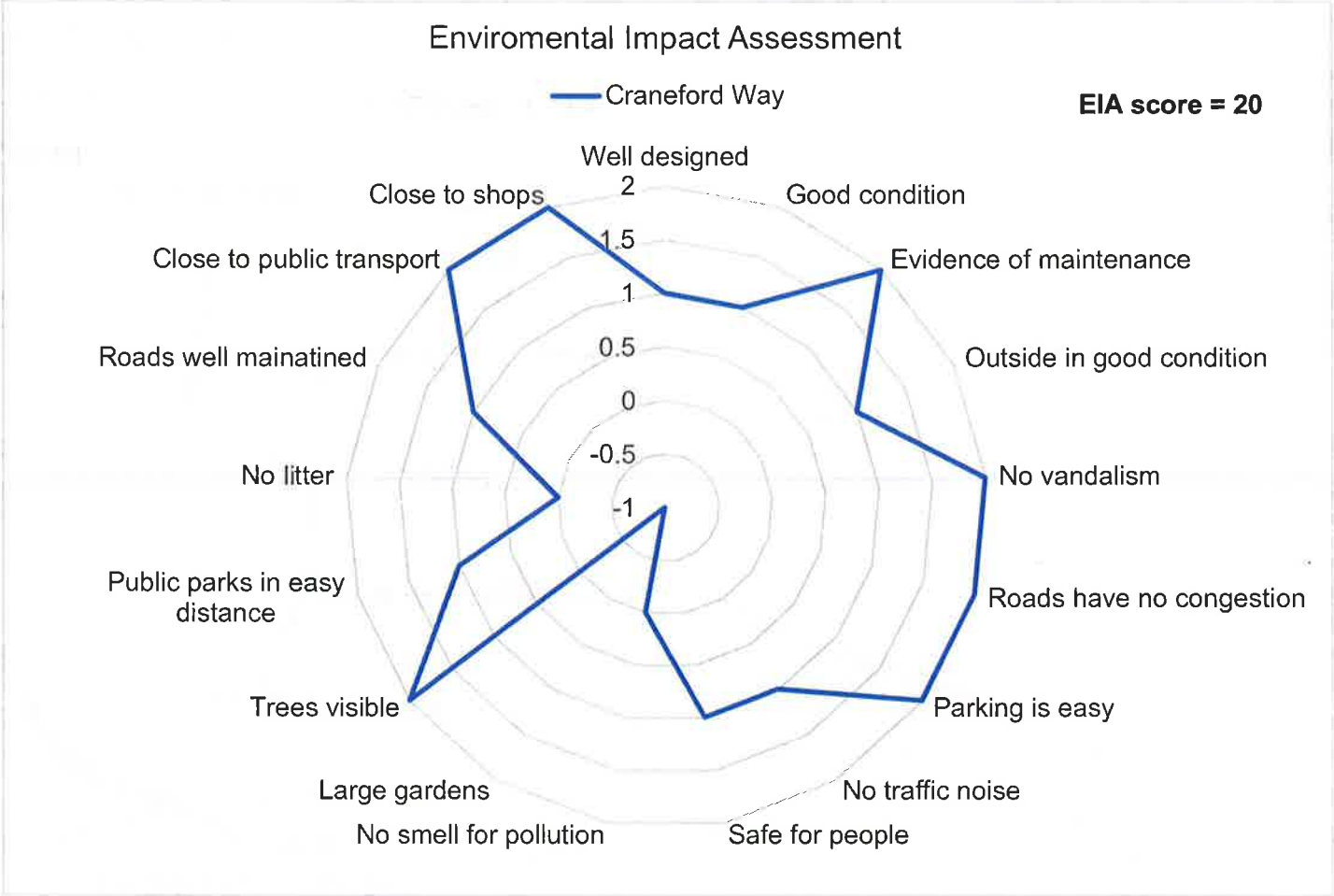


Figure 3.12 **Environmental Impact Assessment Radar Diagram**

1. Close to public transport.
2. Can easily get to other areas of twickenham due to a foot bridge to Crane Park.
3. Very near takeaway shops and corner shops for amenities.

1. Near Twickenham Stadium and The Stoop Stadium, so noise levels may be high.
2. Next to Richmond college, so noise may occur from here.
3. The road is a rat run to avoid the main road, so there might be a lot of cars.
4. The road is right next to a park, which may also generate noise.

Figure 3.13 **Strengths and Weaknesses**

Sample M

MOOR MEAD ROAD

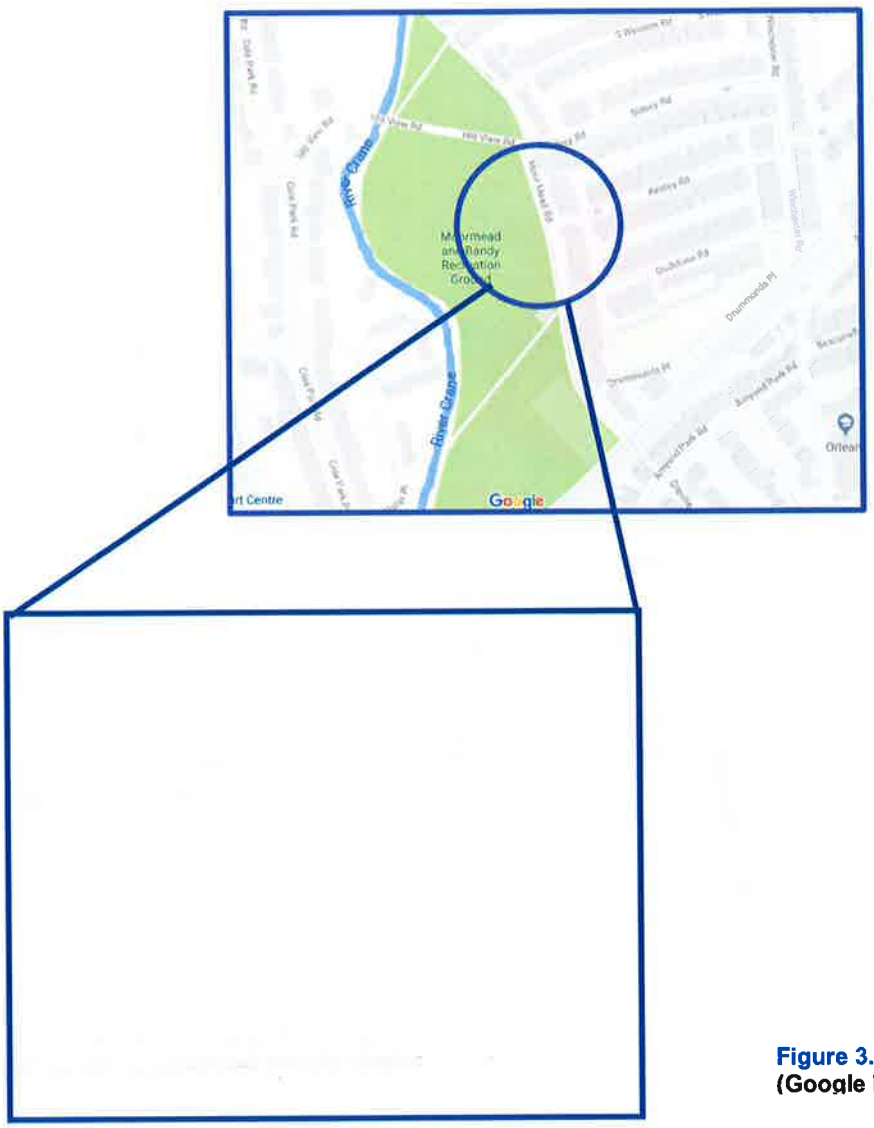


Figure 3.14 Location of Moor Mead Road (Google Maps, 2017)

Description
Long road stretching next to Moor Mead Park. Atmosphere is pleasant and the park creates a good natural enviroment surrounding the properties.

Sample M

Traffc and Footfall Counts

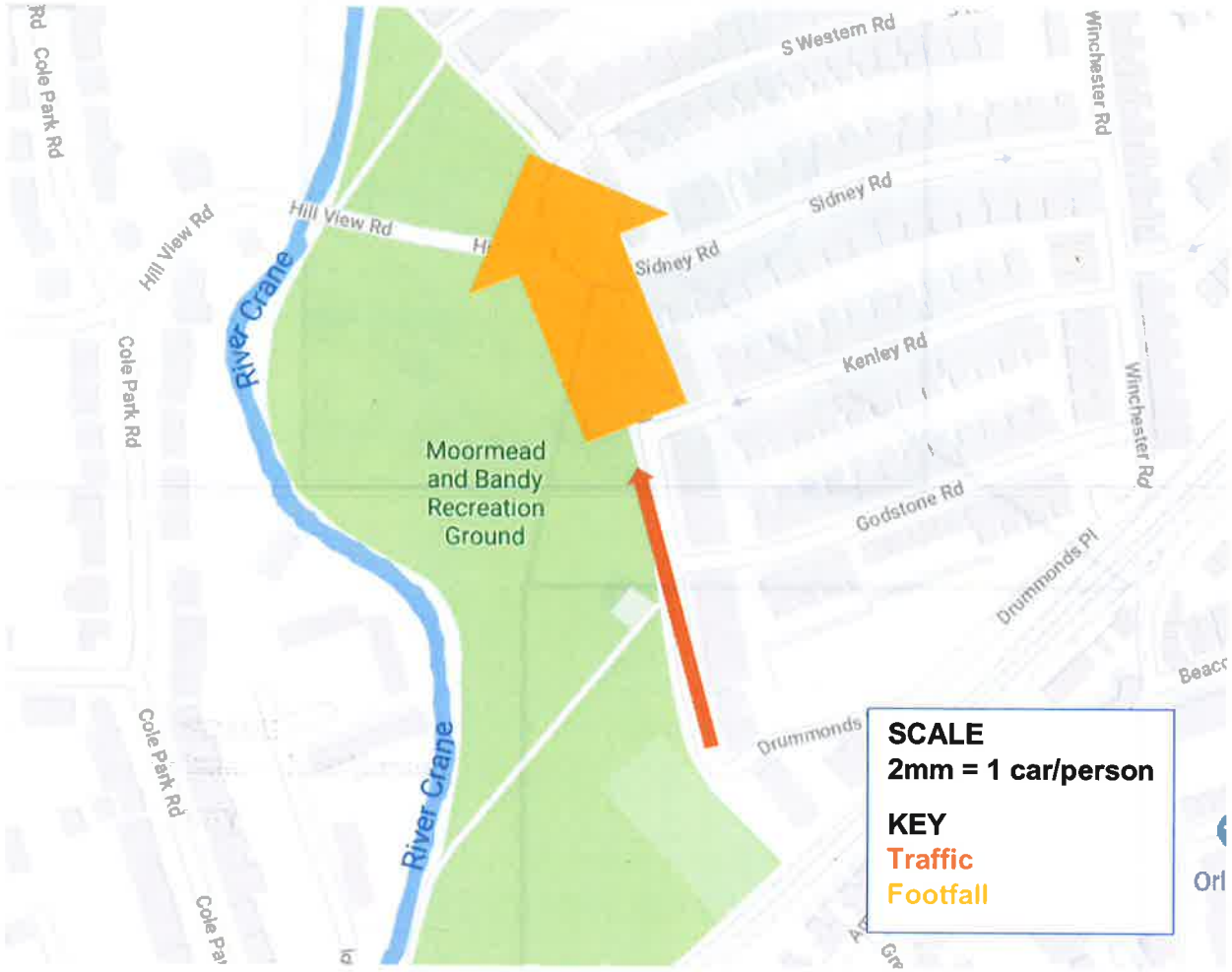


Figure 3.15 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 2 cars

Footfall: 15 people

Sample M

Enviromental Impact Assessment and Strengths and Weaknesses

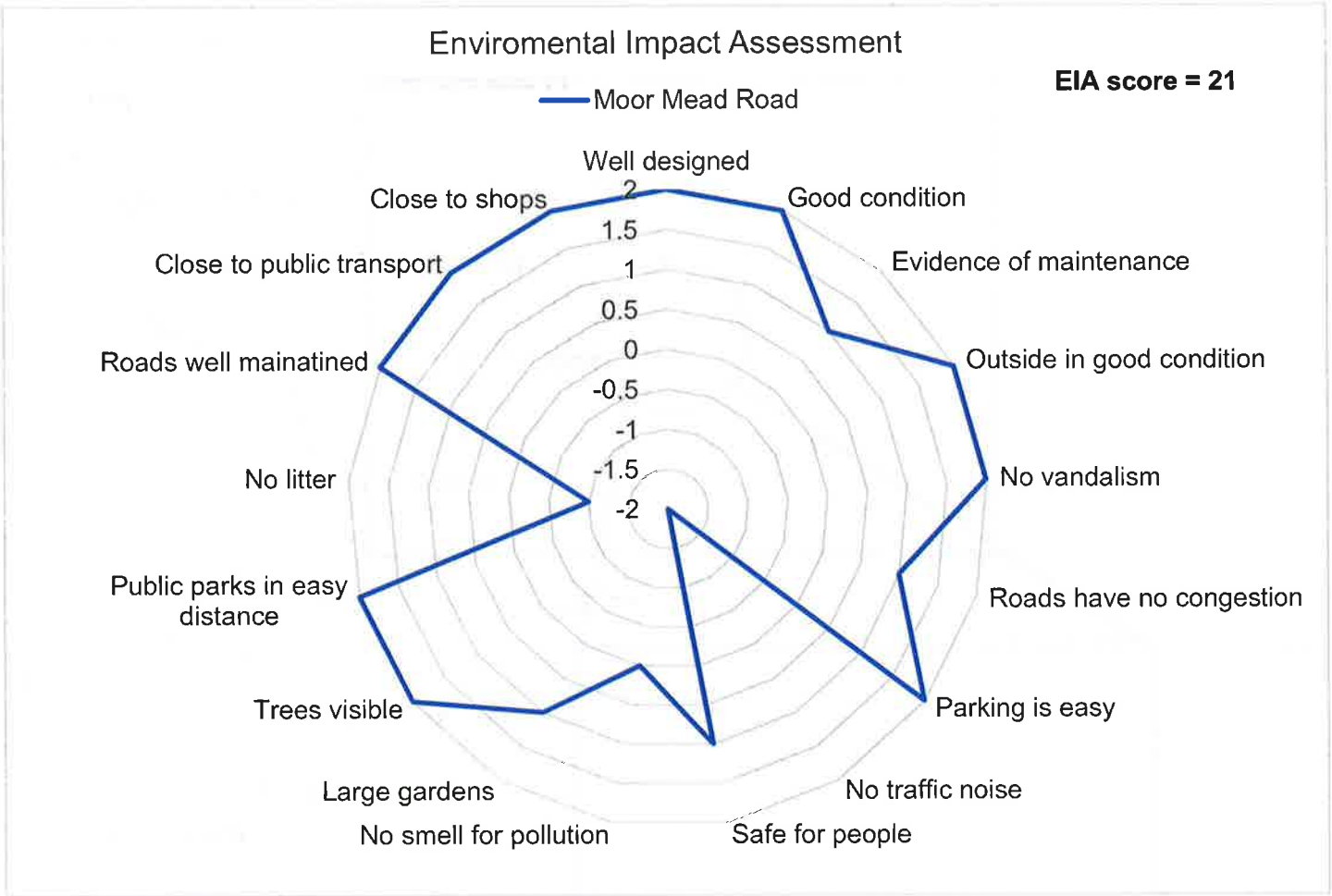


Figure 3.16 **Environmental Impact Assessment Radar Diagram**

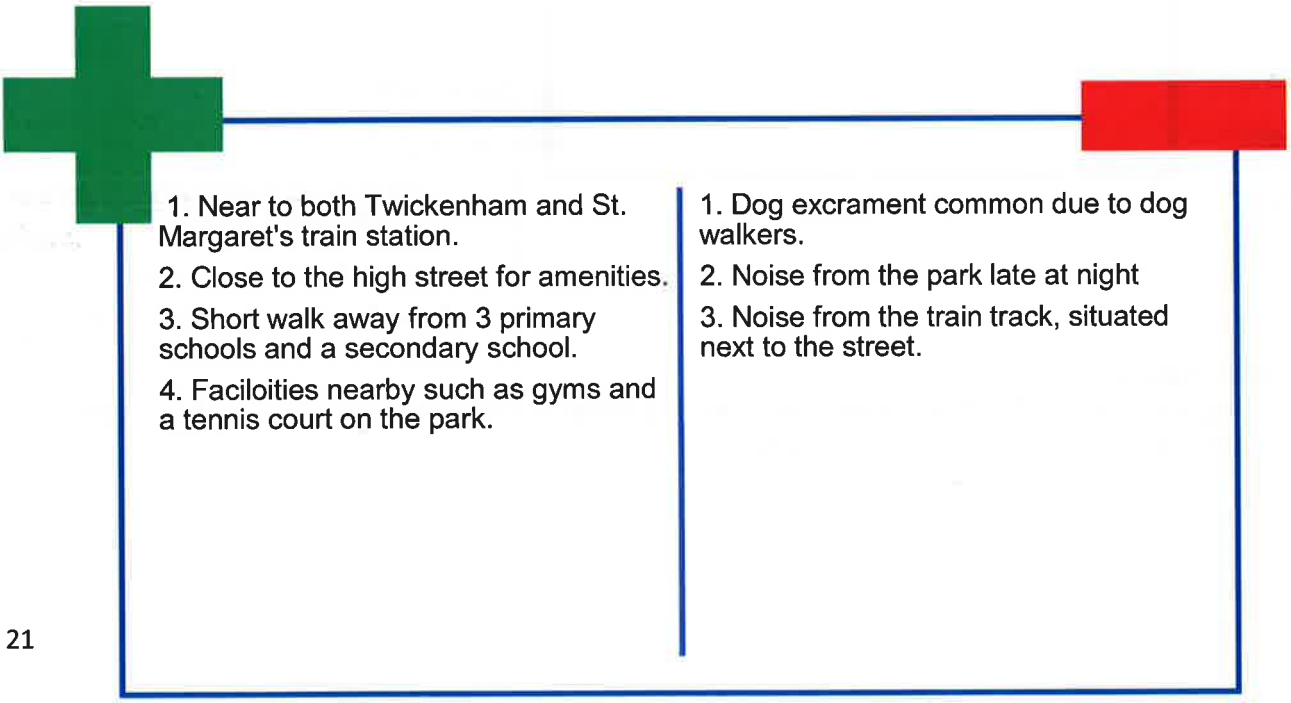


Figure 3.17 **Strengths and Weaknesses**

Sample M

Whitton Road

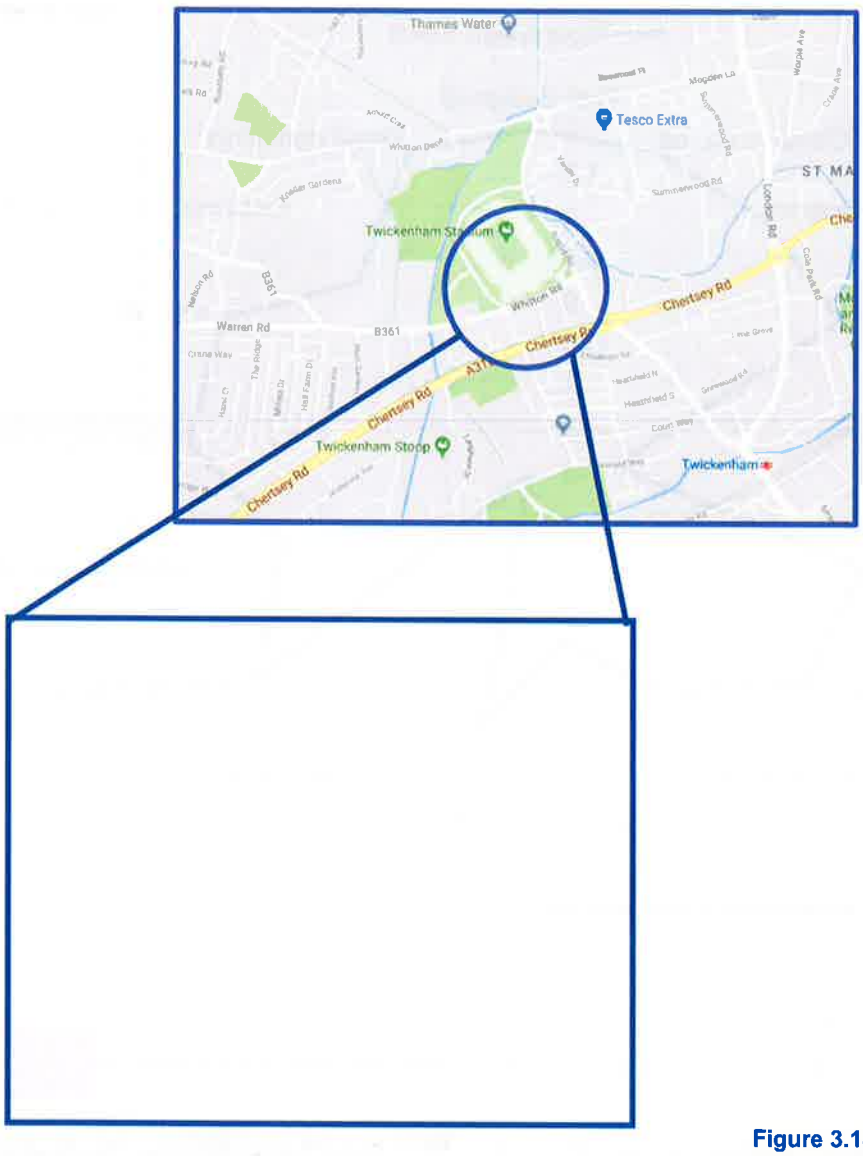


Figure 3.18 Location of Whitton Road (Google Maps, 2017)

Description
Long road right next to Twickenham stadium. The street is conjested with traffic, as it is a large main road, which generates a lot of noise.

Sample M

Traffic and Footfall Count

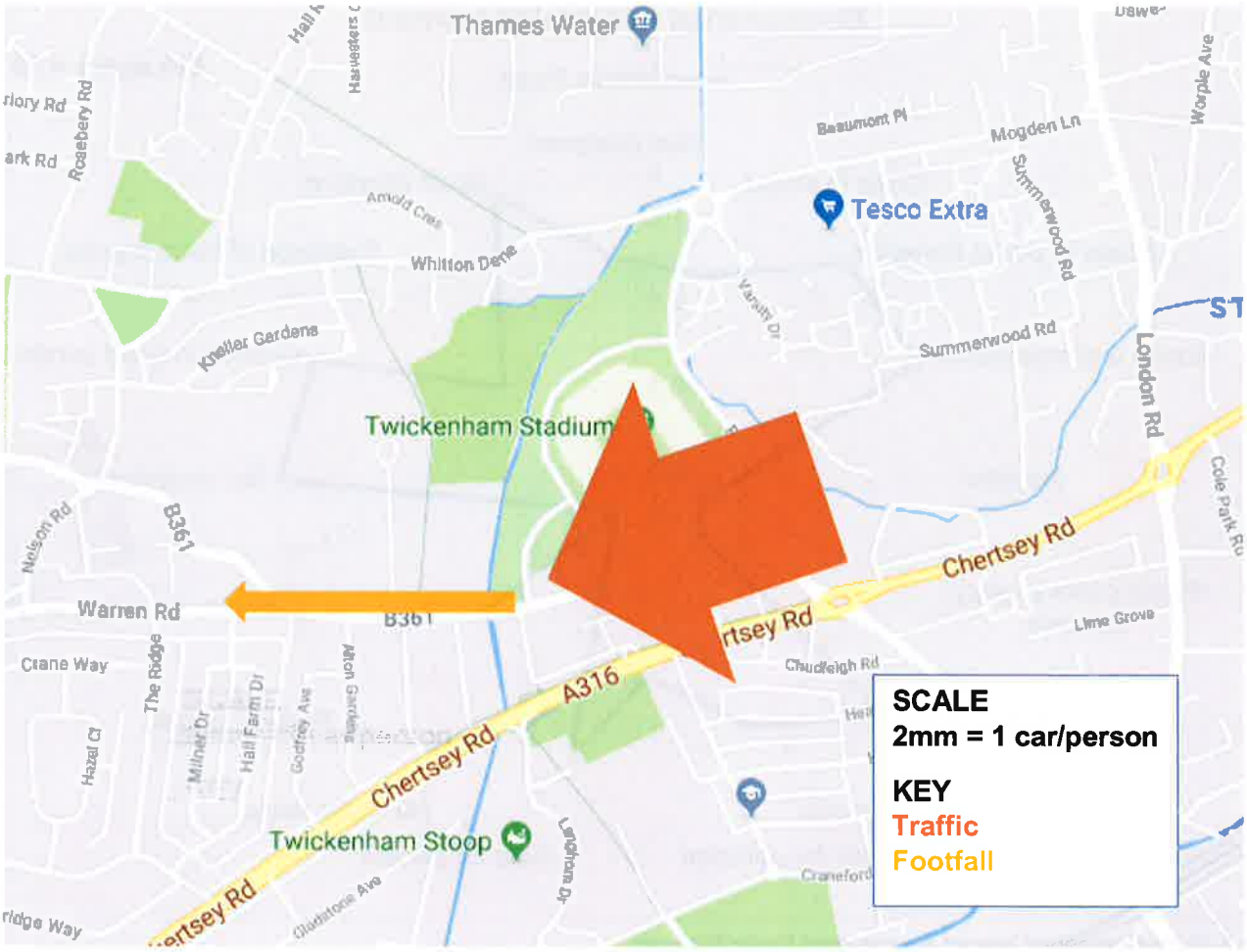


Figure 3.19 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 22 cars

Footfall: 3 people

Sample M

Enviromental Impact Assessment and Strengths and Weaknesses

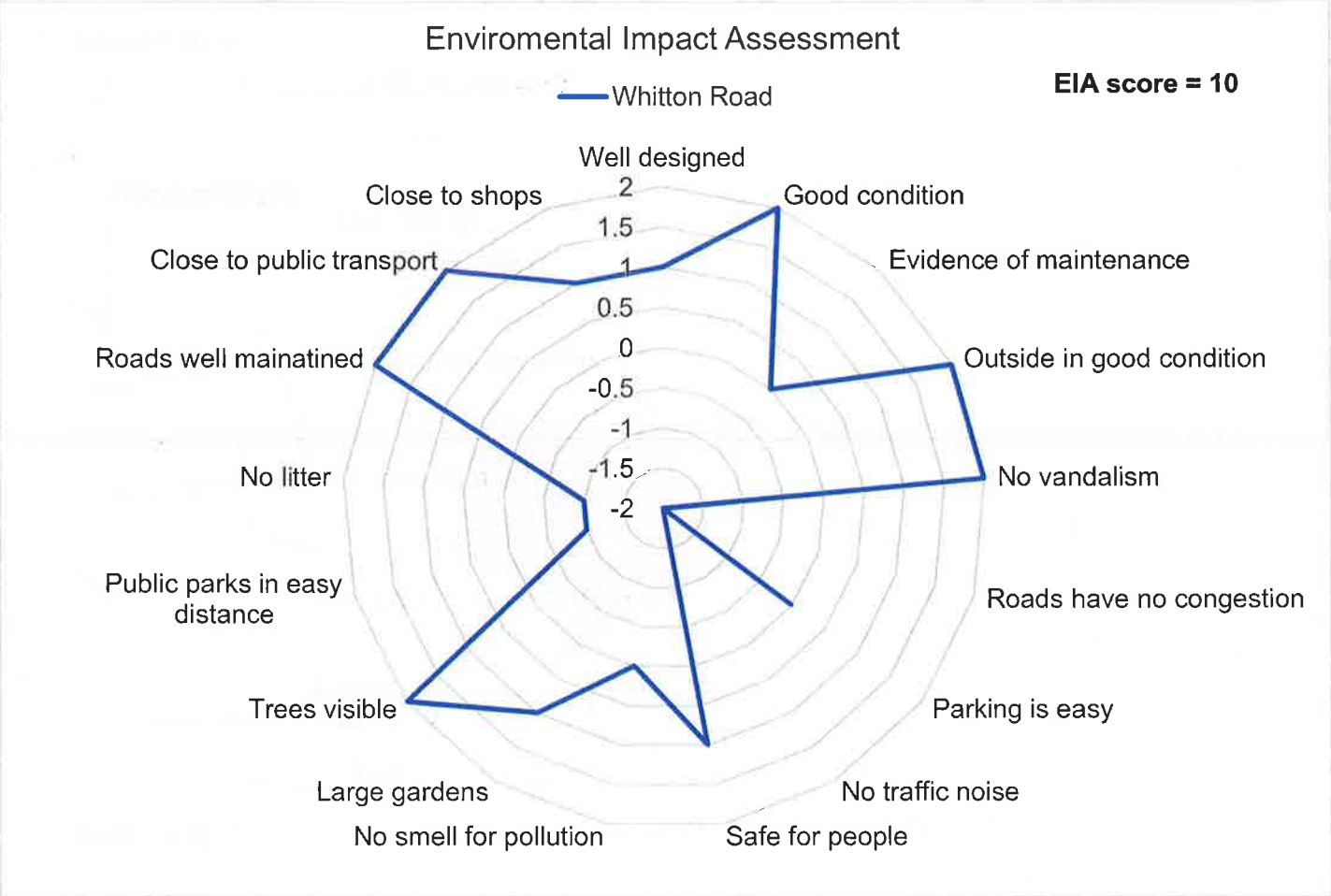


Figure 3.20 **Environmental Impact Assessment Radar Diagram**

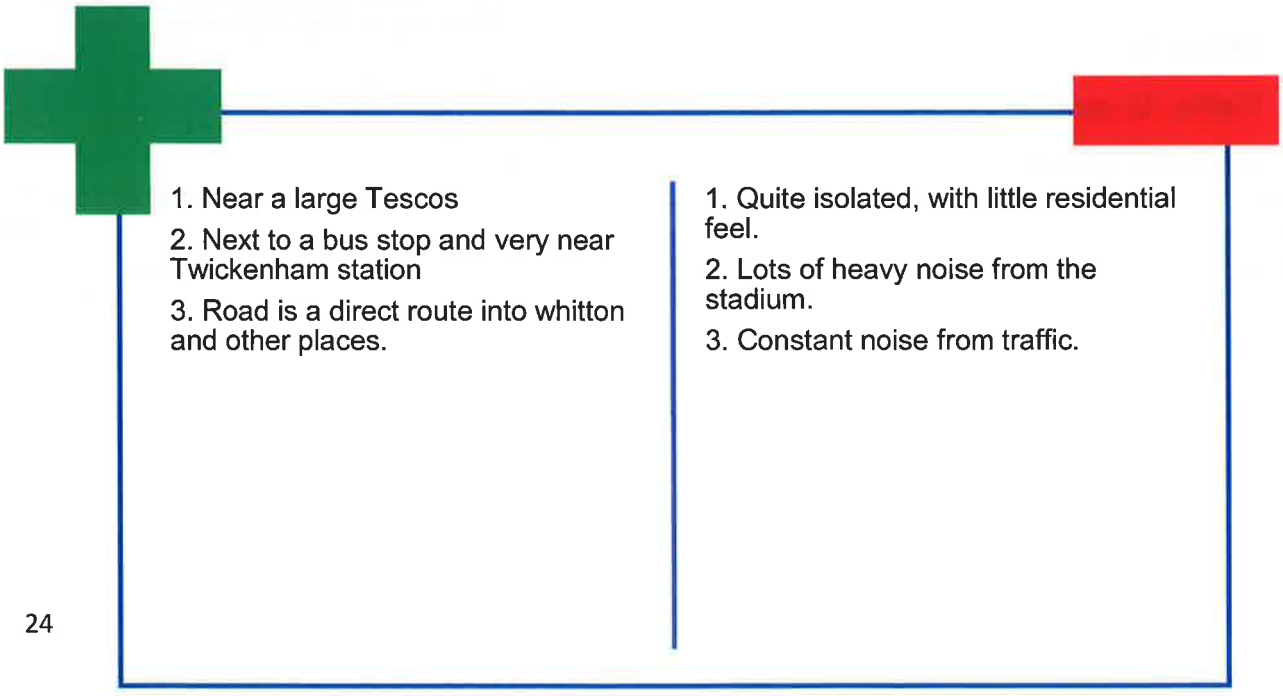


Figure 3.21 **Strengths and Weaknesses**

Sample M

LONDON ROAD

Figure 3.23 Location of London Road (Google Maps, 2017)

Description

Road has constant traffic, but houses are large and attractive. Road is on a roundabout, which leads into central London and it is in close proximity to Moor Mead Park and a church.

Sample M

Traffic and Footfall count

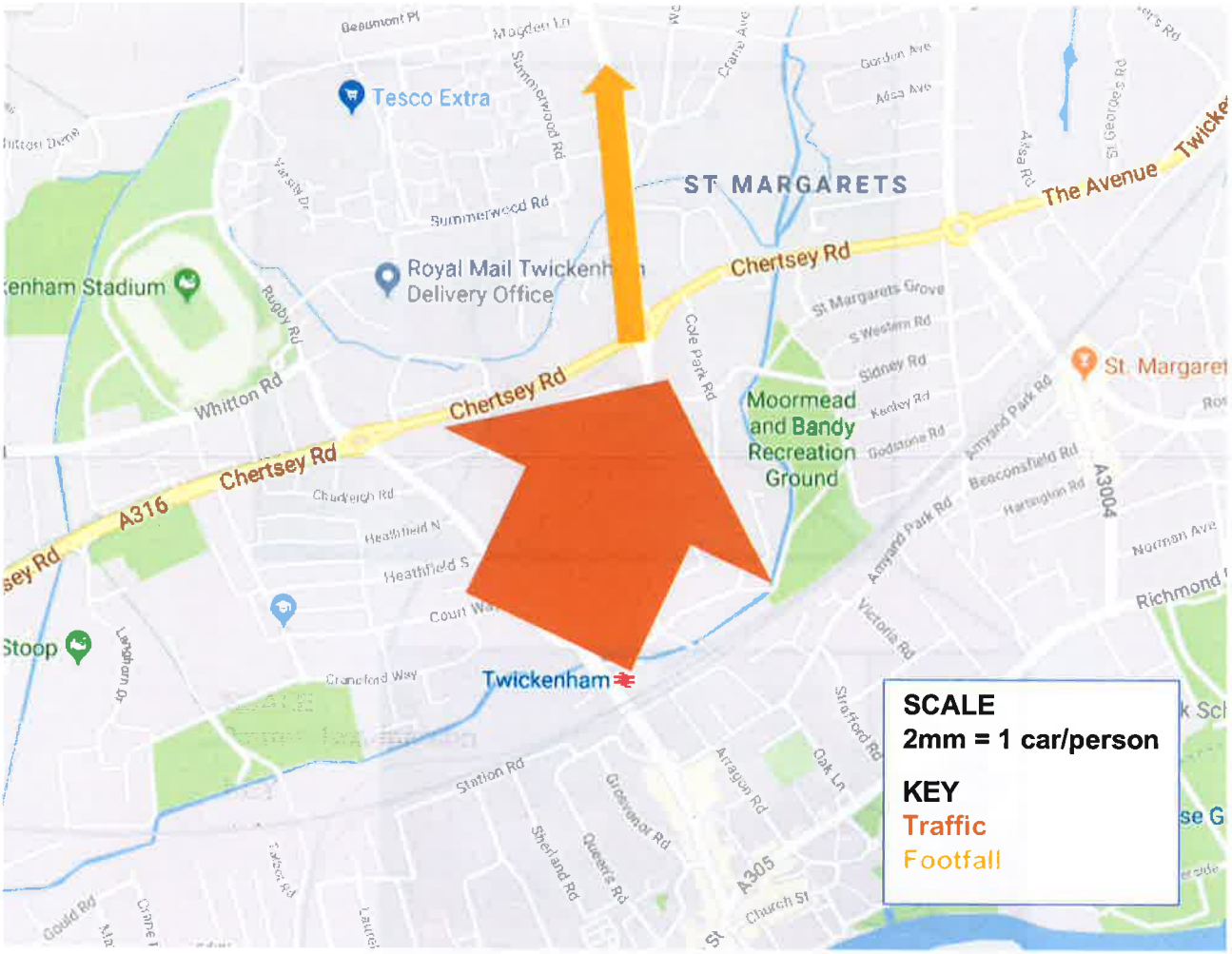


Figure 3.24 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 26 cars

Footfall: 4 people

Sample M

Enviromental Impact Assessment and Strengths and Weaknesses

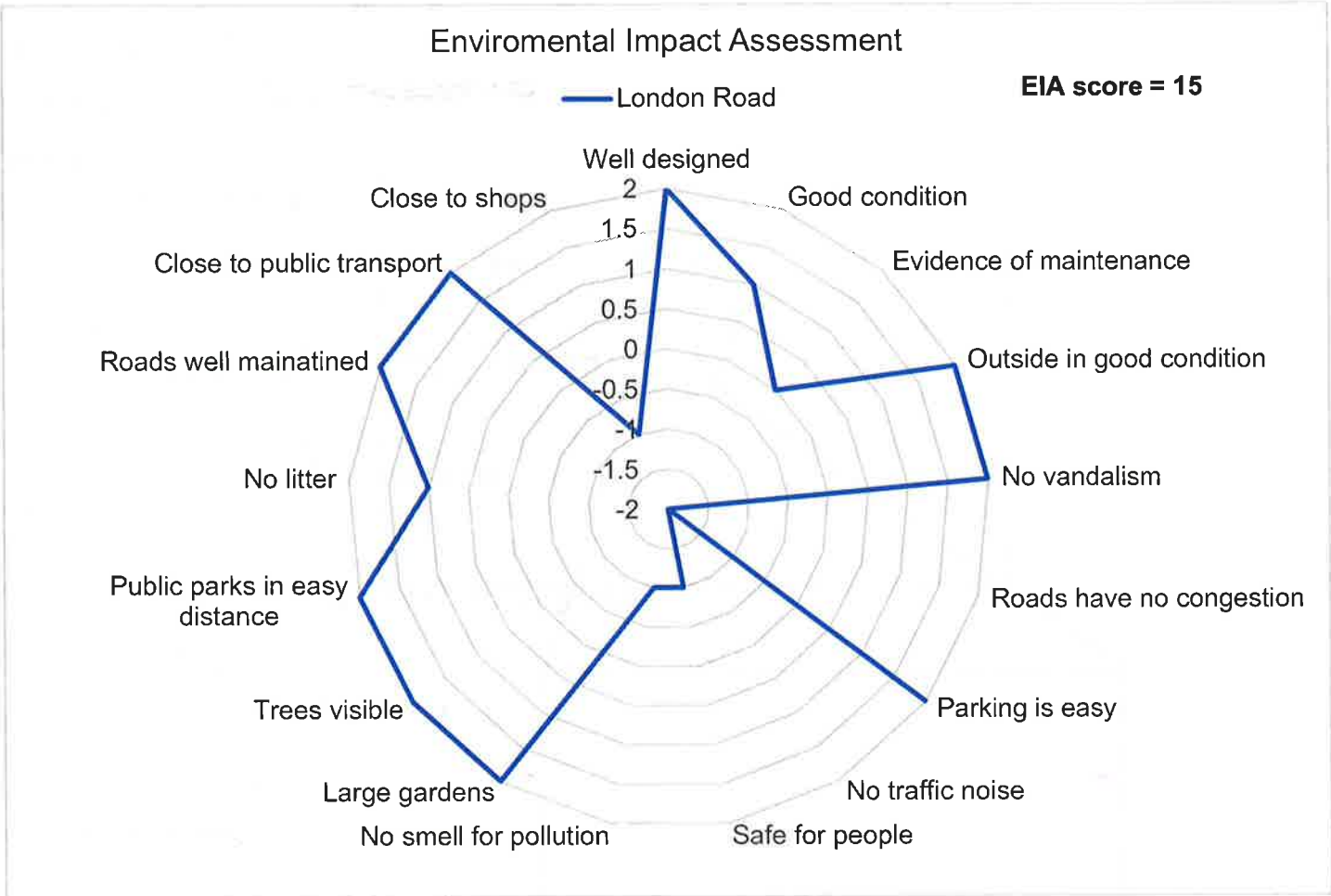


Figure 3.25 **Environmental Impact Assessment Radar Diagram**

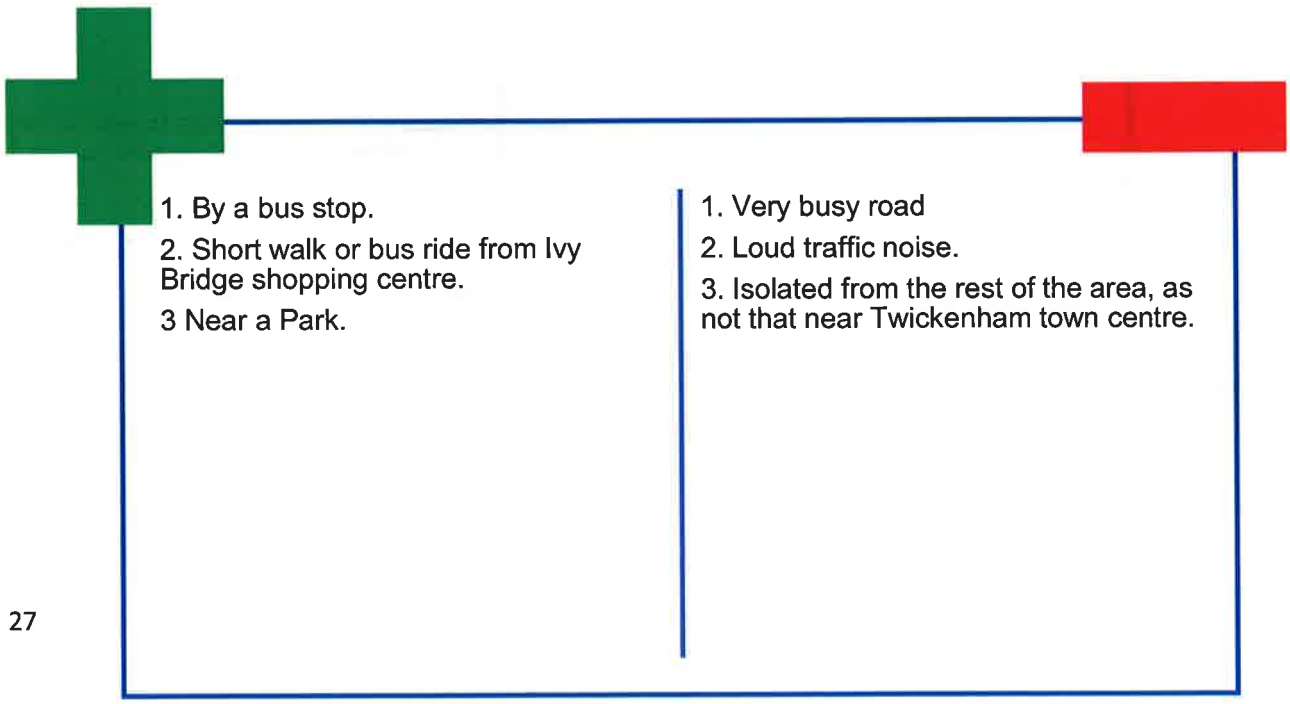


Figure 3.26 **Strengths and Weaknesses**

Sample M

ST. MARGARET'S HIGH STREET (CROWN ROAD)

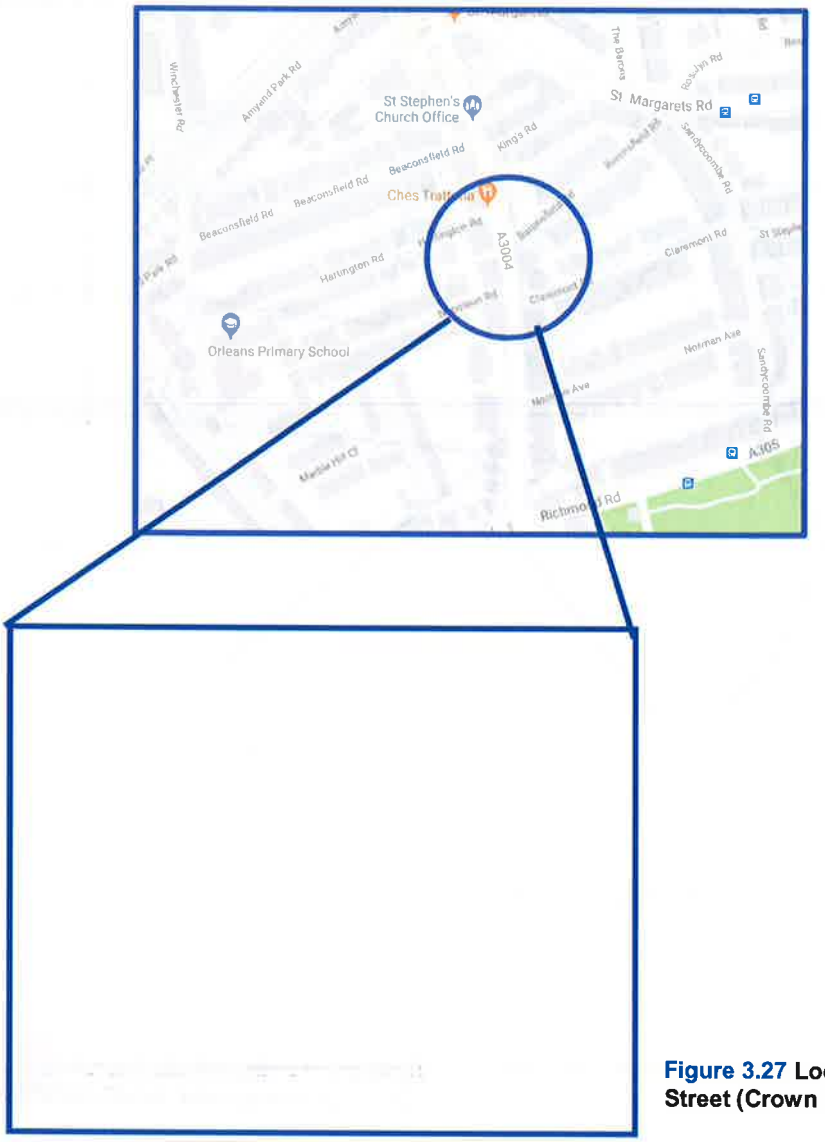


Figure 3.27 Location of St. Margaret's High Street (Crown Road) (Google Maps, 2017)

Description

Small High Street in the middle of the town, with many independent shops. Atmosphere is pleasant, but the road itself has a lot of traffic congestion.

Sample M

Traffic and Footfall Count

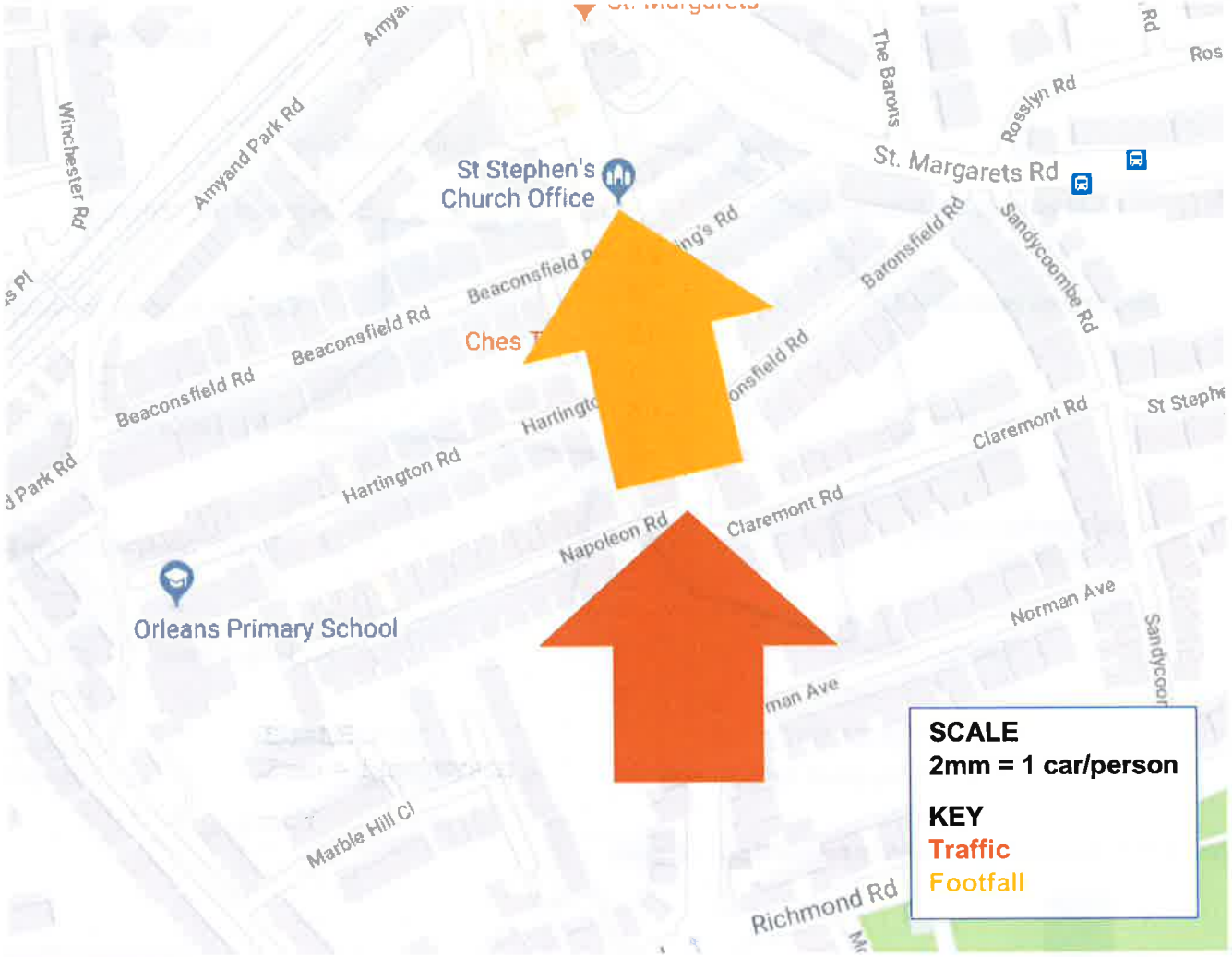


Figure 3.28 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 22 cars

Footfall: 19 people

Sample M

Enviromental Impact Assessment and Strengths and Weaknesses

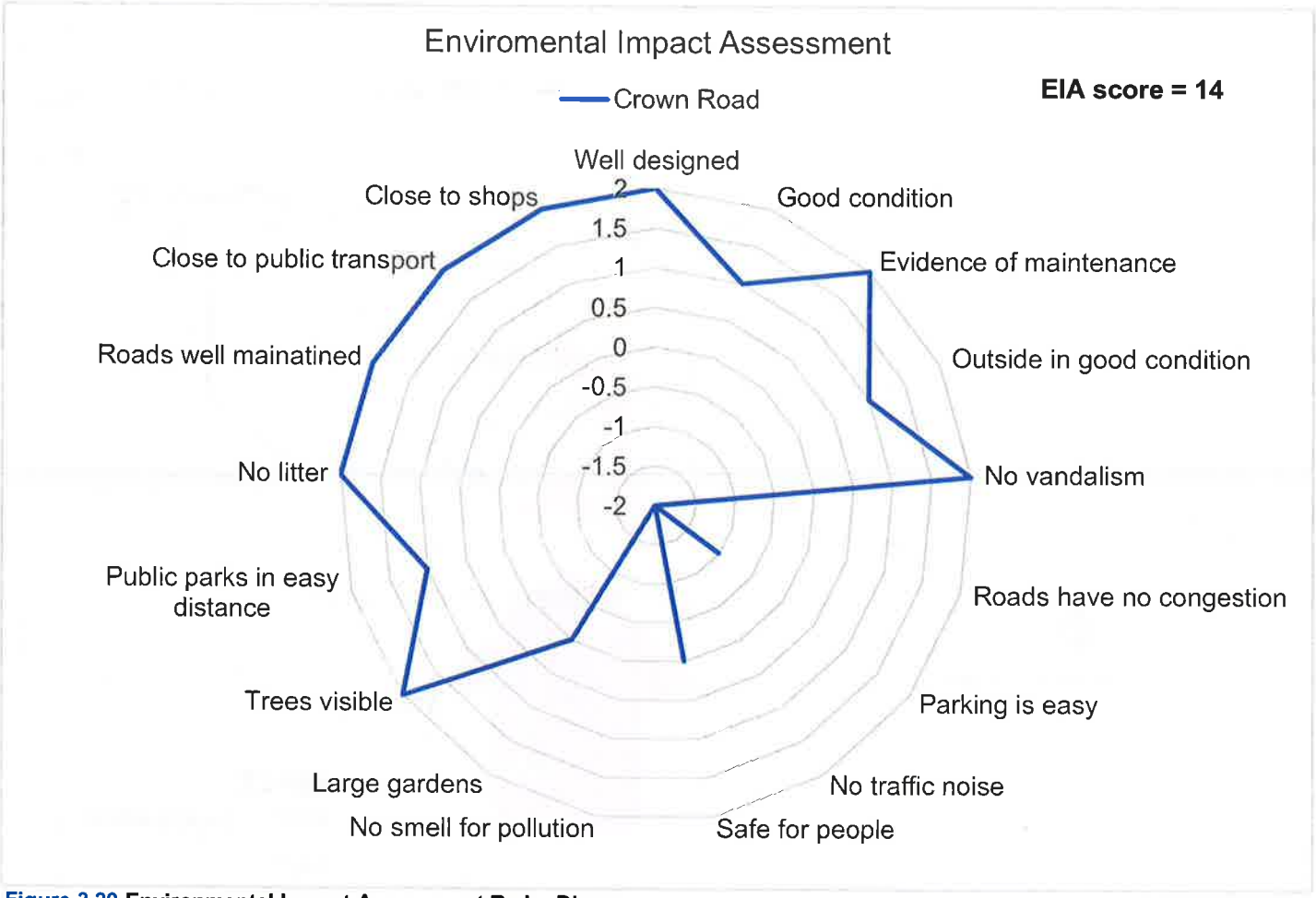


Figure 3.29 **Environmental Impact Assessment Radar Diagram**

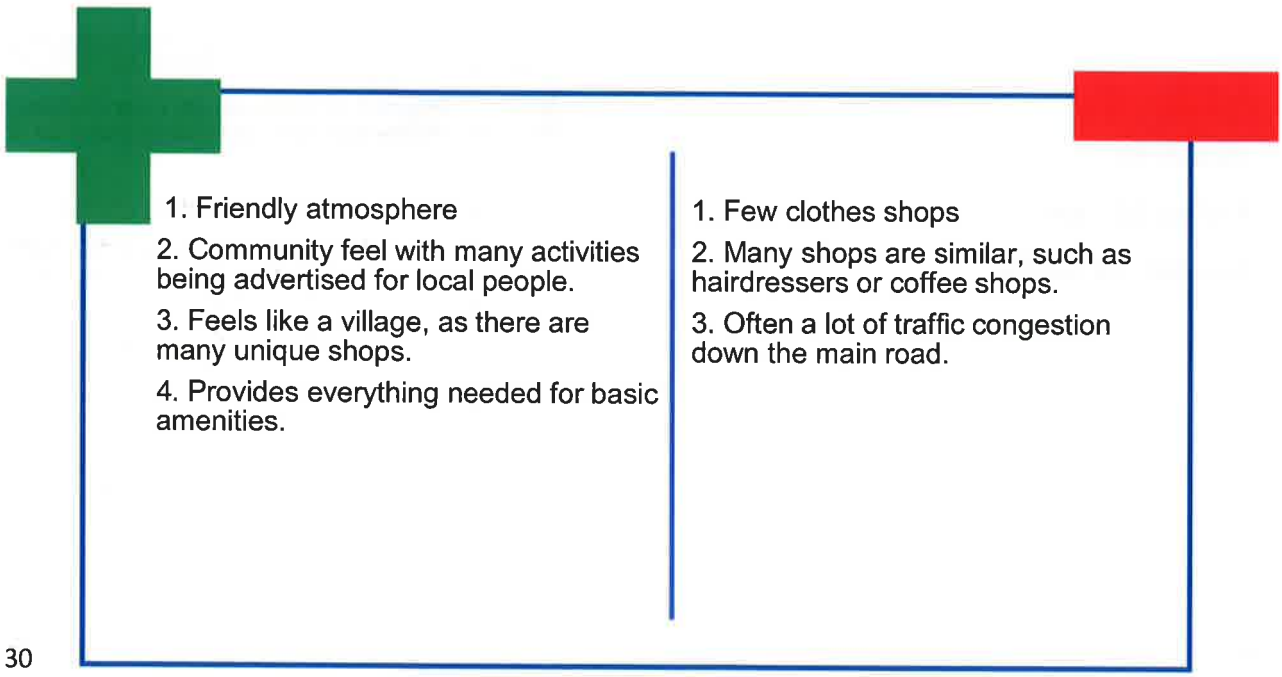


Figure 3.30 **Strengths and Weaknesses**

Sample M

Land Use

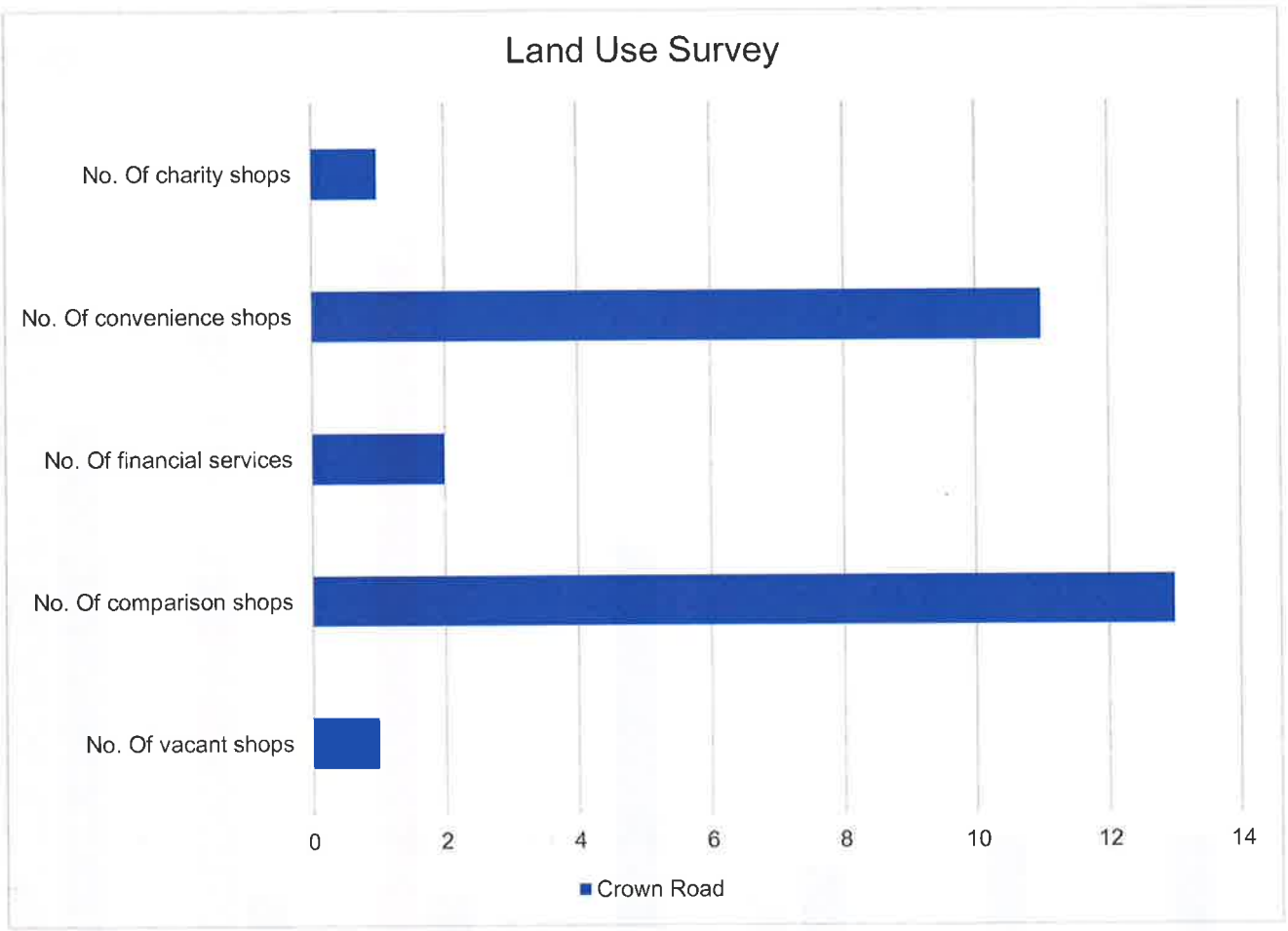


Figure 3.31 Land Use Survey Bar Chart

Sample M

Comparing Data for Footfall and Traffic

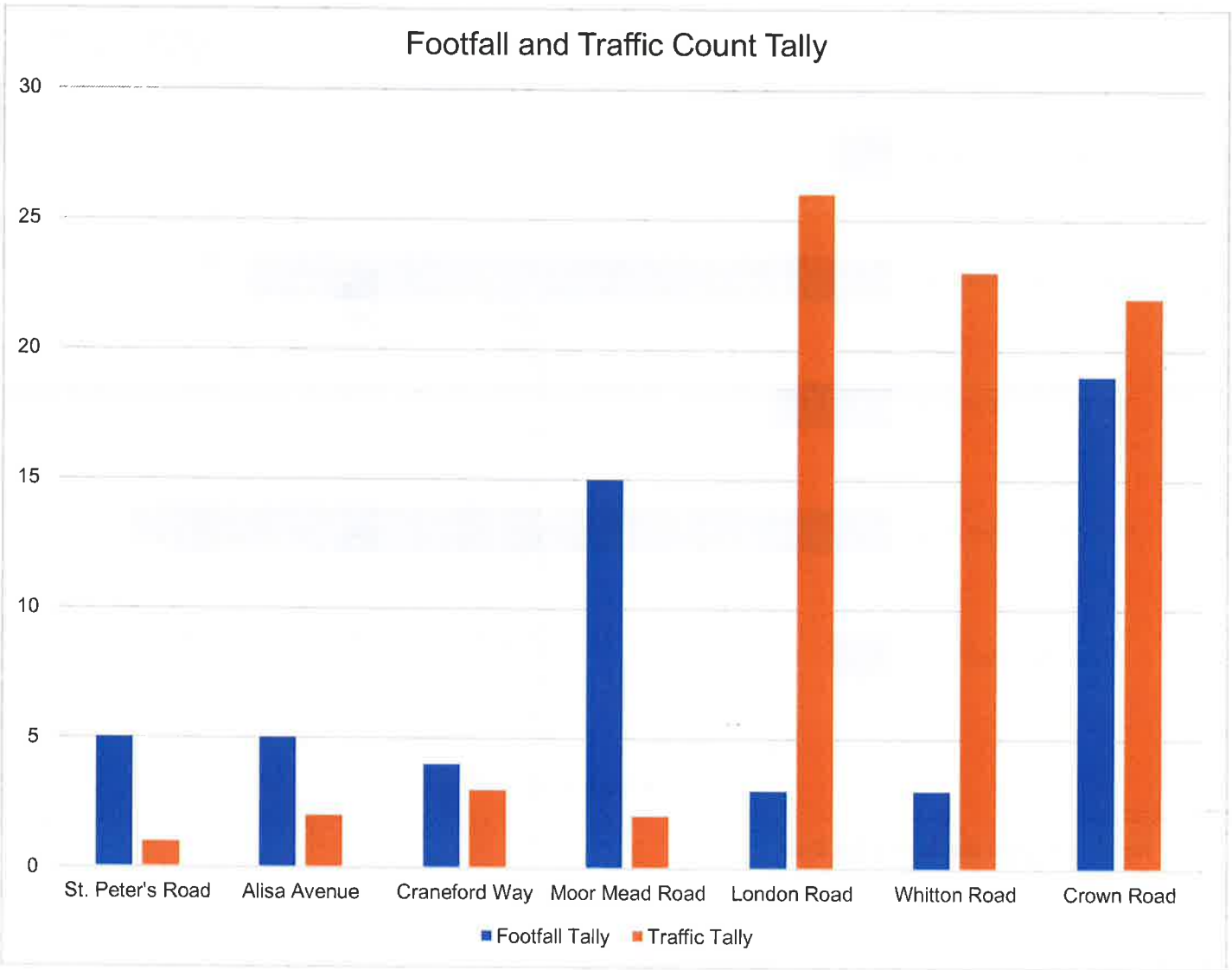


Figure 3.32 Footfall and Traffic Count Column Chart

Mean Footfall = 8 (1sf) **Mean Traffic = 11 (2sf)**

Sample M

Comparing Data for Environmental Impact Assessments

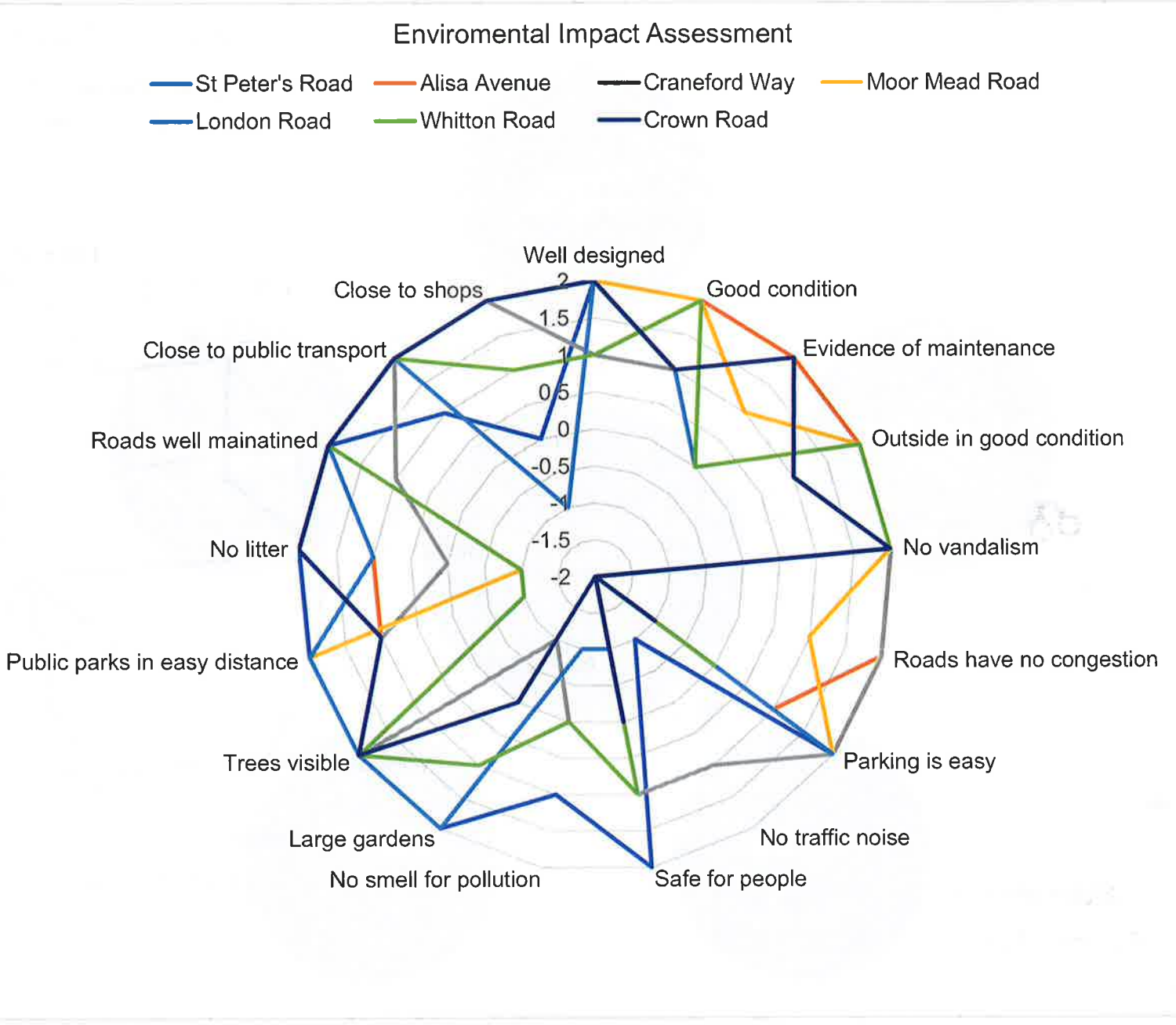


Figure 3.33 Environmental Impact Assessment Radar Diagram

Mean EIA score = 18 (2sf)

Sample M

Questionnaires

25 questionnaires were conducted along the high street of the ward of North Twickenham and St. Margaret'(Crown Road).

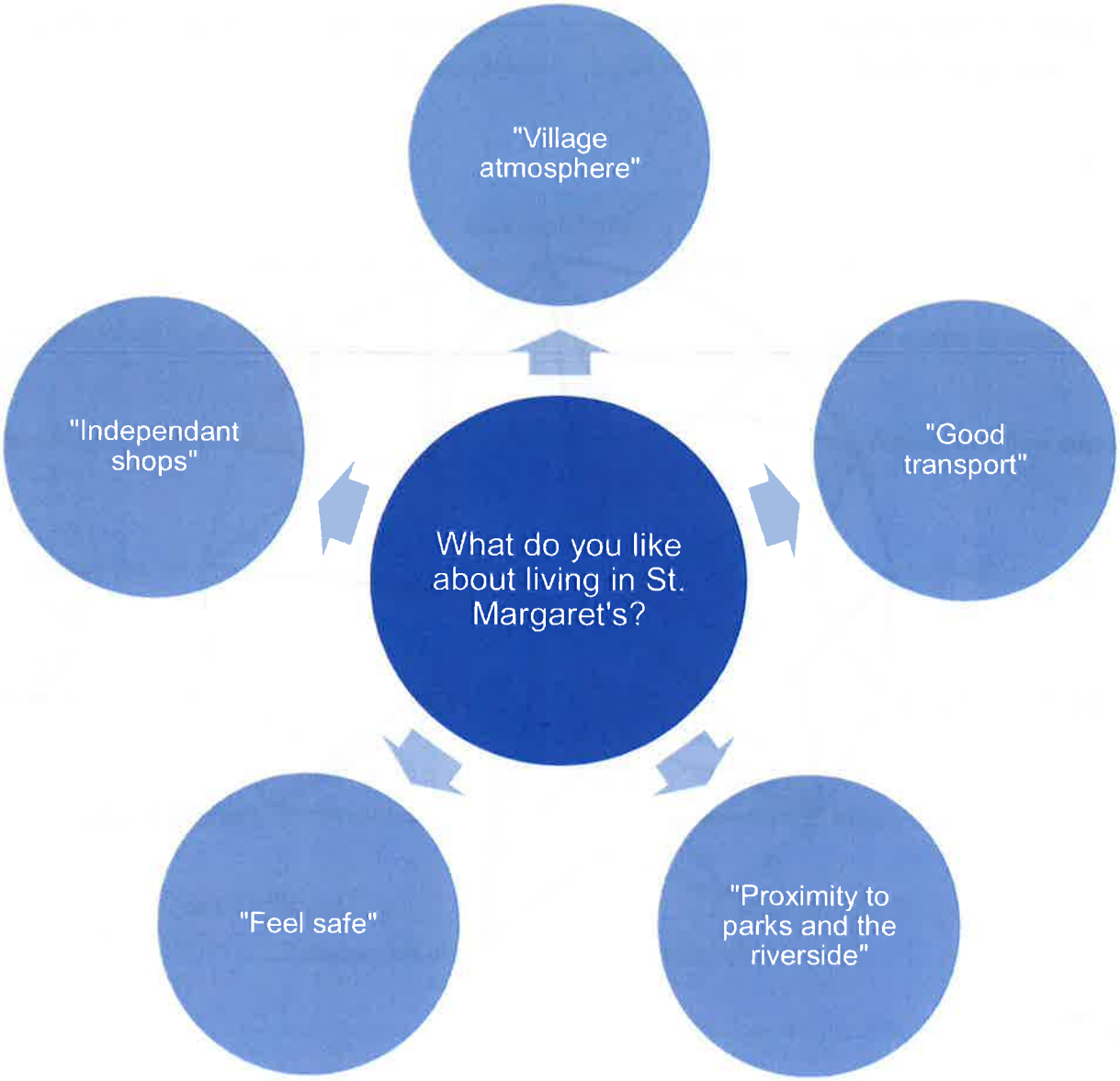


Figure 3.34 Questionnaire Word Bank

Sample M

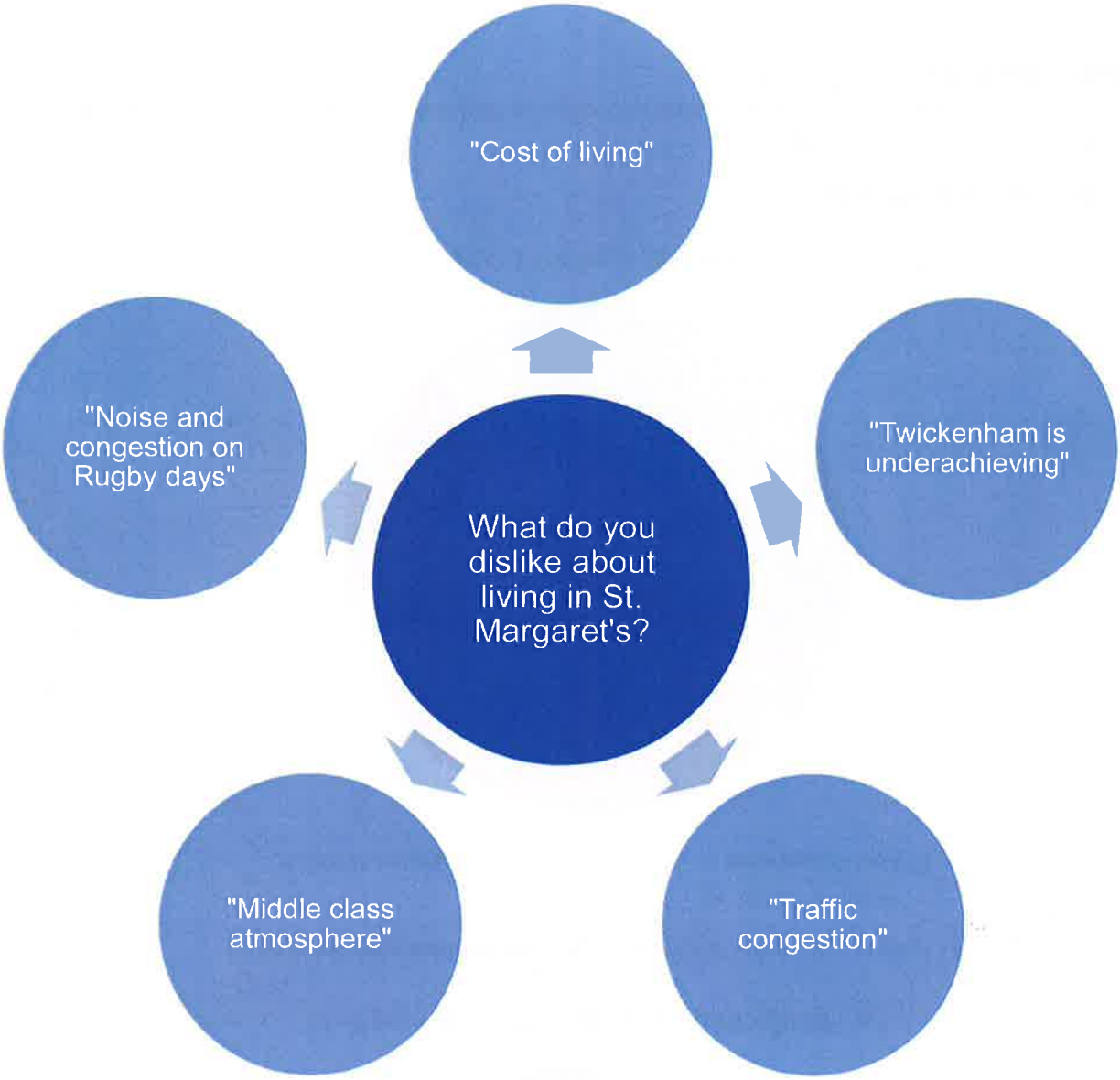


Figure 3.34 Questionnaire Word Bank

SECONDARY DATA

Much of this secondary data is 2011 census information, gathered from the London data store or other sites such as findahood.com.

Education and Employment

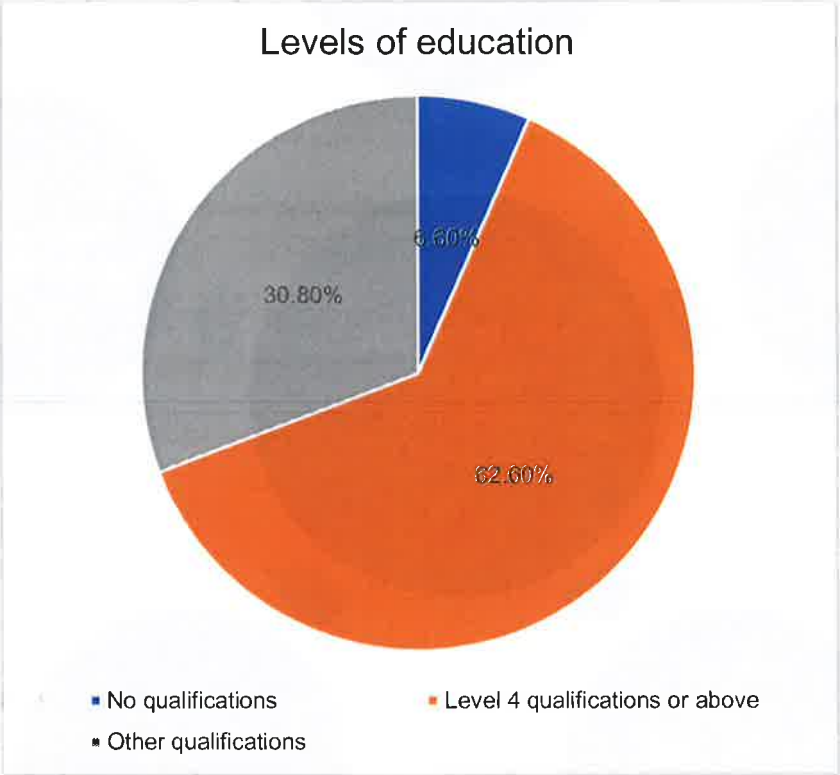


Figure 3.35 Levels of education Pie Chart (London Data Store, 2011)

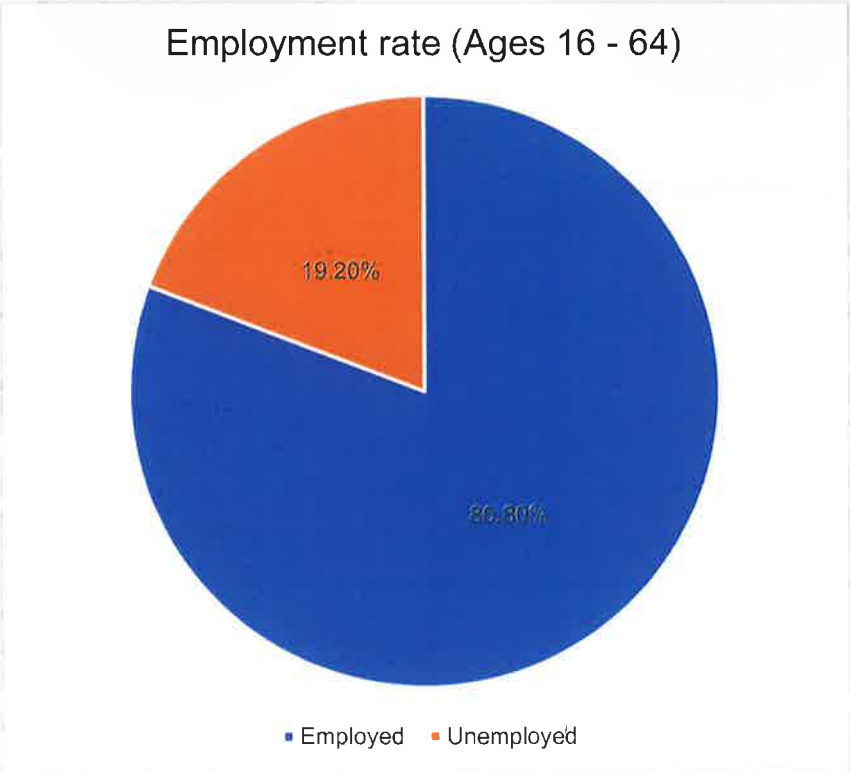


Figure 3.36 Employment Rate Pie Chart (London Data Store, 2011)

Sample M

Average House Price

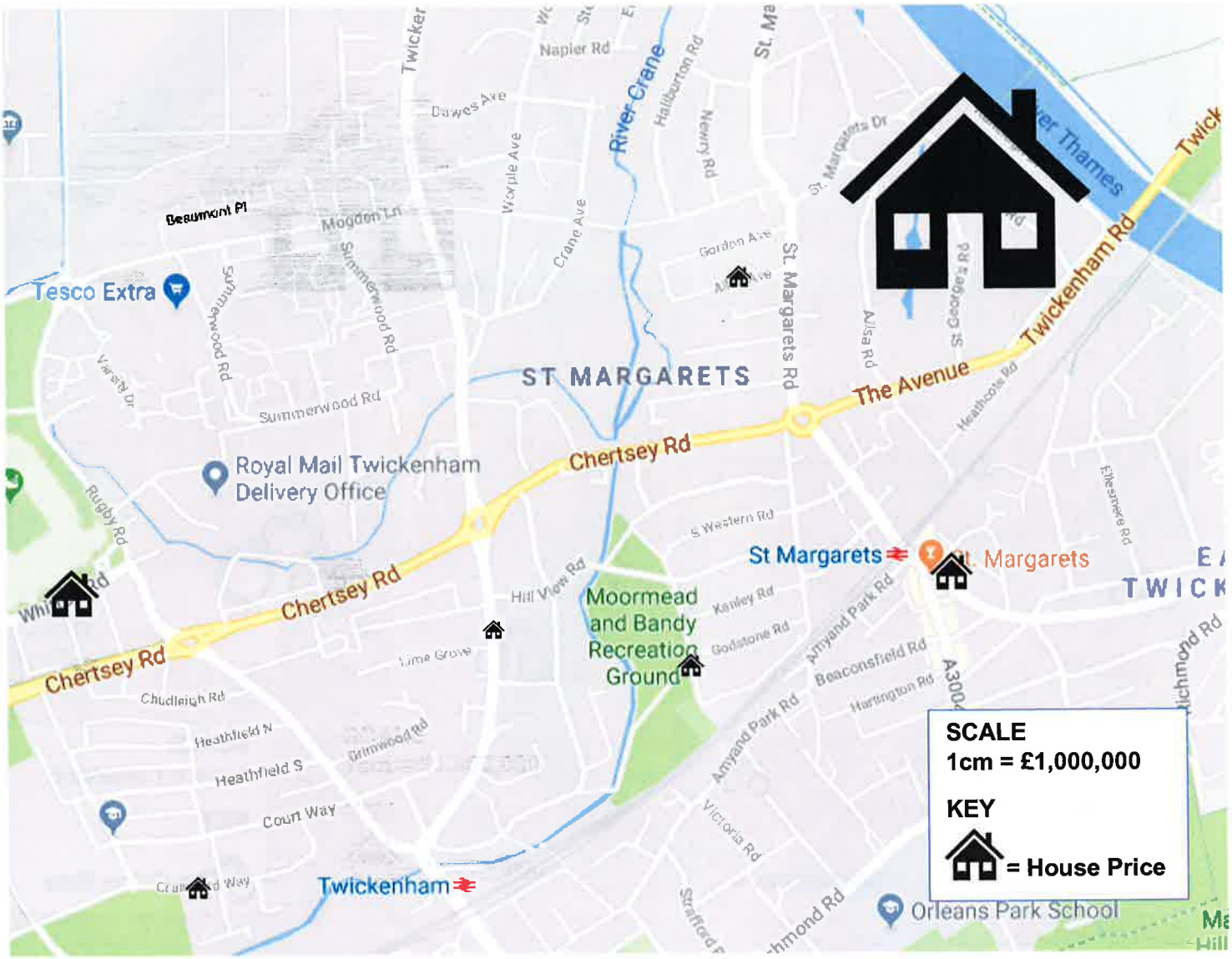


Figure 3.37 Average House Price Proportional Diagram (Google Maps, 2017) (Check My Street, 2017)

RESULTS

St. Peter's Road: £4,675,000 (2017)

Alisa Avenue: £462,375 (2017)

Craneford Way: £470,988 (2017)

Moor Mead Road: £490,218 (2017)

Whitton Road: £1,007,500 (2017)

London Road: £395,333 (2017)

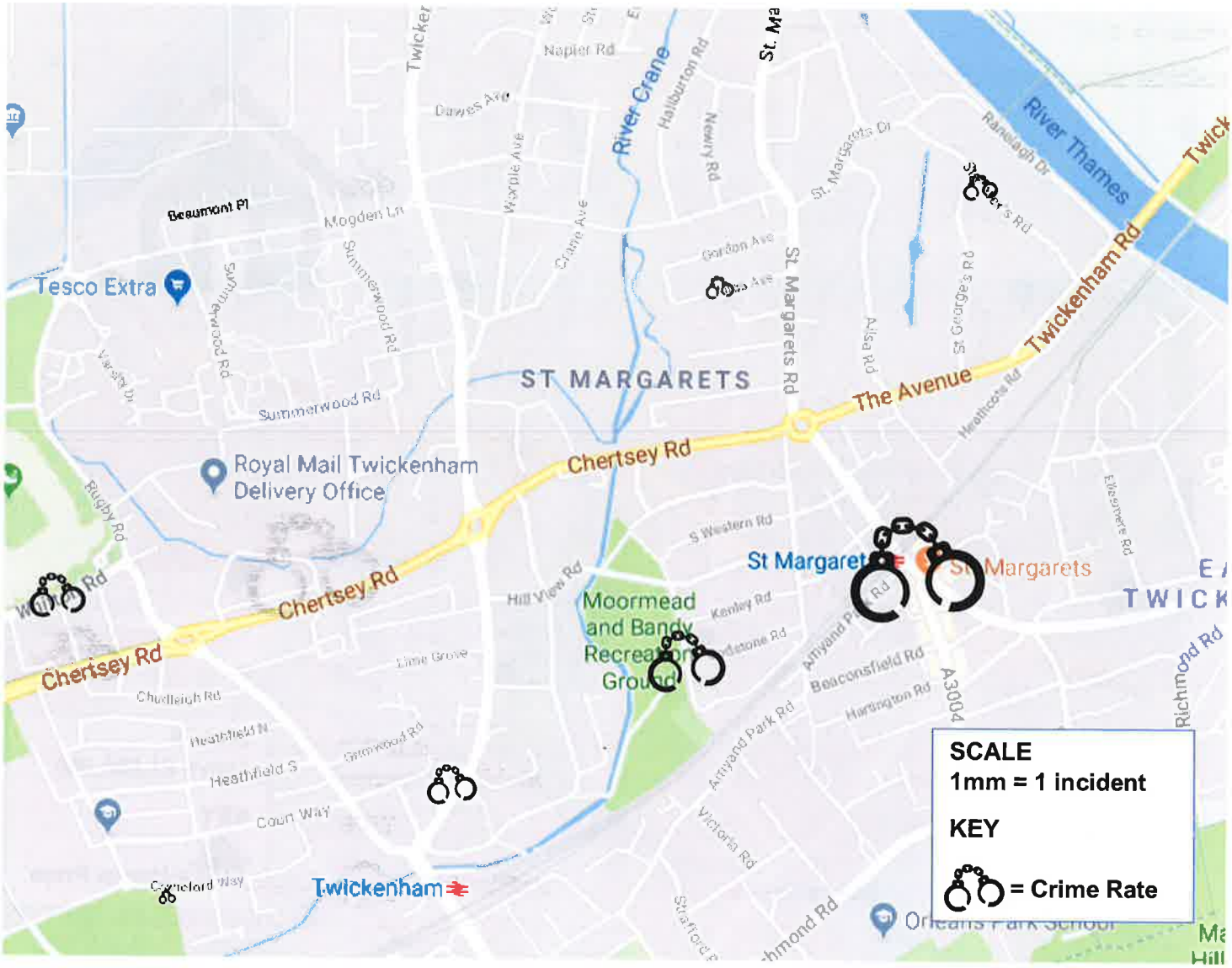
Crown Road (High Street): £801,833 (2017)

Mean House Price: £1,186,178.14

(Check My Street, 2017)

Sample M

Crime Rate



RESULTS

St. Peter's Road: 6 incidents (2017)

Alisa Avenue: 5 incidents (2017)

Craneford Way: 3 incidents (2017)

Moor Mead Road: 14 incidents (2017)

Whitton Road: 10 incidents (2017)

London Road: 9 incidents (2017)

Crown Road (High Street): 24 incidents (2017)

Mean Crime Rate: 10 incidents (2sf)

(Check My Street, 2017)

Figure 3.38 Crime Rate Proportional Diagram (Google Maps, 2017) (Check My Street, 2017)

Chapter 2 Data Presentation (Ward of Hounslow Central)

Each road assessed has an Environmental Impact Assessment (EIA) in the form of a radar diagram, a description, photo and strengths and weaknesses table. For the high street of the ward (Crown Road) there is also a land use survey in the form of a bar chart and questionnaire data. At the end of the section, there is also a column chart showing Footfall and Traffic counts for each road.

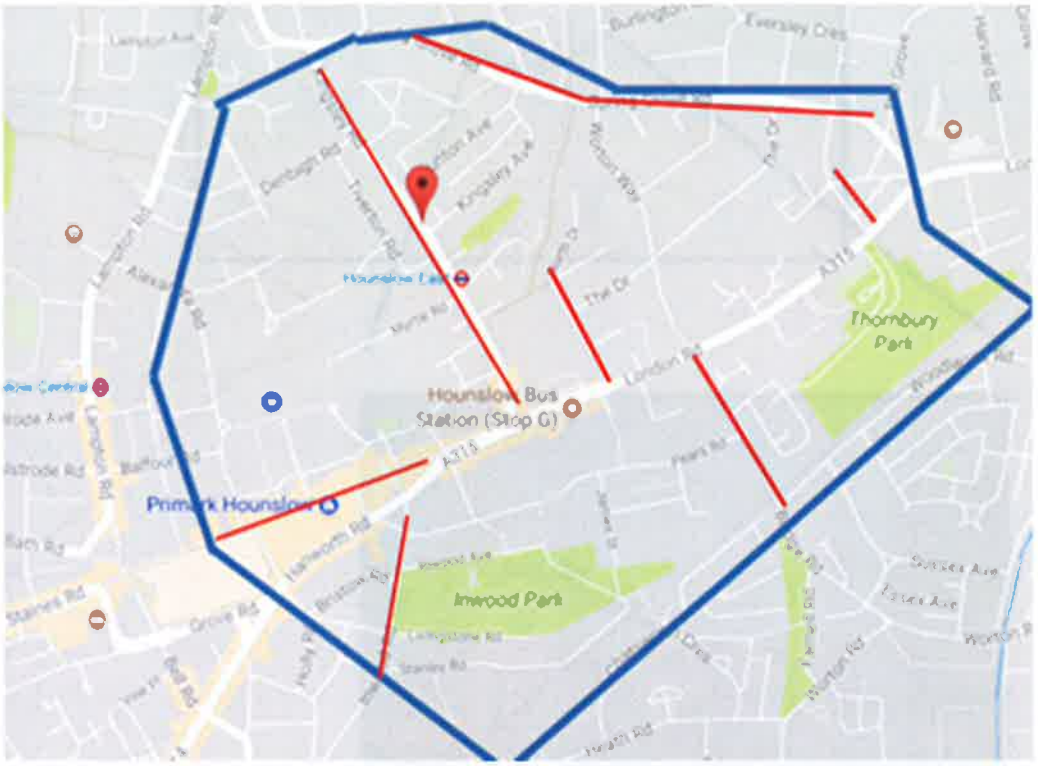


Figure 4.1 Location of streets assessed in the Ward of Hounslow Central (Google Maps, 2017)

Sample M

Thornbury Road

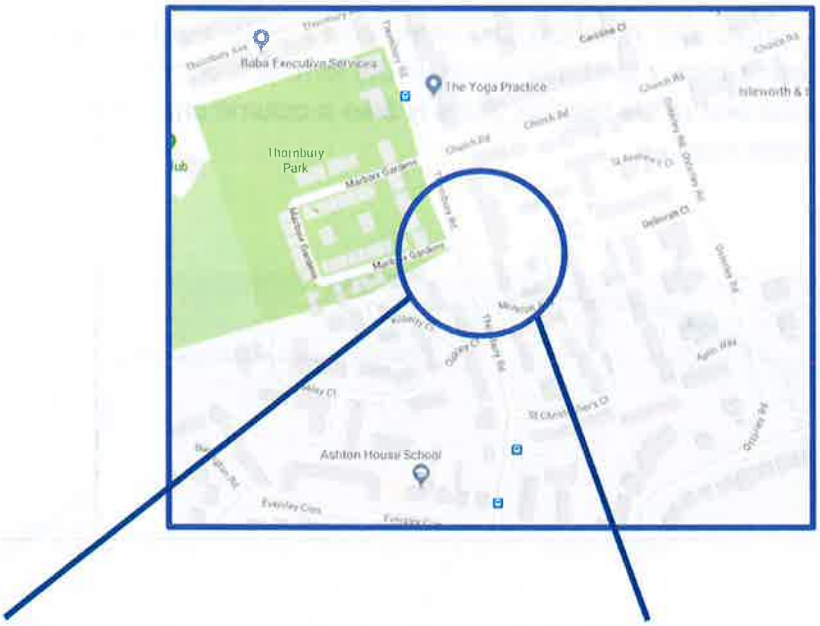


Figure 4.2 Location of Thornbury Road (Google Maps, 2017)

Description

It is a small Road off a very busy main road, often used as a rat run. It is near community centers, a pub and a church, as well as being next to a bus stop and shops for amenities.

Sample M

Traffic and Footfall Counts

Figure 4.3 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 10 cars

Footfall: 2 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

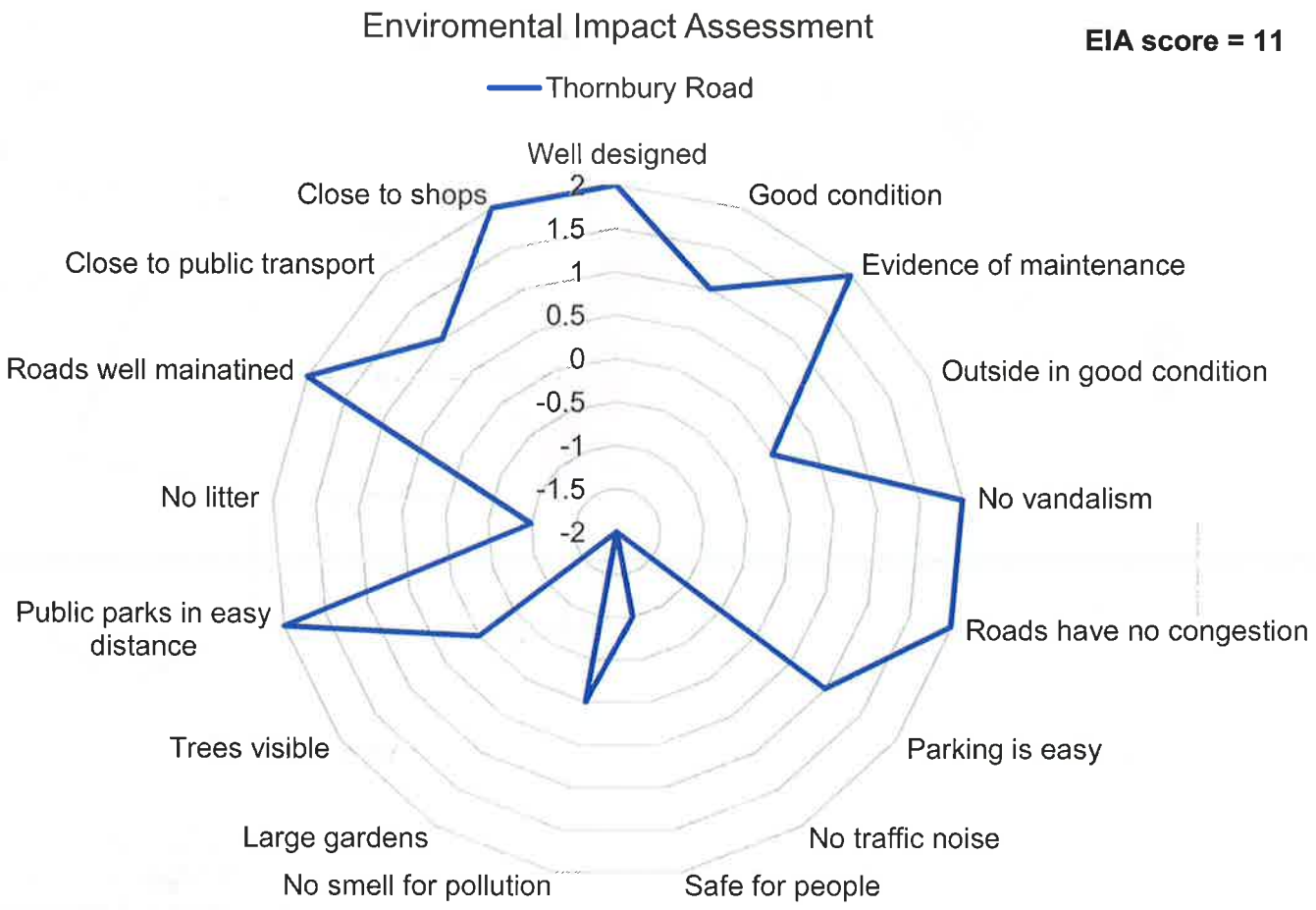


Figure 4.4 Enviromental Impact Assessment Radar Diagram

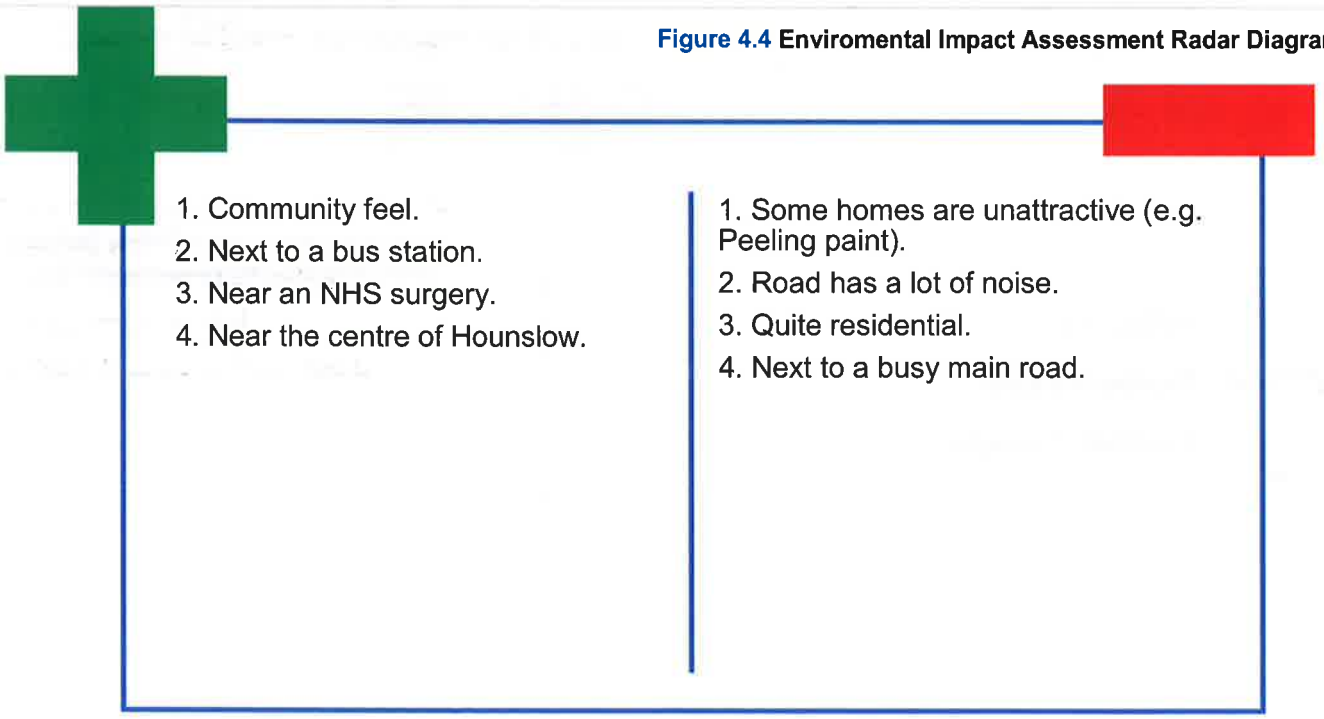


Figure 4.5 Strengths and Weaknesses

Sample M

North Drive

Figure 4.6 Location of North Drive (Google Maps, 2017)

Description

Road heading off from a main road with many amenities nearby. Noise of traffic, but road itself has little congestion. Houses are fairly large and gardens appear well kept.

Sample M

Traffic and Footfall Count

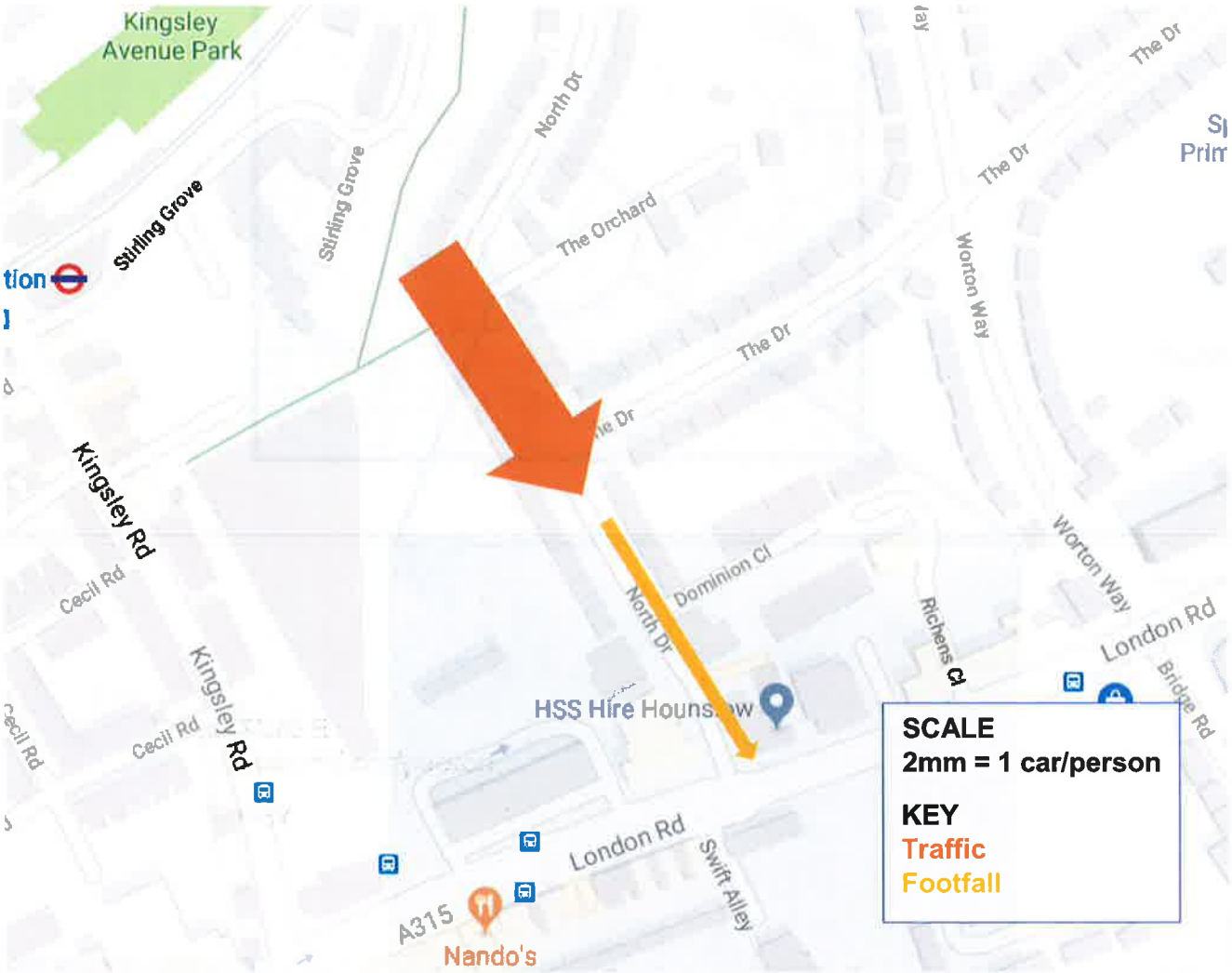


Figure 4.7 Proportional Flow Diagram of Traffic and Footfall (Google Maps, 2017)

RESULTS

Traffic: 10 cars

Footfall: 2 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

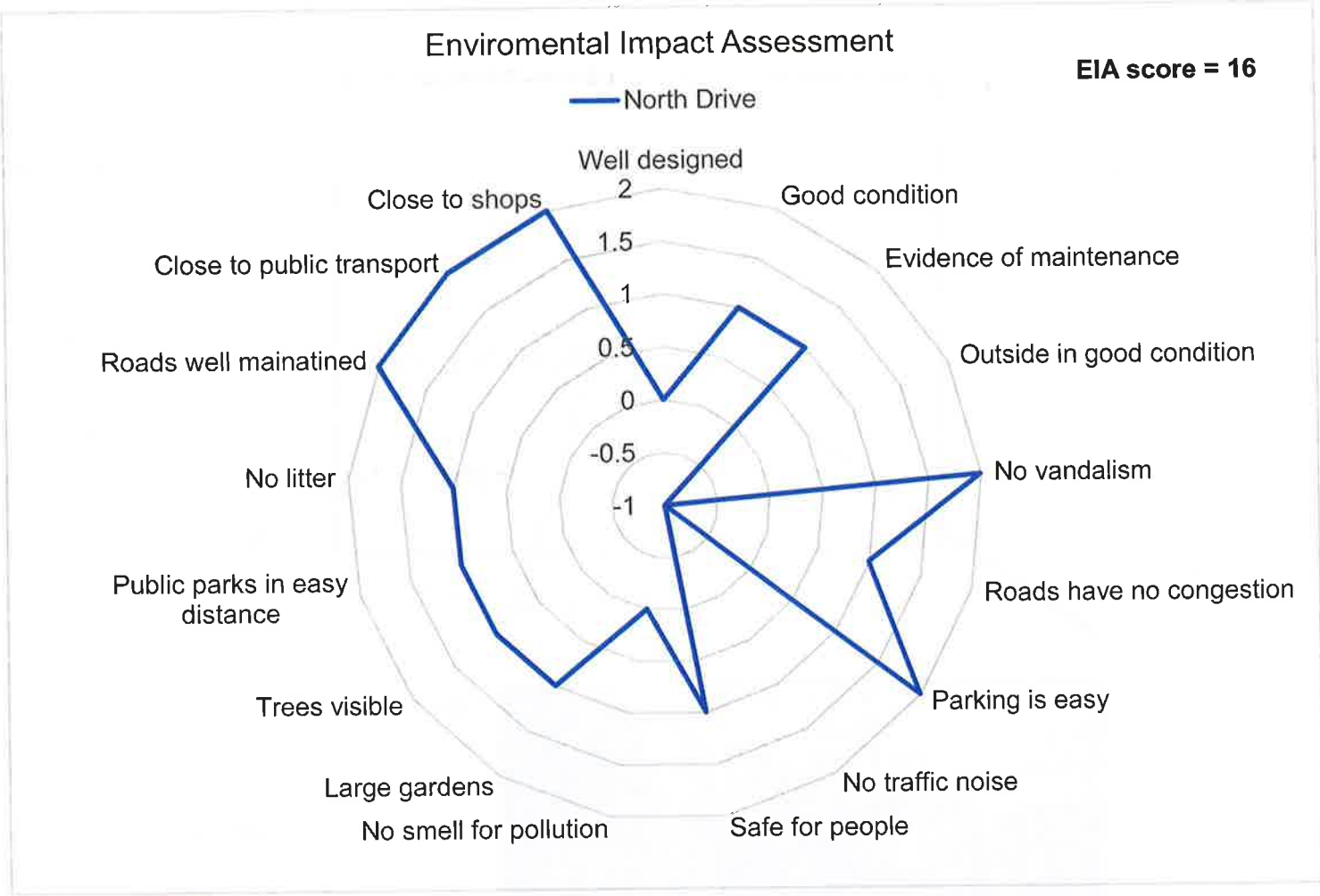


Figure 4.8 Enviromental Impact Asessment Radar Diagram

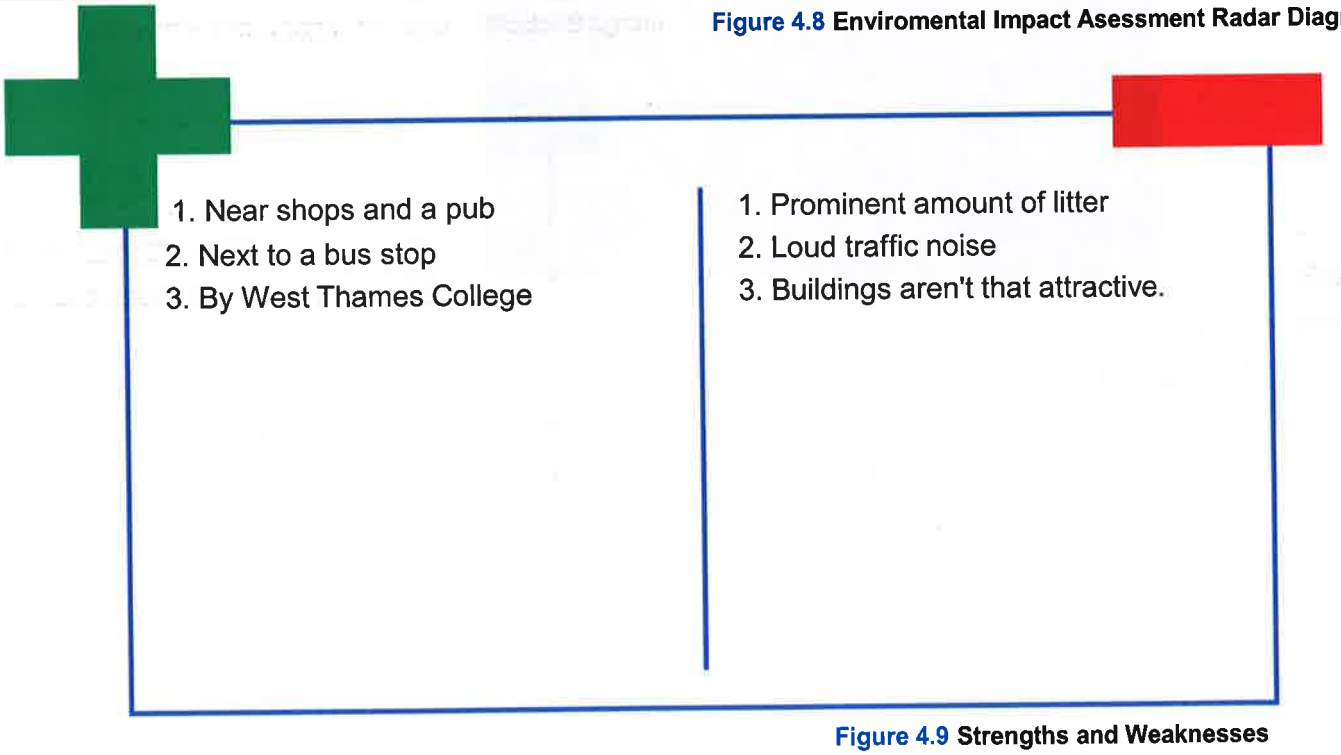


Figure 4.9 Strengths and Weaknesses

Sample M

Bridge Road

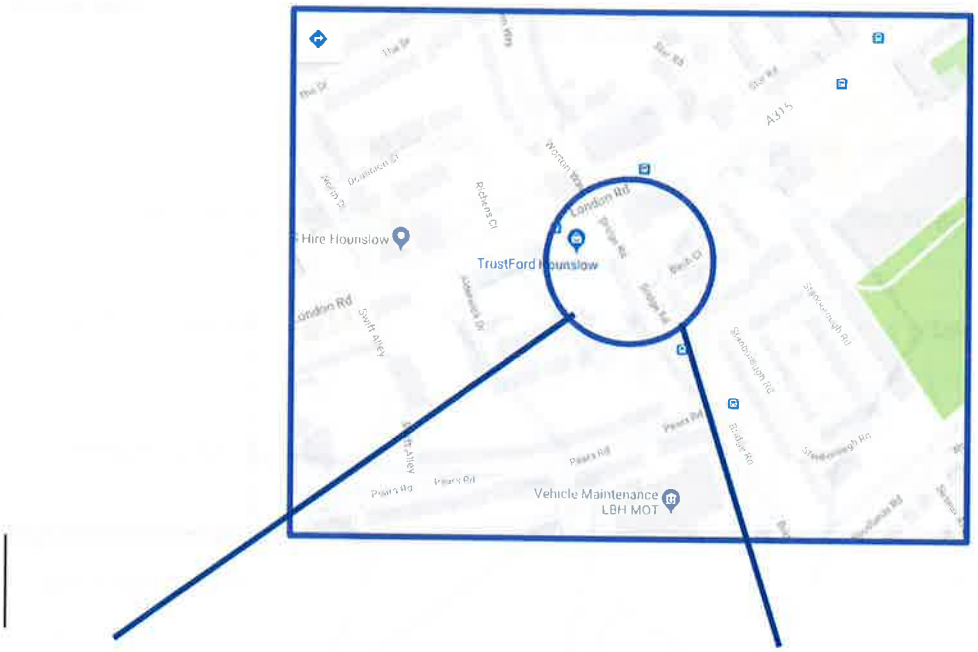


Figure 4.10 Location of Bridge Road (Google Maps, 2017)

Description

Long road that supports a lot of traffic, with little residential feel. Off the road there are pedestrianized small housing estates that are very attractive.

Sample M

Traffic and Footfall Count

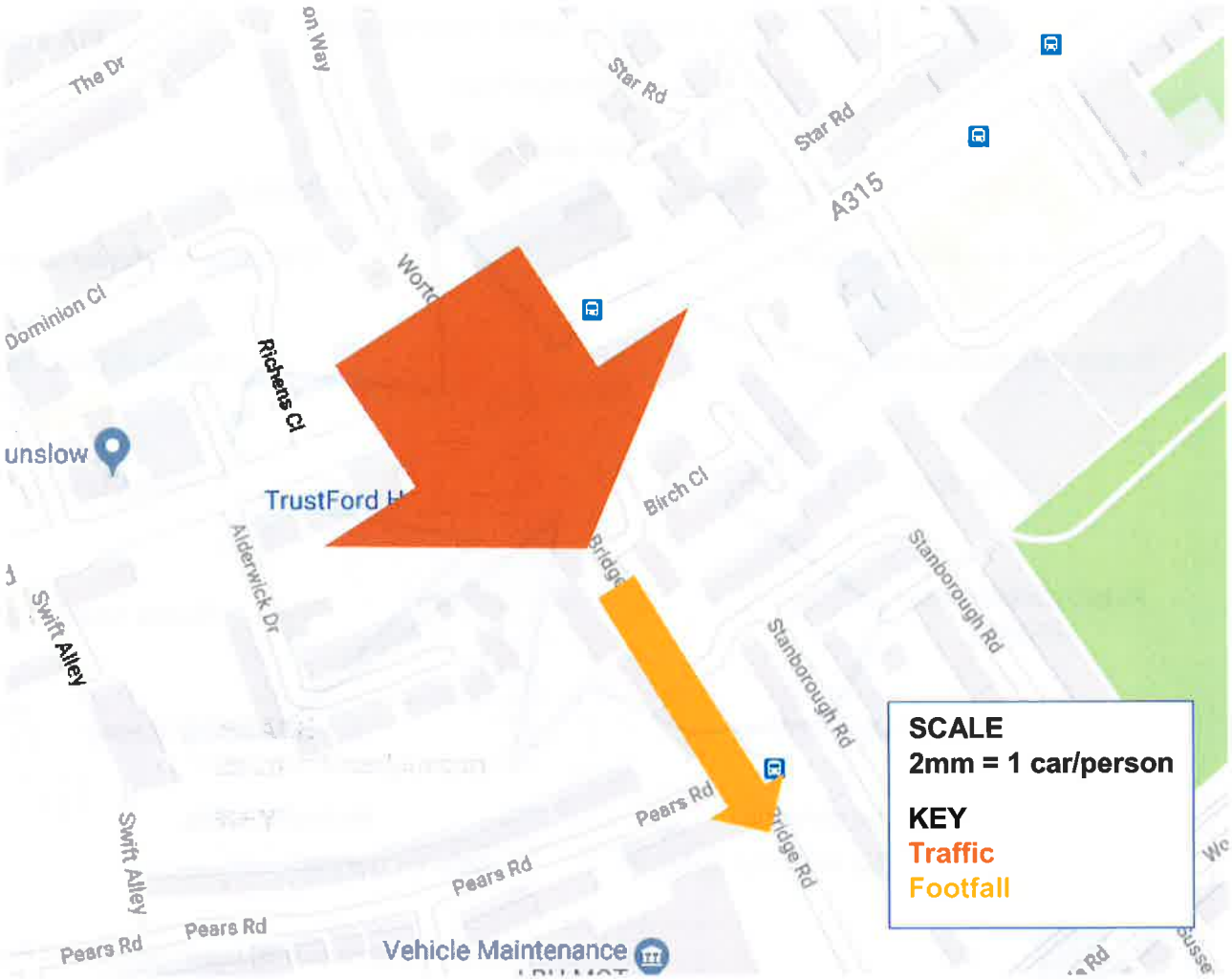


Figure 4.11 Traffi and Footfall Proportional Flow Diagram (Google Maps, 2017)

RESULTS

Traffic: 30 cars

Footfall: 6 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

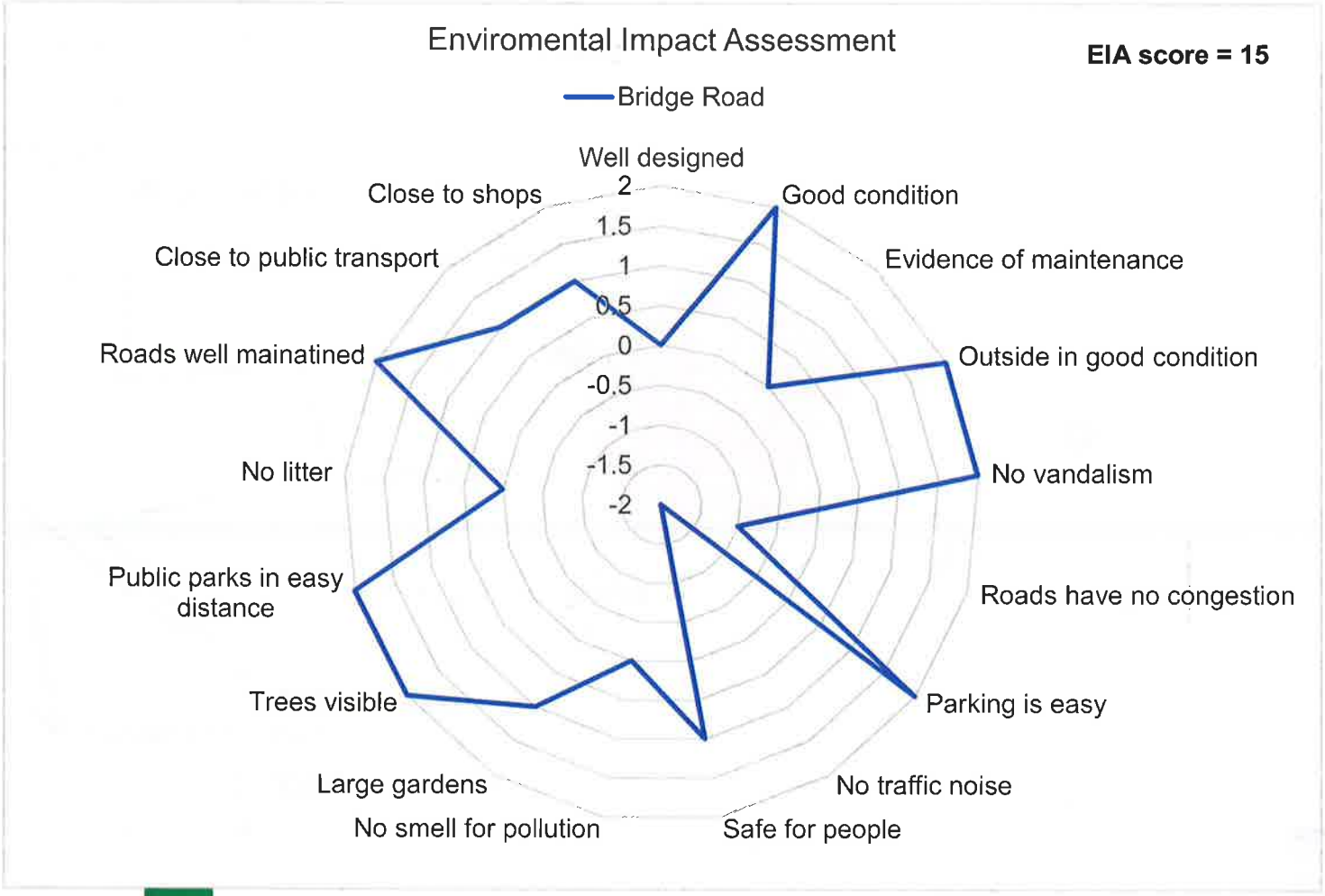


Figure 4.12 Enviromental Impact Asessment Radar Diagram

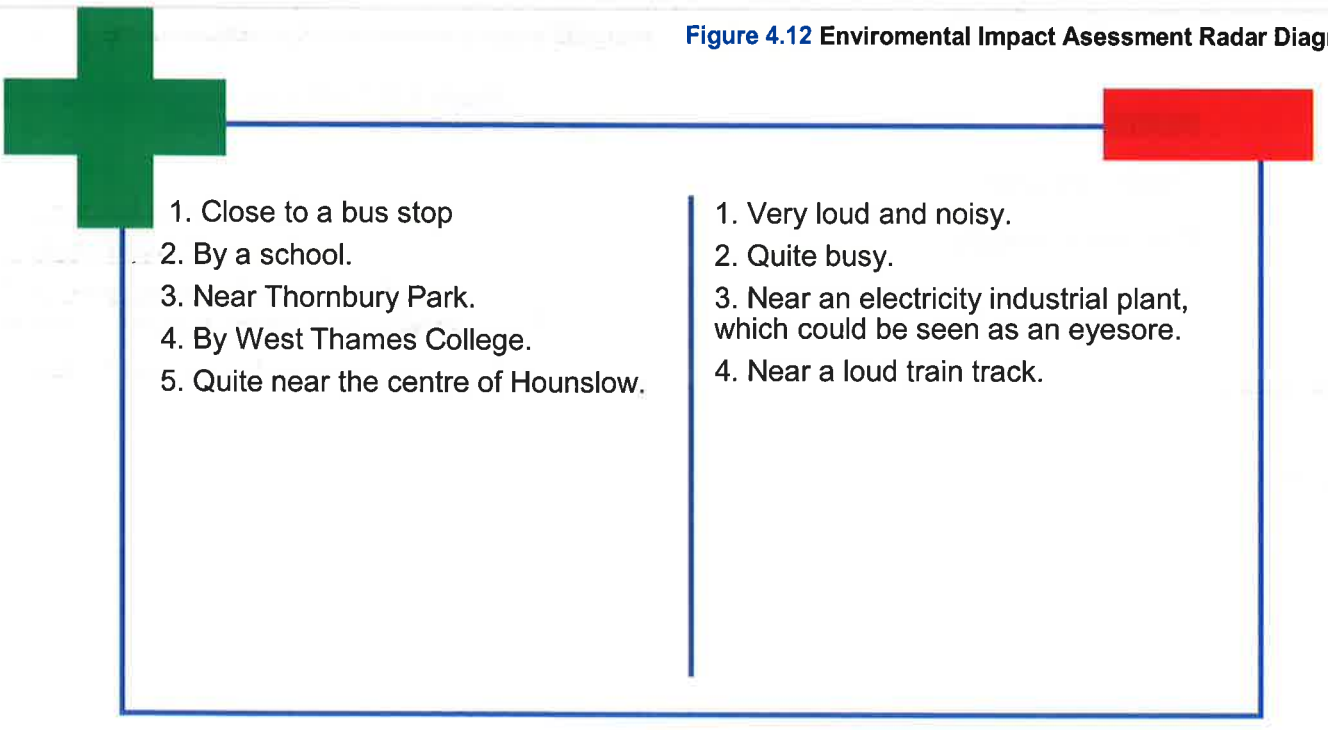


Figure 4.13 Strengths and Weakensses

Sample M

Kingsley Road

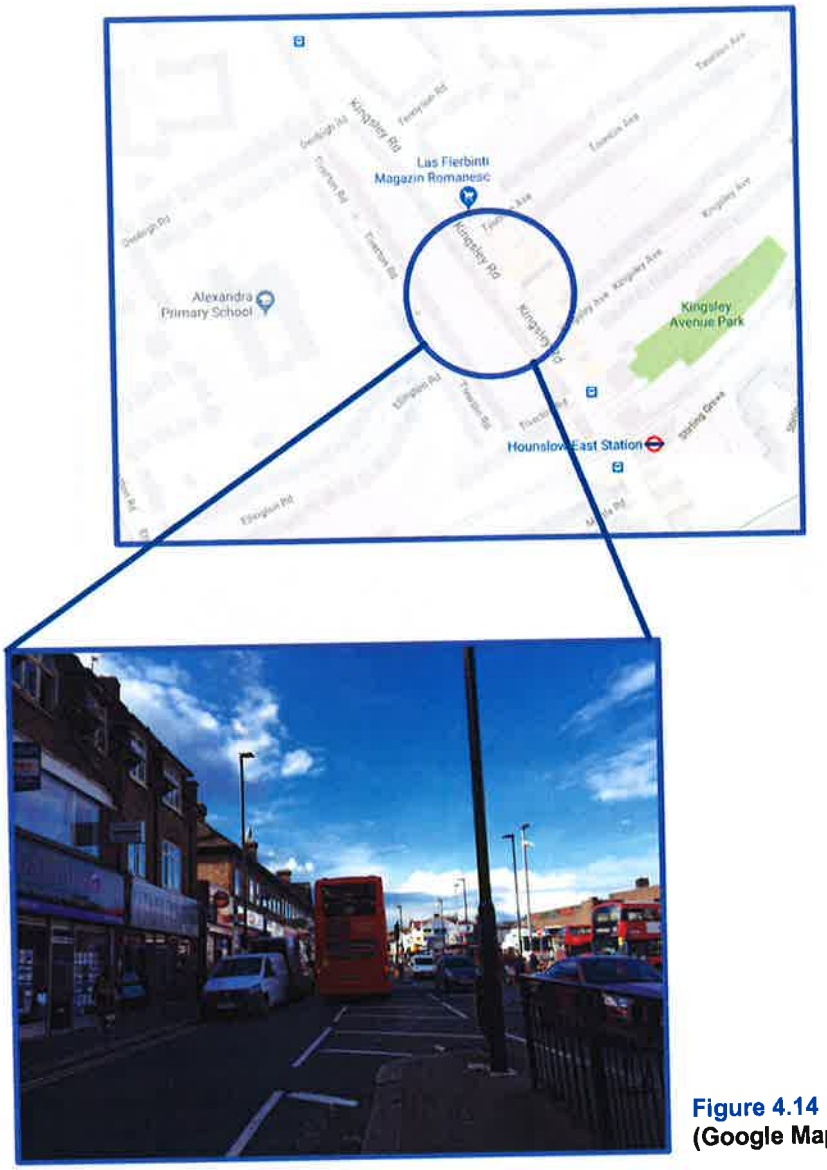


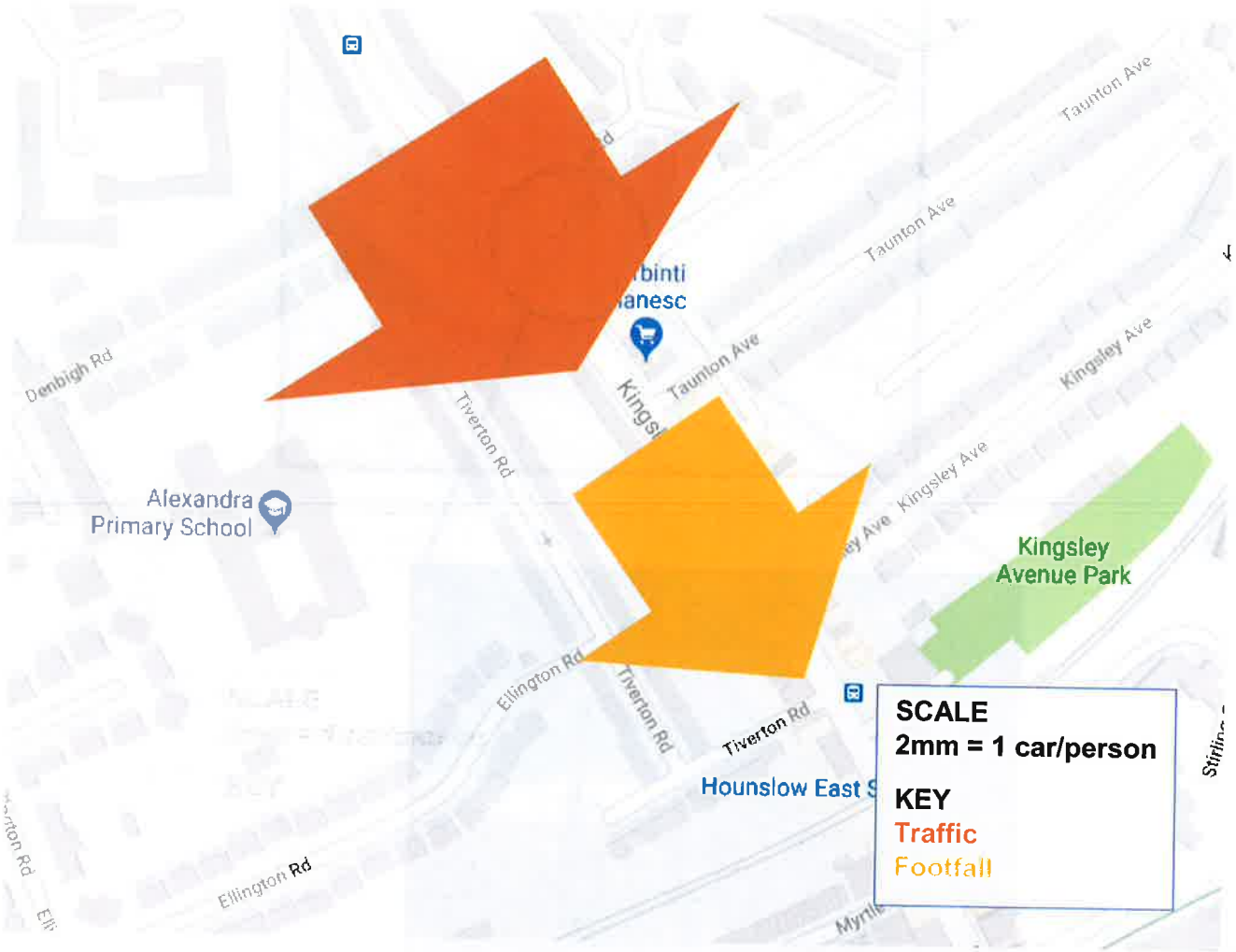
Figure 4.14 Location of Kingsley Road (Google Maps, 2017)

Description

Very busy and congested road coming off Staines Road, next to Hounslow Bus station and train station. Shops occur all down the street and atmosphere is lively.

Sample M

Traffic and Footfall Count



RESULTS

Traffic: 40 cars

Footfall: 25 people

Figure 4.15 Traffi and Footfall Proportional Flow Diagram (Google Maps, 2017)

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

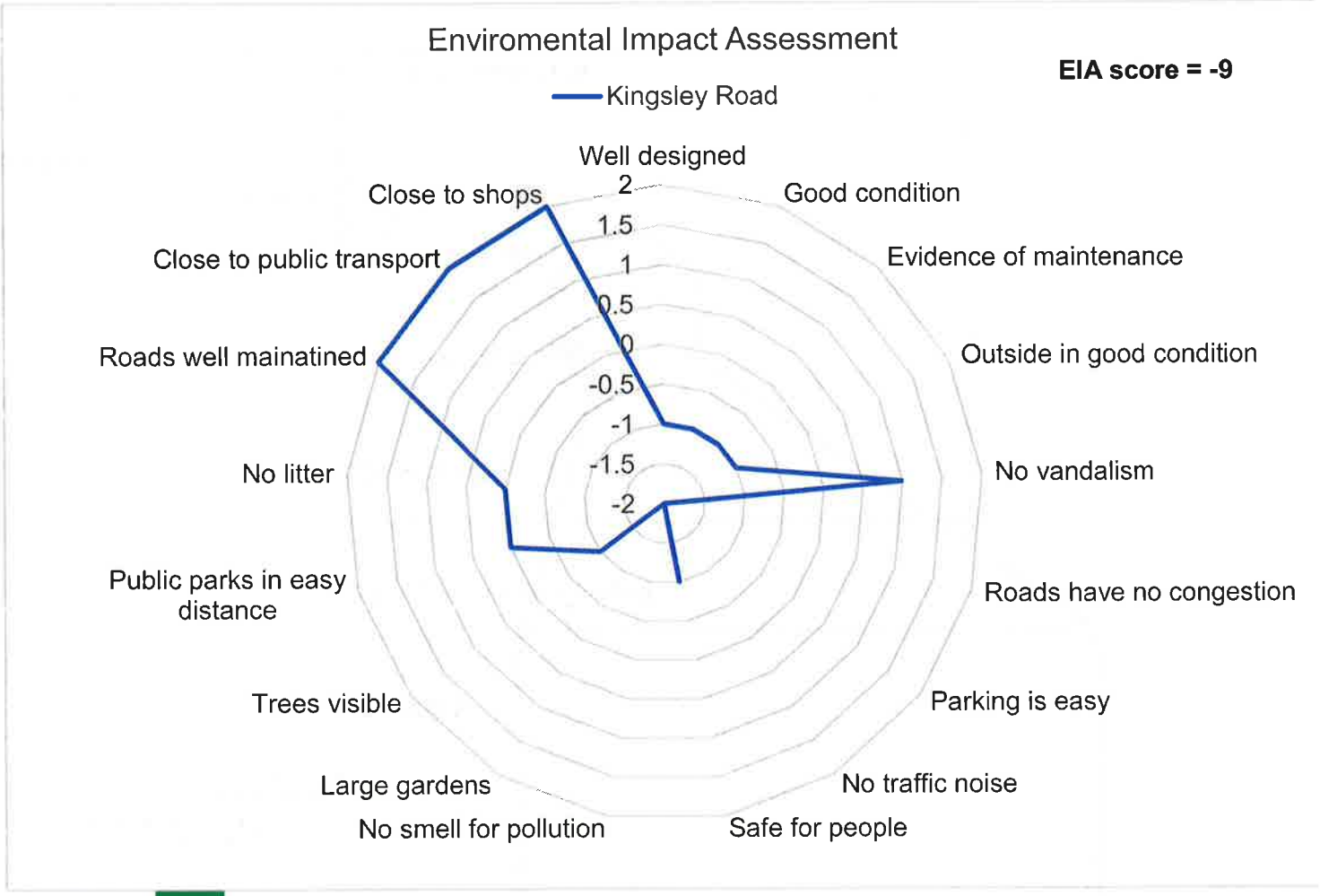


Figure 4.16 Enviromental Impact Asessment Radar Diagram

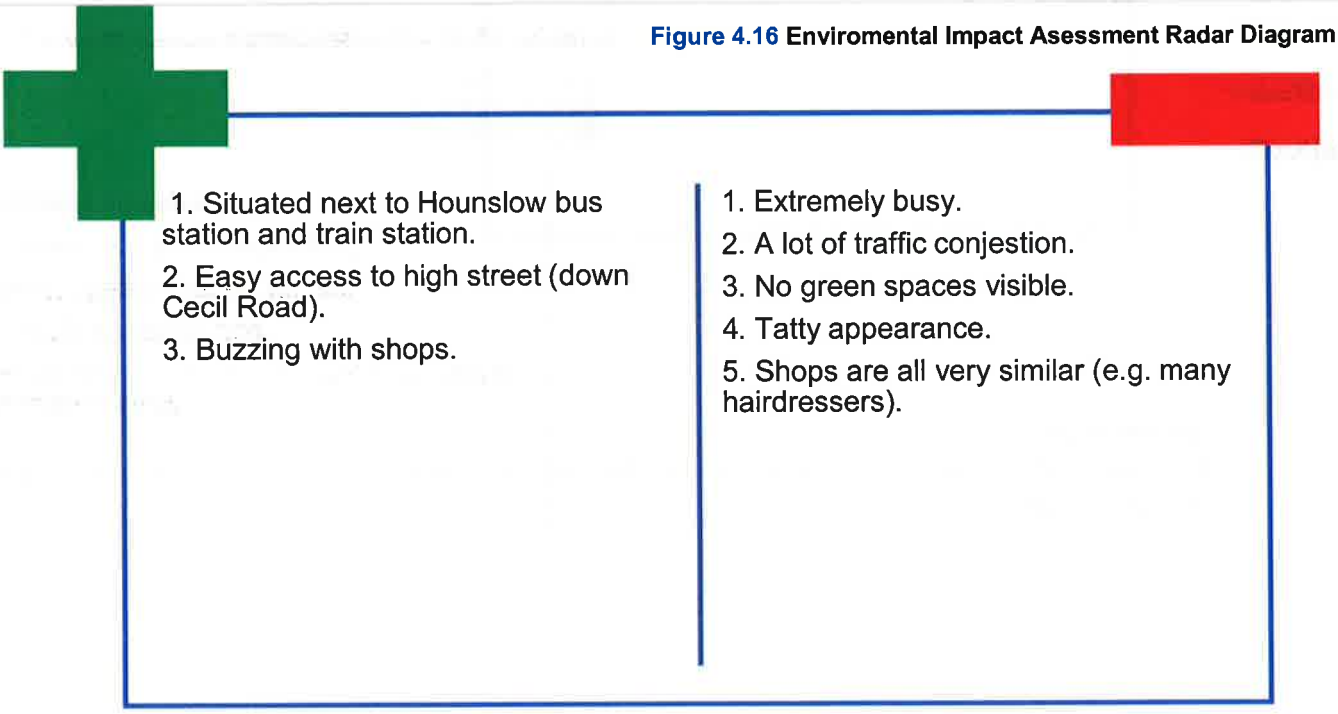


Figure 4.17 Stengths and Weaknesses

Sample M

Inwood Road

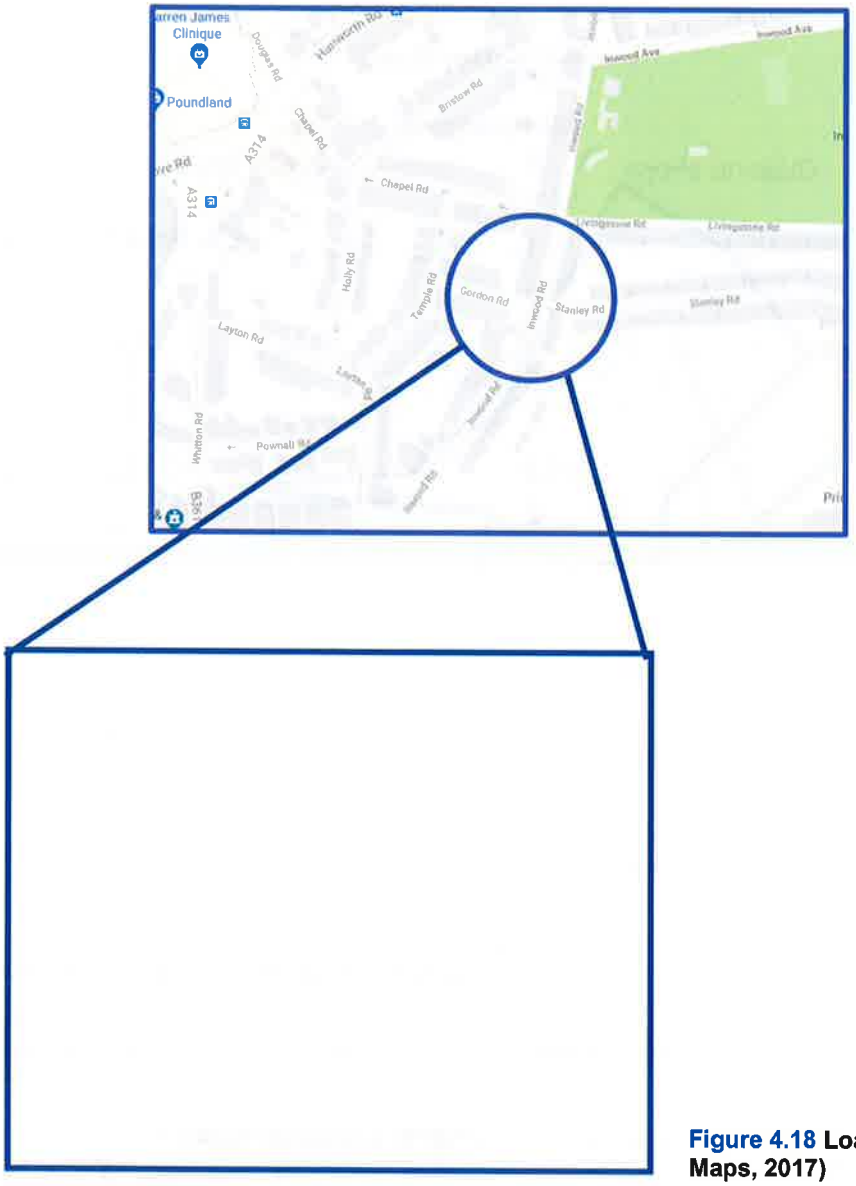


Figure 4.18 Loation of Inwood Road (Google Maps, 2017)

Description

Long and quiet road next to high street with two corner shops, a pub and library. It is situated off the high street.

Sample M

Traffic and Footfall Counts

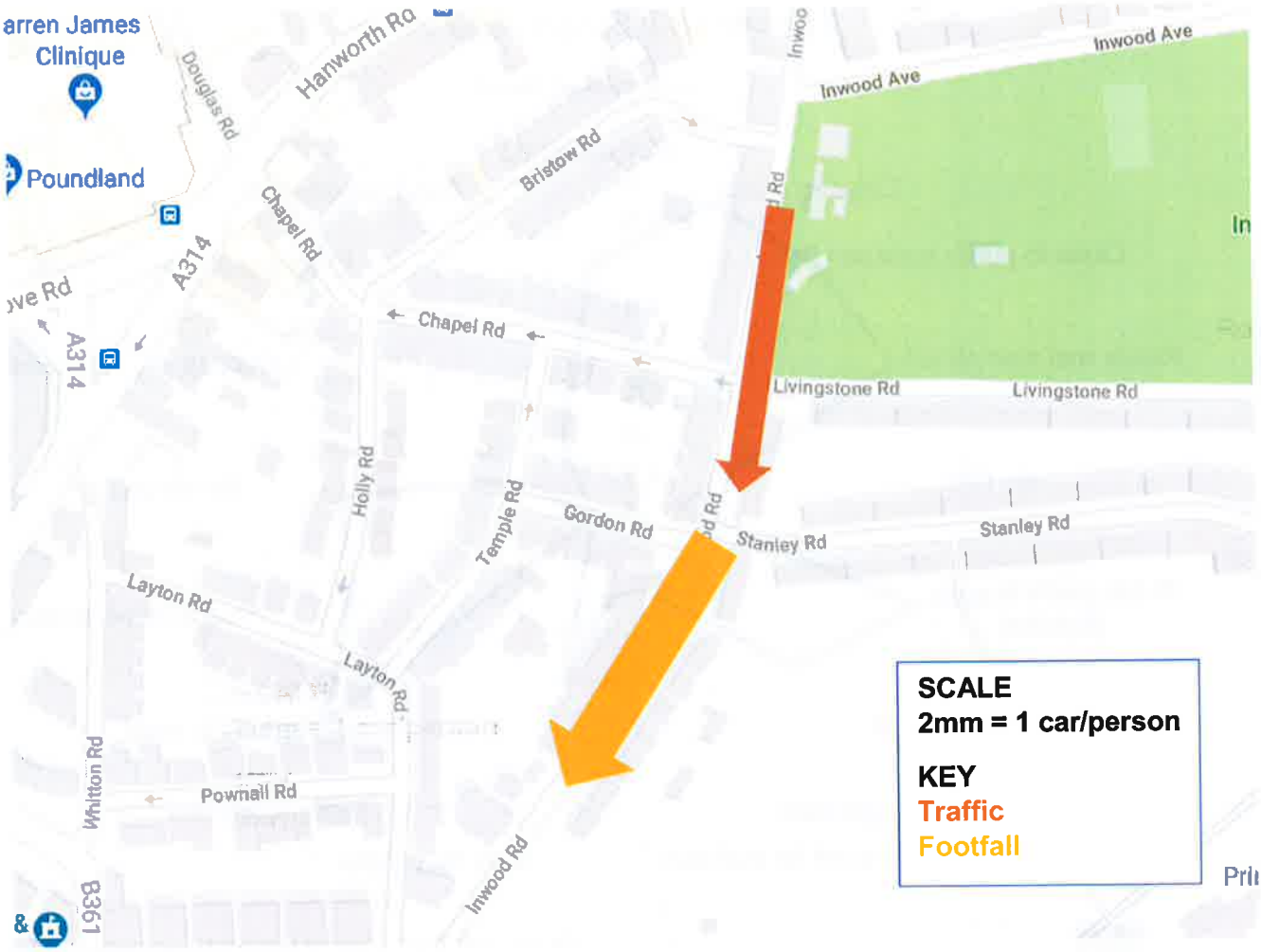


Figure 4.19 Traffic and Footfall Proportional Flow Diagram (Google Maps, 2017)

RESULTS

Traffic: 4

Footfall: 7

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

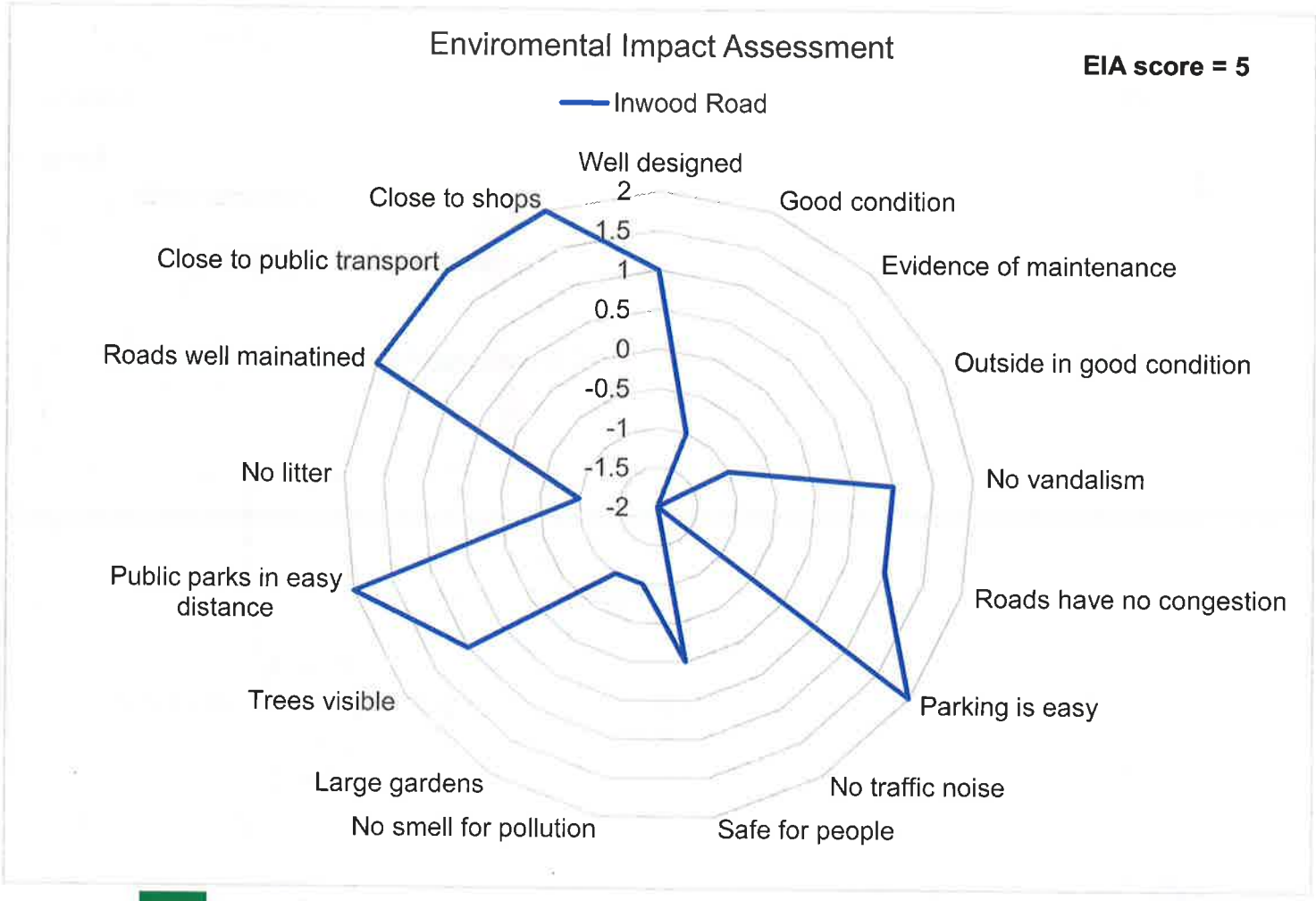


Figure 4.20 Enviromental Impact Assessment Radar Diagram

1. Very close to the high street.
2. Near public transport
3. Easy parking for residents
4. Amenities on the road.
5. Community feel, e.g. Pub and library.

1. Heavy litter.
2. Next to the high street, so might have rat run traffic.
3. Buildings are not that attractive.

Figure 4.21 Strengths and Weaknesses

Sample M

Springe Grove Road

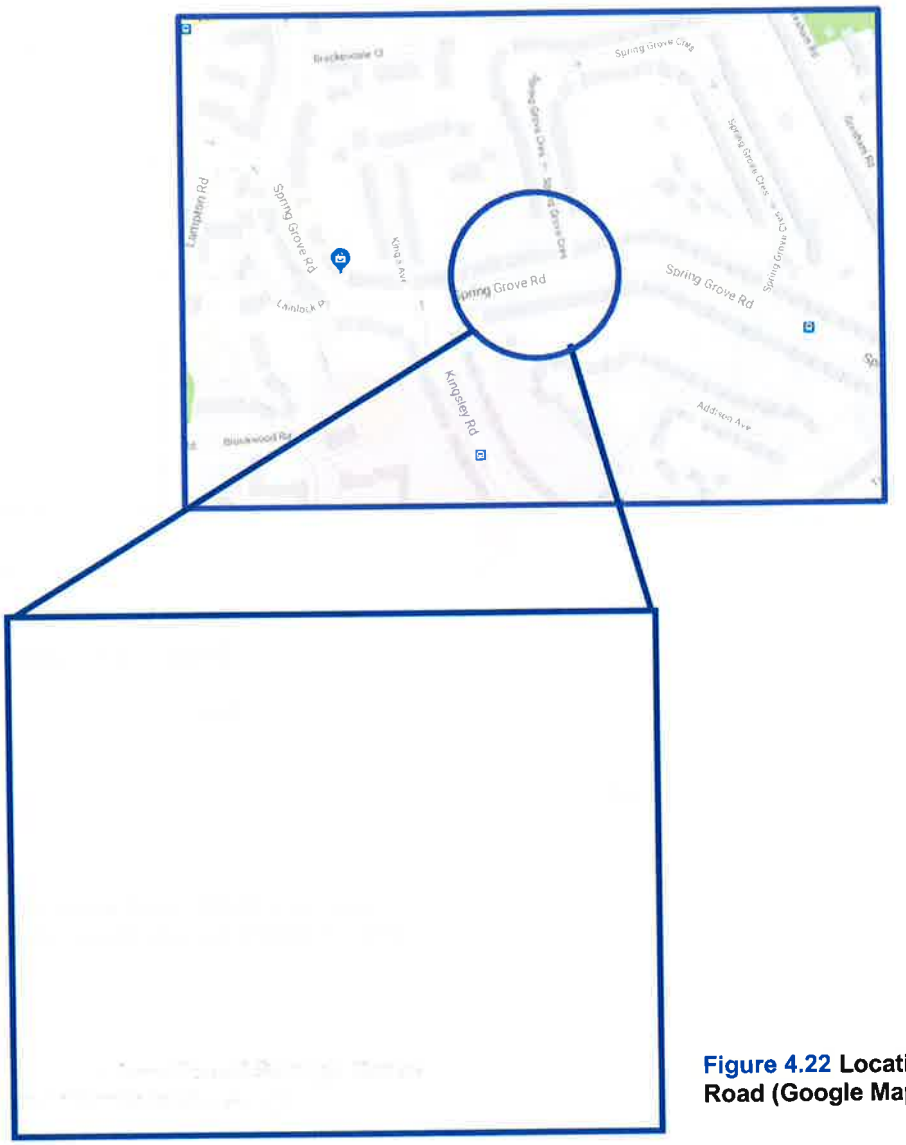


Figure 4.22 Location of Springe Grove Road (Google Maps, 2017)

Description

Long, busy main road with large houses and it is noisy from cars and planes. It is near a lot of churches and close to Thornbury park.

Sample M

Traffic and Footfall Count

Figure 4.23 Traffic and Footfall Proportional Flow Diagram (Google Maps, 2017)

RESULTS

Traffic: 17

Footfall: 2

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

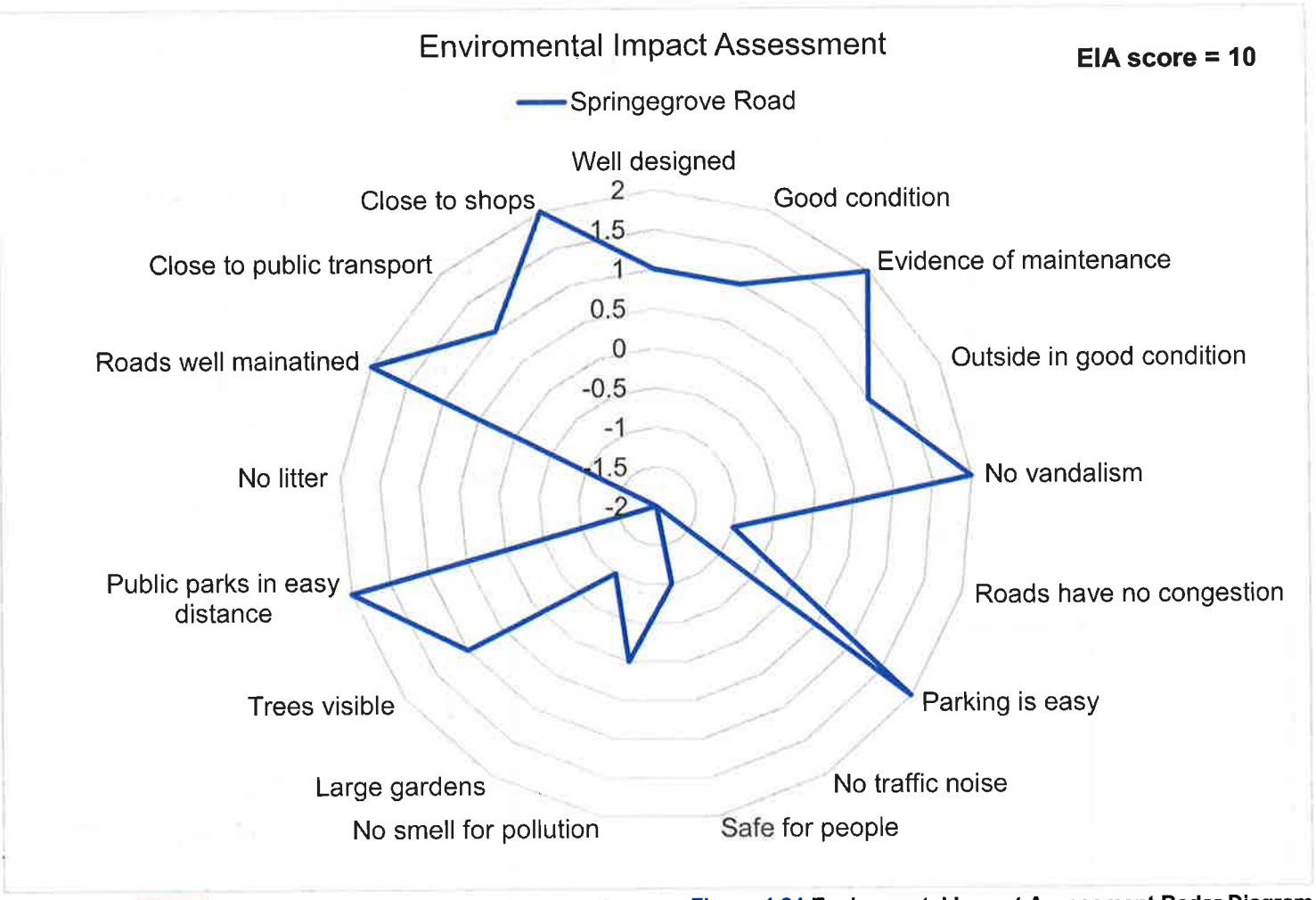


Figure 4.24 Enviromental Impact Assessment Radar Diagram

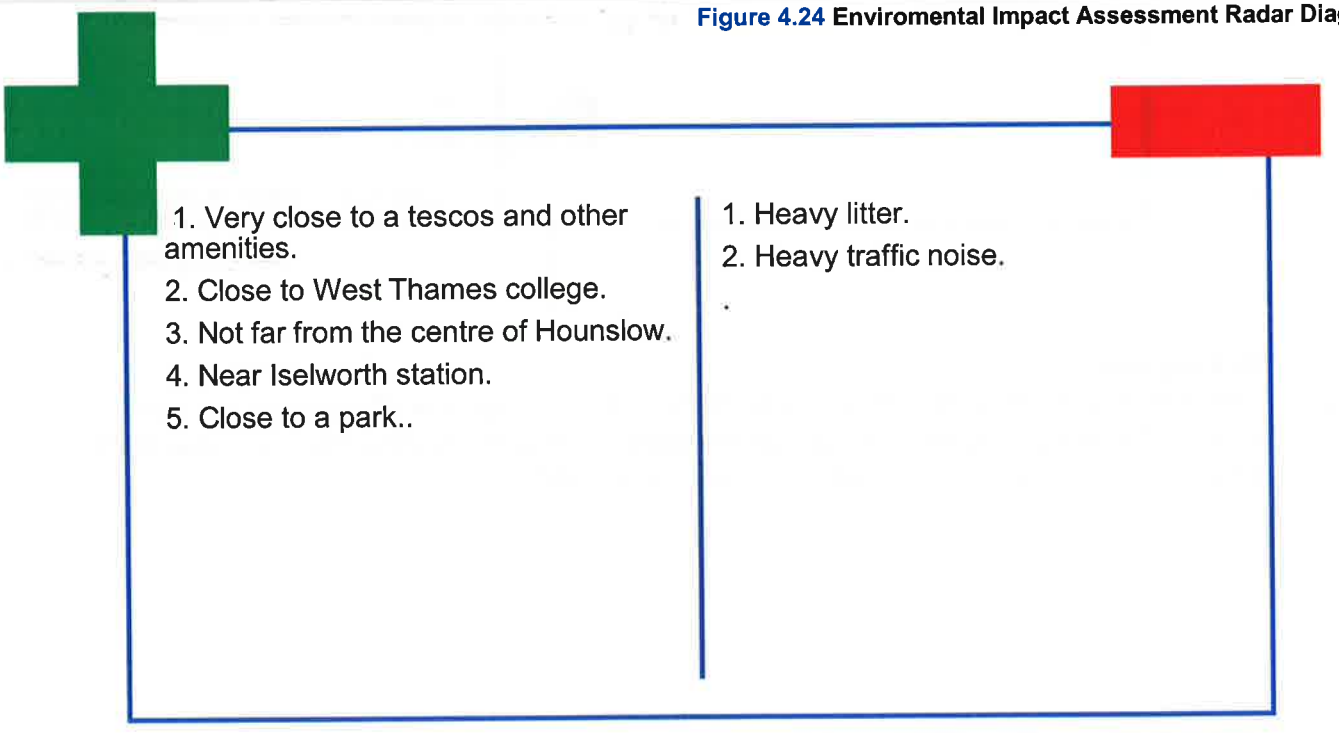


Figure 4.25 Strengths and Weaknesses

Sample M

Hounslow High Street

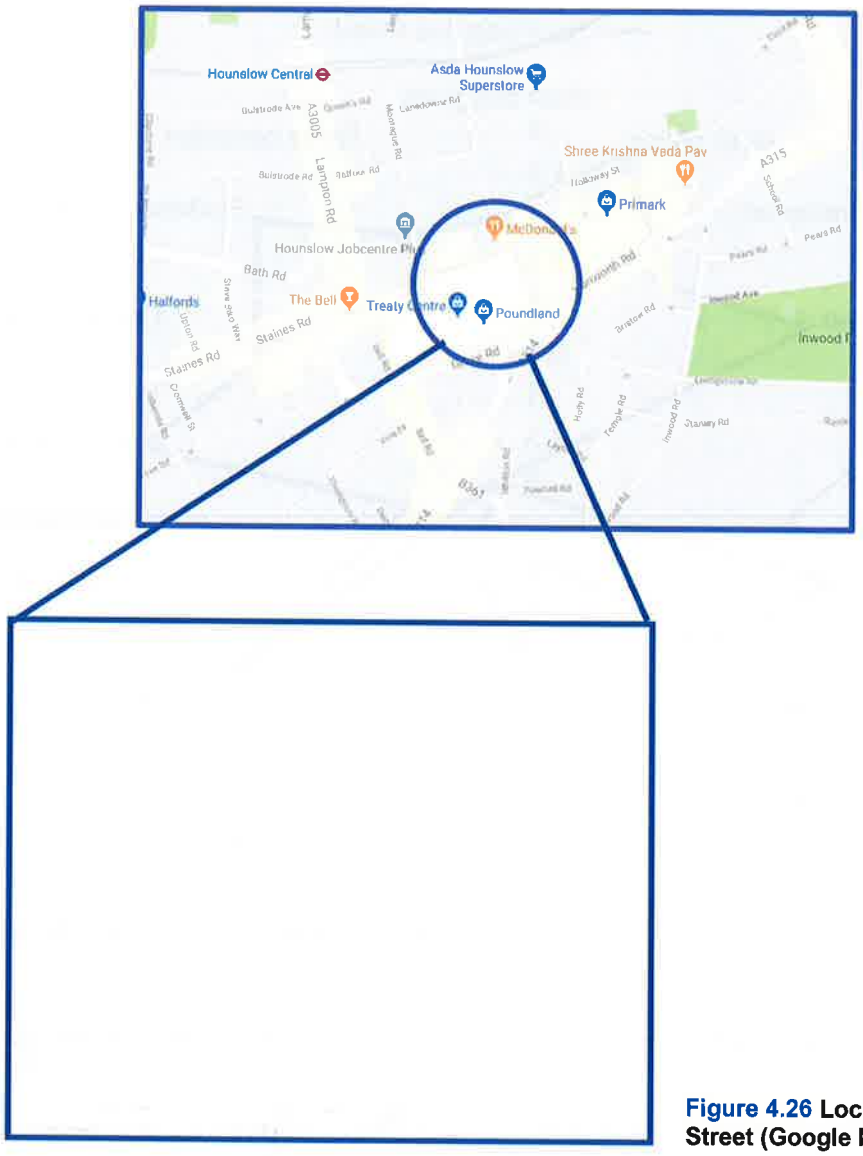


Figure 4.26 Location of Hounslow High Street (Google Maps, 2017)

Description

Very long high street with a lot of shops. Many of these shops are affordable e.g. Pound shops, offer beauty services or sell different food e.g. Polish supermarket. The street itself is pedestrianised, which eases a stressful feel, but it is still very busy.

Sample M

Traffic and Footfall Count

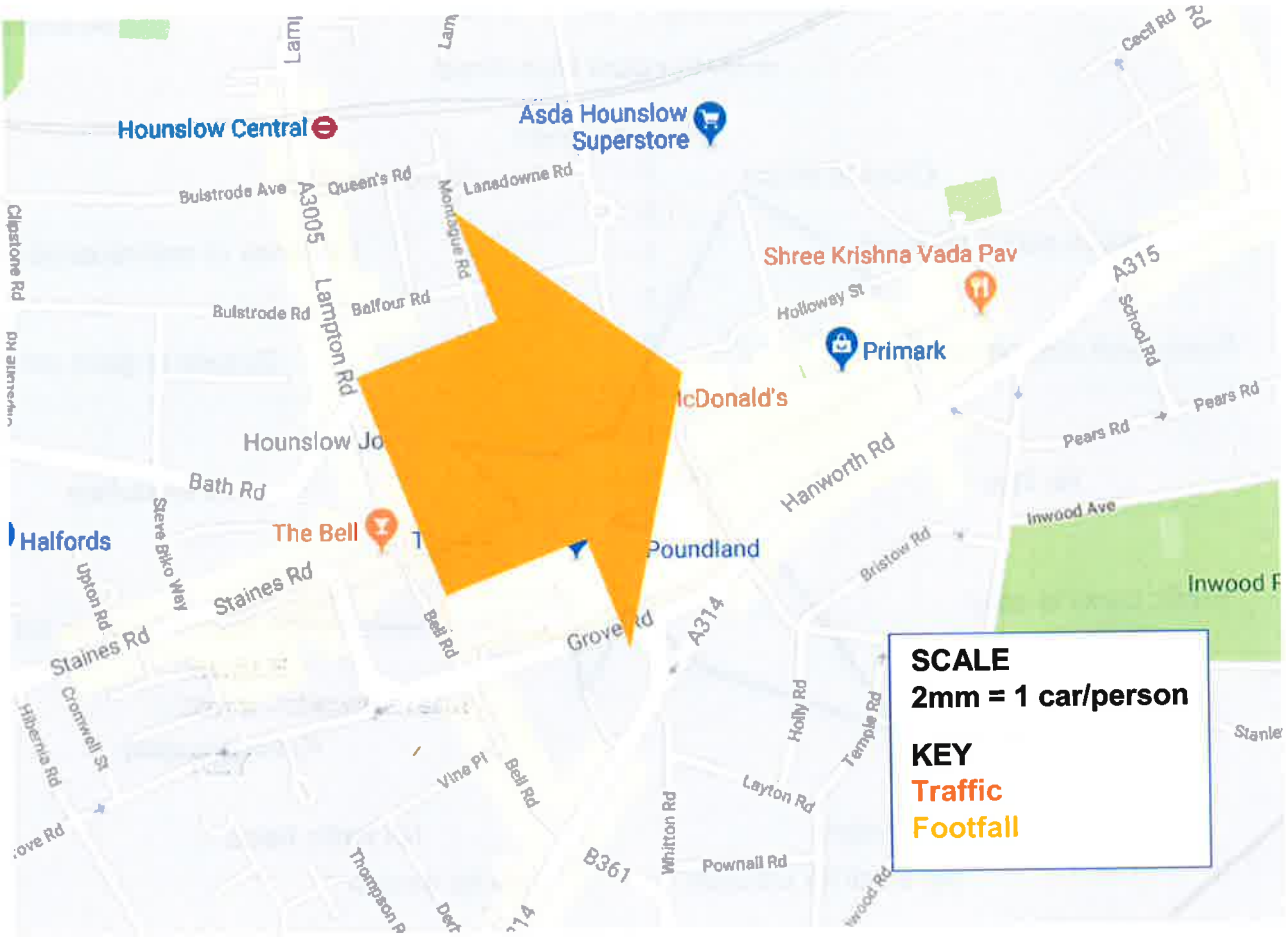


Figure 4.27 Traffic and Footfall Proportional Flow Diagram (Google Maps, 2017)

RESULTS

Traffic: 0

Footfall: 31 people

Sample M

Environmental Impact Assessment and Strengths and Weaknesses

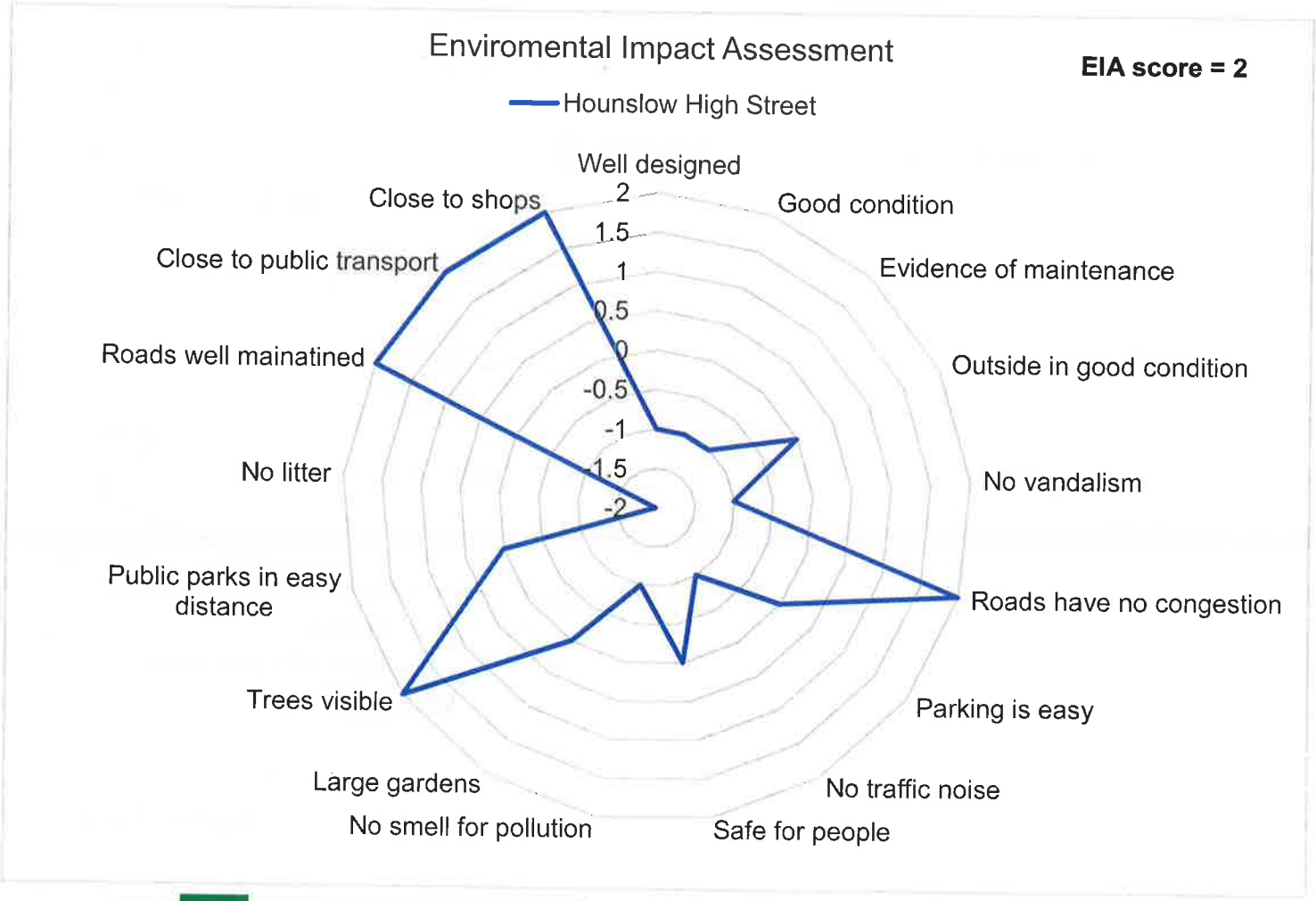


Figure 4.28 Enviromental Impact Assessment Radar Diagram

1. A lot of shops due to the length of the street.
2. Variety of shops i.e. comparison and amenities.
3. Close to public transort

1. Shops ate very simlar (tailaored at quick sales e.g. Pound stores).
2. Very busy.
3. Unattractive buildings.
4. Plane noise is very loud.
5. Commercial feel..

Figure 4.29 Strengths and Weaknesses

Sample M

Land Use

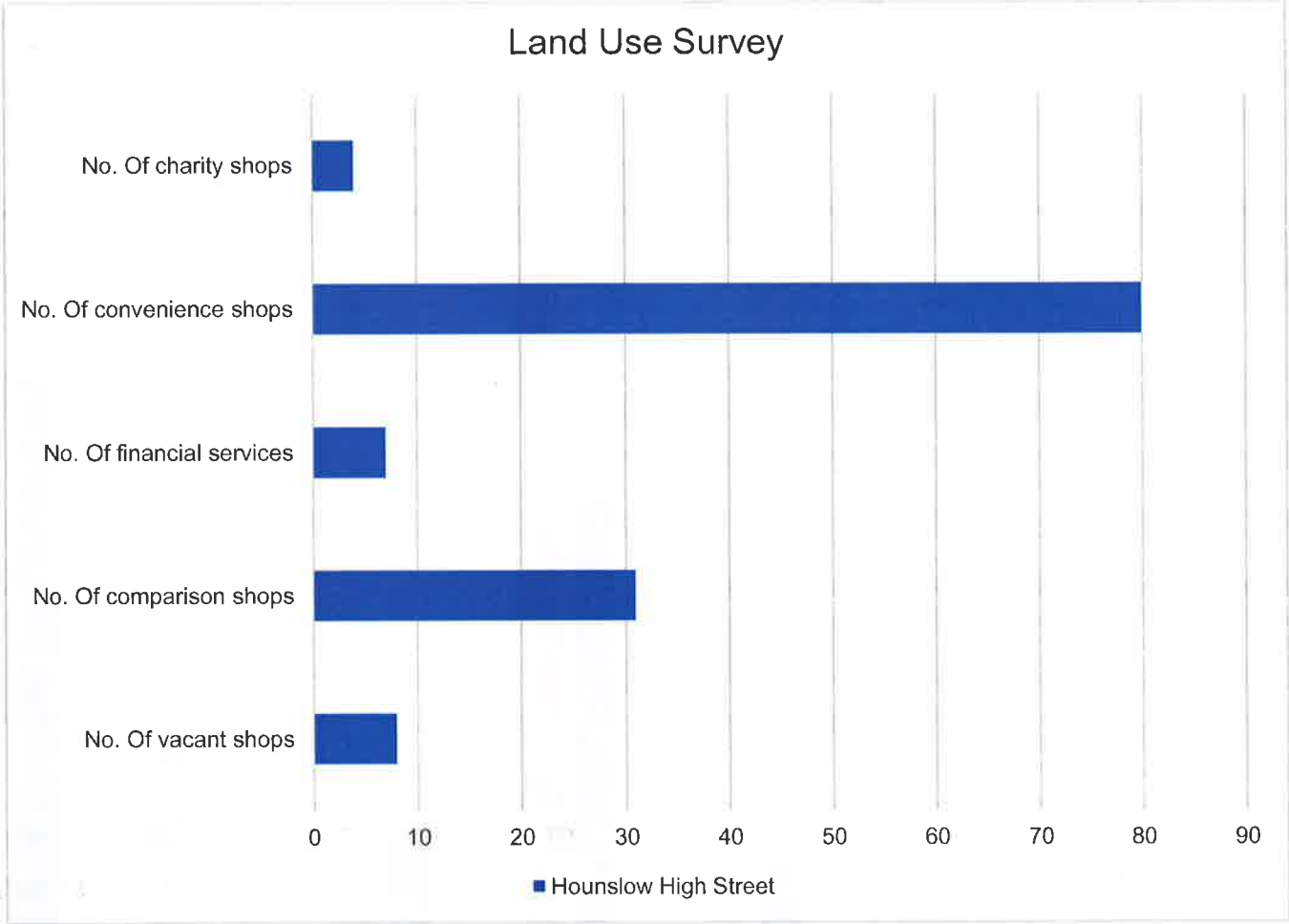


Figure 4.30 Land Use Survey Bar Chart

Sample M

Comparing Data for Traffic and Footfall Count

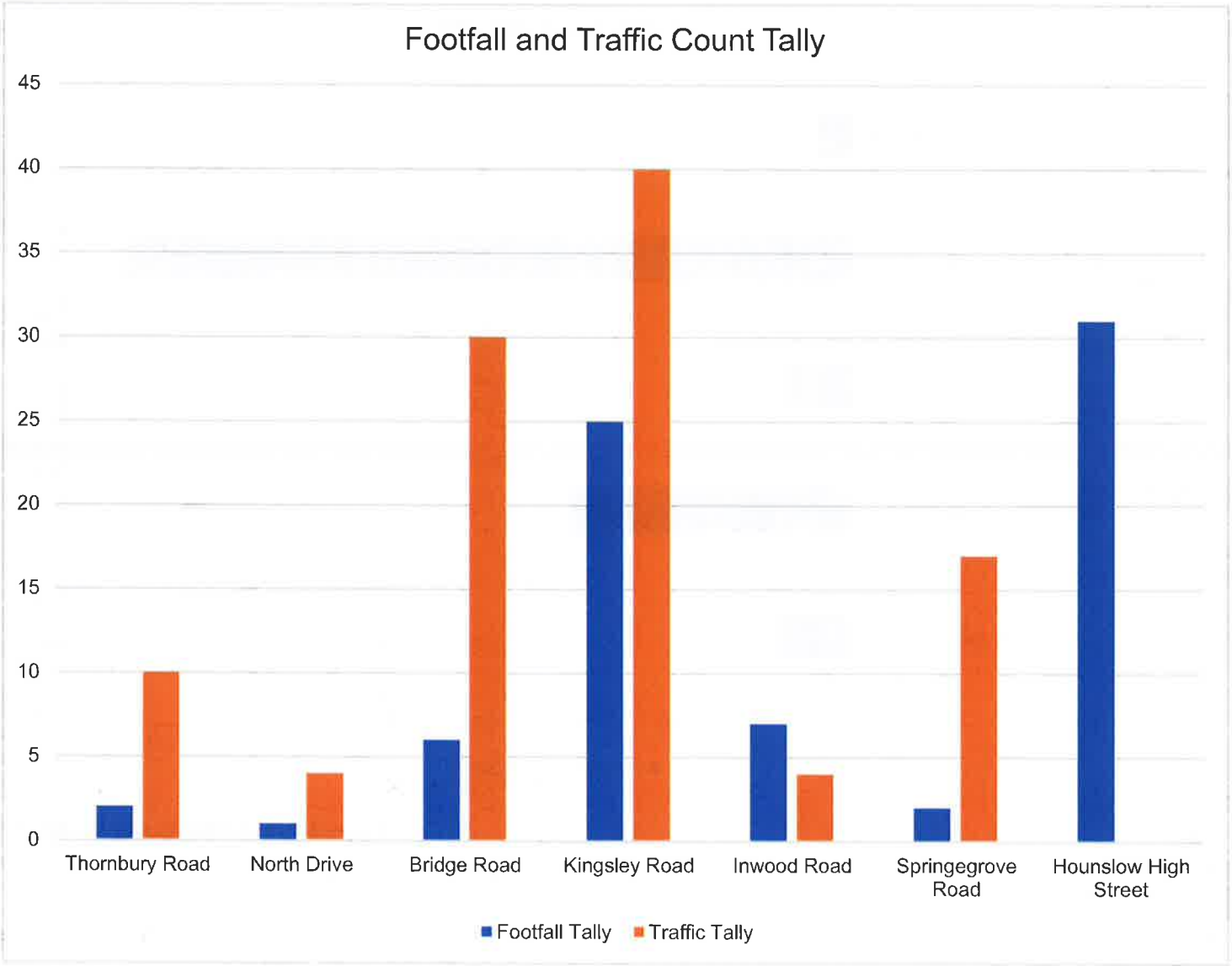


Figure 4.31 Traffic and Footfall Column Chart

Mean Footfall = 11 (2sf) **Mean Traffic = 15**

Sample M

Comparing Data for Environmental Impact Assessment

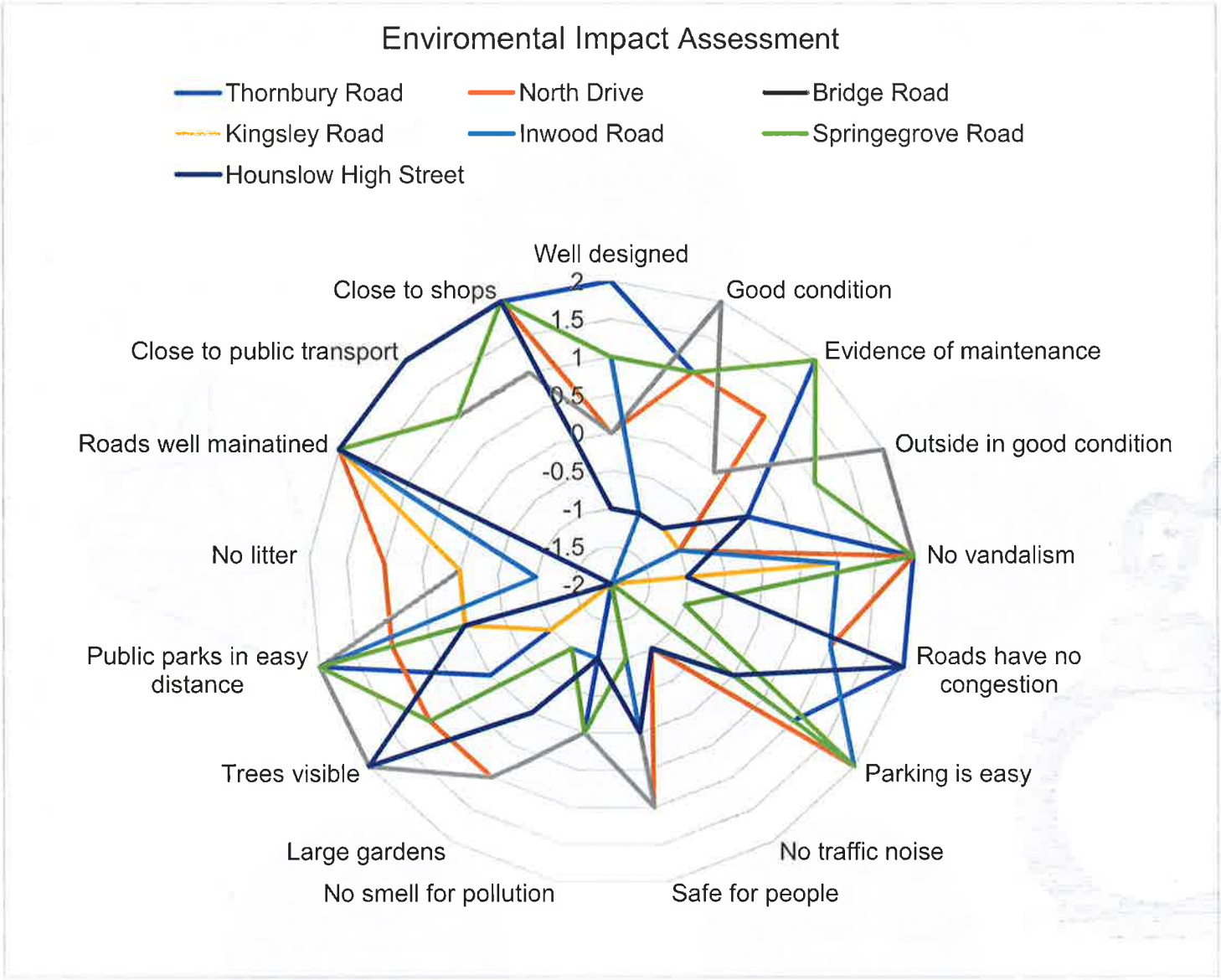


Figure 4.32 Environmental Impact Assessment Radar Diagram

Mean EIA Score = 7 (1sf)

Sample M

Questionnaires

25 questionnaires were conducted along the high street of the ward of Hounslow Central.

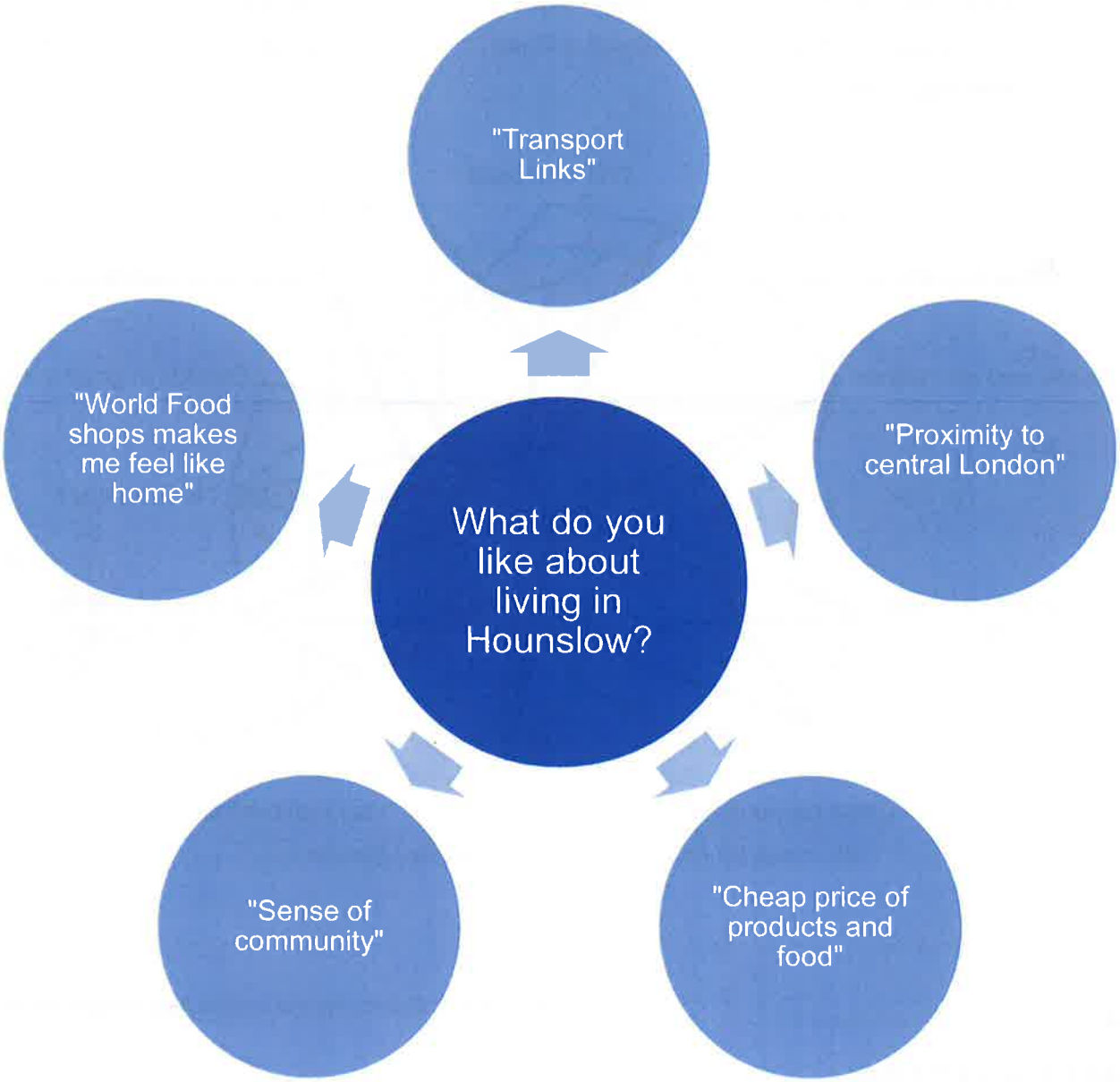


Figure 4.33 Questionnaire Word Bank

Sample M

Figure 4.34 Questionnaire Word Bank

Sample M

SECONDARY DATA

Much of this secondary data is 2011 census information, gathered from the London data store or other sites such as checkmystreet.co.uk.

Education and Employment

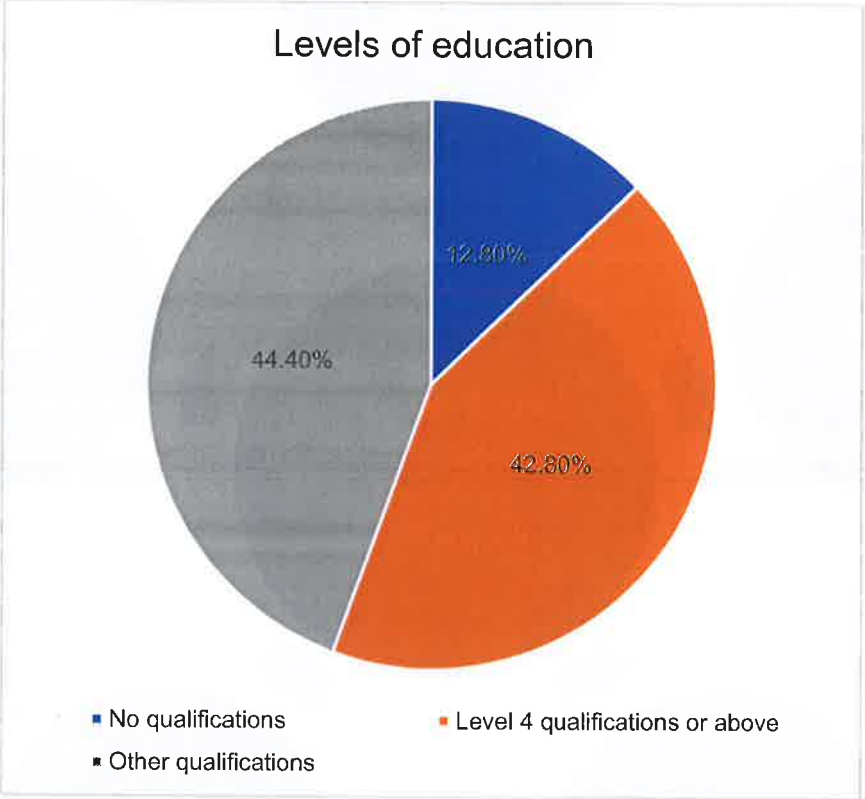


Figure 4.35 Levels of Educations Pie Chart (London Data Store, 2011)

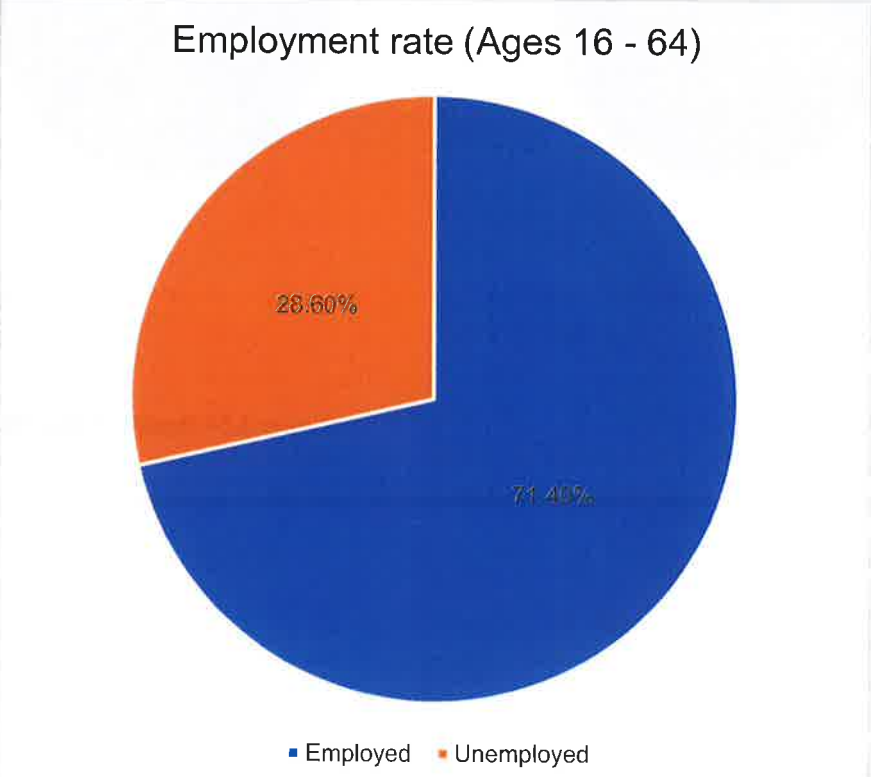


Figure 4.36 Levels of Educations Pie Chart (London Data Store, 2011)

Sample M

Average House Price

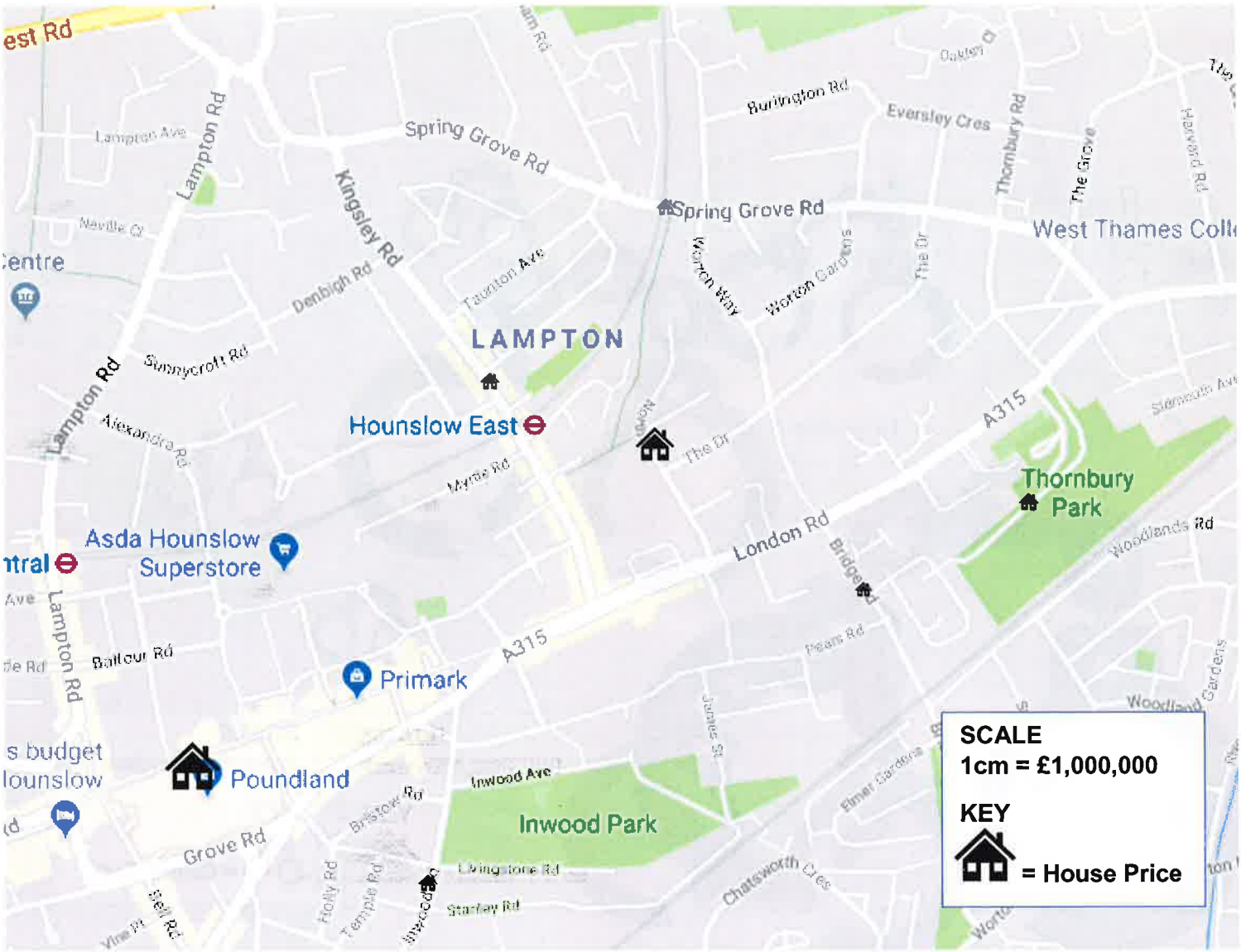


Figure 4.37 Average House Price Proportional Diagram (Google Maps, 2018) (Check My Street, 2017)

RESULTS

Thornbury Road: £350,000 (2014)

North Drive: £700,000 (2017)

Bridge Road: £295,000 (2015)

Kingsley Road: £340,000 (2017)

Inwood Road: £336,000 (2017)

Spring Grove Road: £341,000 (2017)

Hounslow High Street: £1,000,000 (2015)

Mean House Price: £480,285.71 (8sf)

(Check My Street, 2017)

Sample M

Crime Rate

Figure 4.38 Crime Rate Proportional Diagram (Google Maps, 2018) (Check My Street, 2017)

RESULTS

Thornbury Road: 23 incidents (2017)

North Drive: 78 incidents (2017)

Bridge Road: 19 incidents (2017)

Kingsley Road: 44 incidents (2017)

Inwood Road: 72 incidents (2017)

Spring Grove Road: 24 incidents (2017)

Hounslow High Street: 110 incidents (2017)

Mean Crime Rate: 53 incidents (2sf)

(Check My Street, 2017)

As shown in the previous two chapters, each ward has produced very different data results. In this chapter, there will be an attempt to analyse this data using statistical methods and measuring it to the original hypothesis of this investigation.

1. Traffic and Footfall

For the ward of North Twickenham and St. Margaret's, figures 3.3., 3.7, 3.11, 3.15, 3.19, 3.23, 3.27 are proportional flow diagrams of traffic and footfall, which have also been displayed together in a column chart in figure 3.32. Here, a mean of 8 (1sf) for footfall per minute and 11 (2sf) for traffic per minute could be calculated. Similarly, for the ward of Hounslow Central, figures 4.3., 4.7, 4.11, 4.15, 4.19, 4.23, 4.27 are proportional flow diagrams of traffic and footfall, which have been displayed together in a column chart in figure 4.32. In the same way, a mean of 11 (2sf) for footfall per minute and 15 for traffic per minute could be calculated. This is relevant to this investigation, because it shows that there is more traffic and footfall in Hounslow and it is therefore busier, a factor in determining lower quality of life.

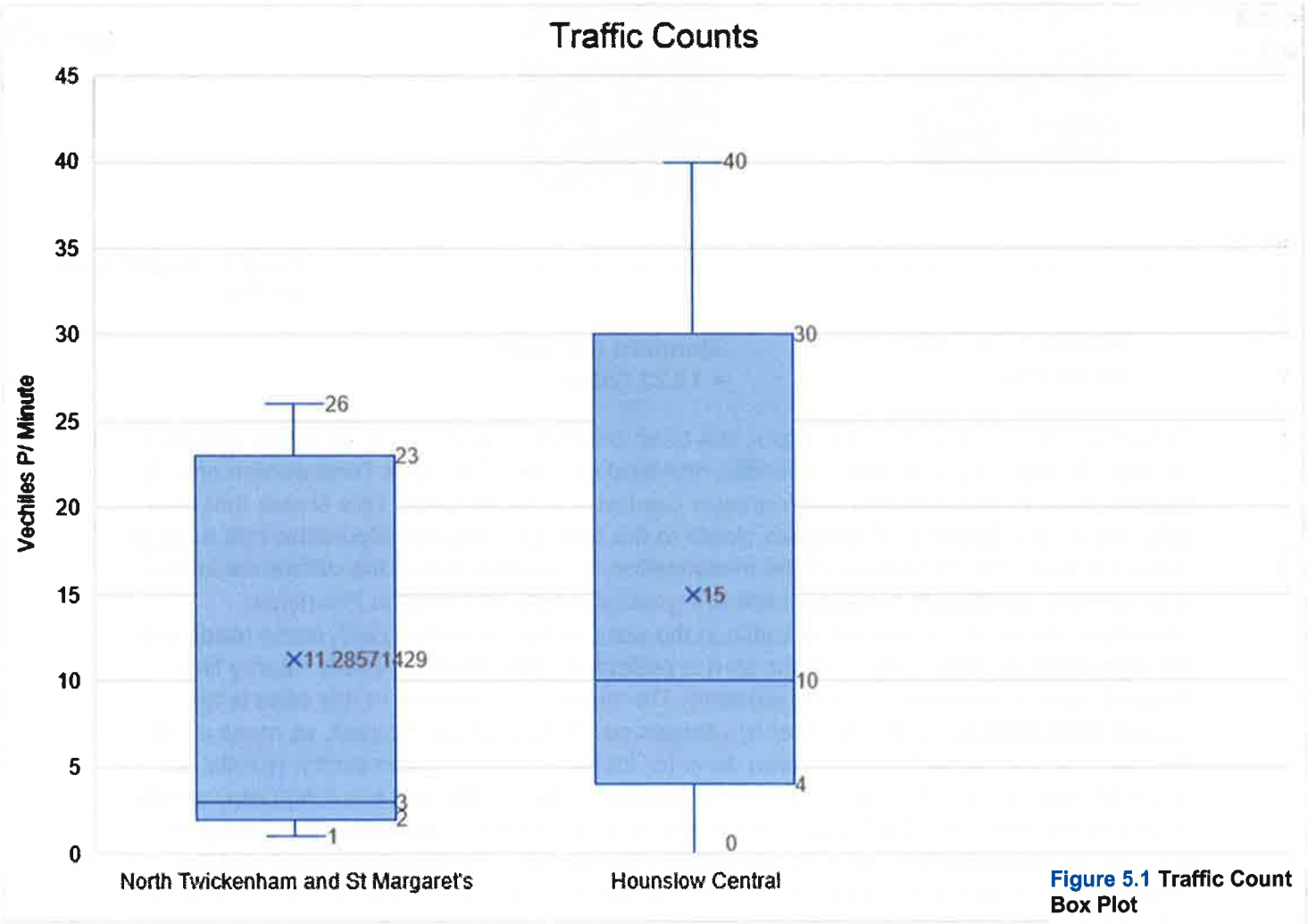


Figure 5.1 Traffic Count Box Plot

Standard Deviation = 11.66 (2dp)

Standard Deviation = 14.98 (2dp)

Sample M

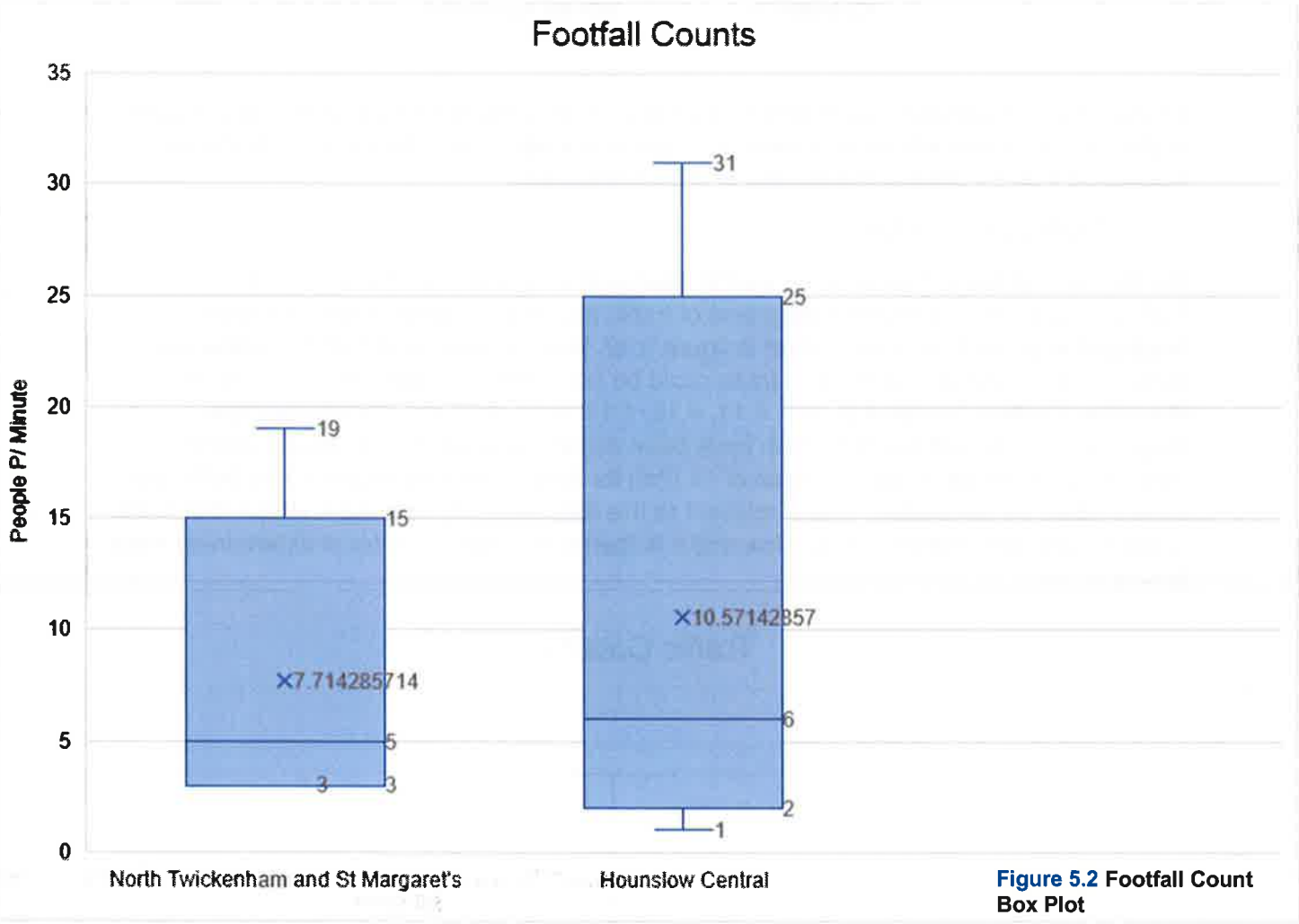


Figure 5.2 Footfall Count Box Plot

Standard Deviation = 6.50 (2dp)

Standard Deviation = 12.23 (2dp)

To further analyse this data, a box plot has been created for each ward, by which standard deviation has been calculated. For traffic, standard deviation for North Twickenham and St. Margaret's is 11.66 (2dp) and for Hounslow Central, it is 14.98 (2dp). This shows that data collected in St. Margret's all compiles closer to the average, however Hounslow has a larger spread of data. This is relevant to the investigation, because it shows the difference in the two means is significant, because there is a greater variety of scores in Hounslow. Therefore, meaning the amount of traffic in the ward is not consistent (with some roads like the high street experiencing no traffic as it is pedestrianised, whereas roads nearby like Kingsely road experiencing a large amount). The mean for Hounslow in this case is not reliably representative of the number of vehicles per minute on each street, as much as St. Margert's is. The same thing has been done for footfall. This has given similar results, as standard deviation for the ward of North Twickenham and St. Margret's is 6.50 (2dp) and for Hounslow central, it is 12.23 (2dp). This is also relevant to the investigation for the same reasons, as Hounslow's mean score is not as representative for the whole ward and the range of data shows there are some streets that are busy and some that are quiet, whereas in St. Margret's, it is fairly consistently quiet.

supported by evidence

When evaluating this data technique, it is important to consider the time of day in which data was collected. In St. Margret's, assessment of streets ranged from 12pm – 2pm on a

understanding of validity

Saturday, but in Hounslow it ranged from 12pm – 2pm on a Sunday. This is important, because it may have affected results and therefore the data's reliability.

2. Environmental Impact Assessment (EIA)

An EIA has been carried out for each street in both wards, presented by radar diagrams. For the ward of North Twickenham and St. Margaret's, figures 3.4, 3.8, 3.12, 3.16, 3.20, 3.24 and 3.28 demonstrate this, with figure 3.32 showing that the average EIA score is 18 (2sf) For the ward of Hounslow Central, figures 4.4, 4.8, 4.12, 4.16, 4.20 and 4.24 show the EIA scores for each street, with figure 4.32 showing the average EIA score is 7. Therefore, this displays that the physical qualities of a place that make up quality of life are higher in St. Margret's and North Twickenham.

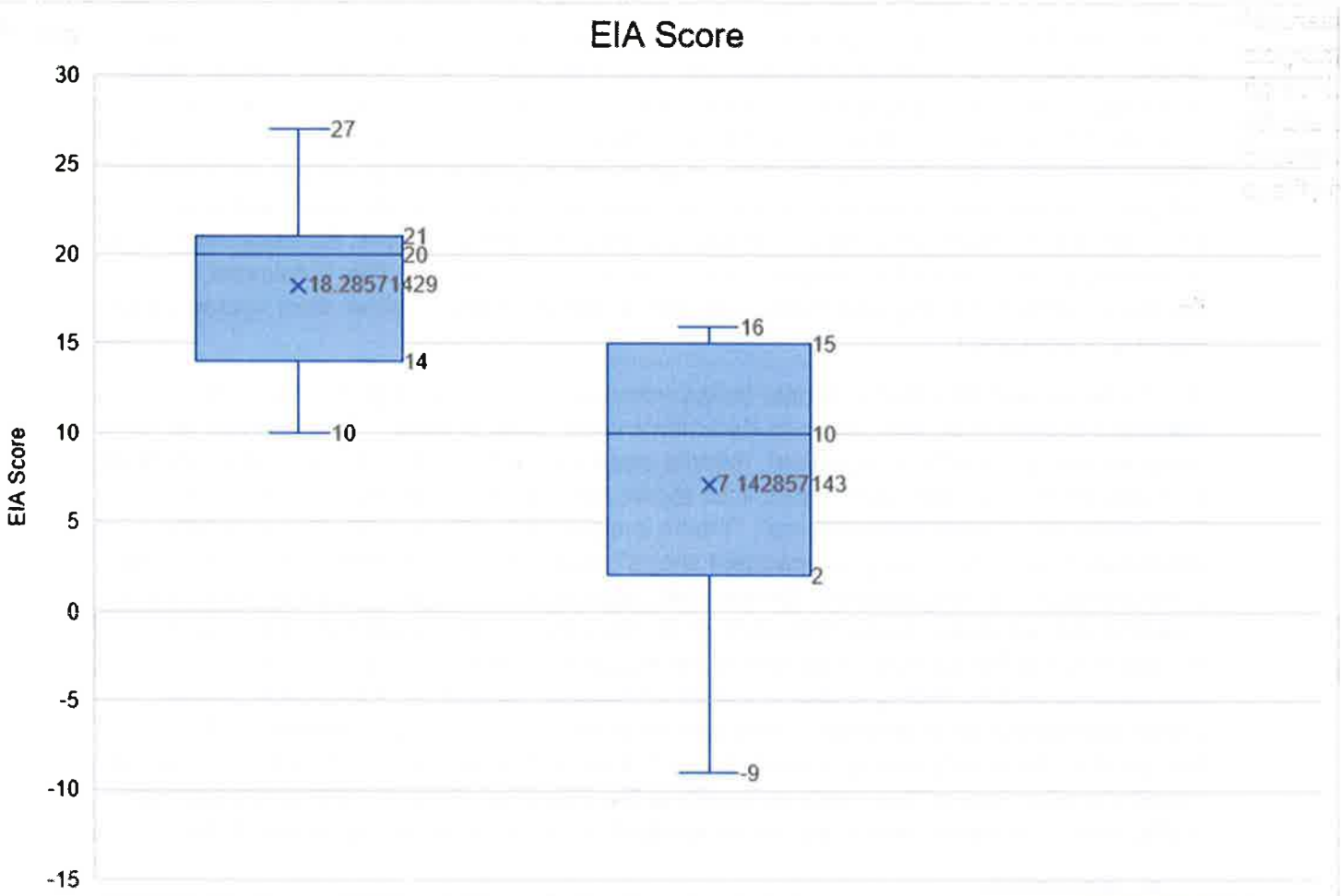


Figure 5.3 EIA Score Box Plot

Standard Deviation =5.65 (2dp)

Standard Deviation =8.71 (2dp)

To further present this data, a box plot graph has been created. From this information, standard deviation has been calculated for the results of each ward. The standard deviation for the ward of North Twickenham and St. Margret's is 5.65 (2dp) and for Hounslow Central, it is 8.71 (2dp). This shows that in St. Margret's, data is closer to the average, which is 18 (1sf), which therefore shows that EIA is more consistently high than in Hounslow, because the average is 7 (1sf). This is relevant to the investigation, because appearance and

atmosphere of place may indicate the quality of life of people. With a greater environmental quality in St. Margret's, it is also evident that the area receives greater investment.

When evaluating this data technique, it is important to consider the time of day in which data was collected. In St. Margret's, assessment of streets ranged from 12pm – 2pm on a Saturday, but in Hounslow it ranged from 12pm – 2pm on a Sunday. This is important, because it may have affected results and therefore the data's reliability. Bias also occurs when using this technique, as scores are based on opinion, which may reduce the data's reproducibility.

3. Questionnaires

For the ward of North Twickenham and St. Margaret's, figure 3.34 is a word bank, which shows the 5 most common things said by 25 people, when interviewed about what they like about living there. These things were "Village atmosphere", "Good transport", "Independent shops", "Proximity to parks and the riverside" and "Feel safe". For Hounslow Central, figure 4.34 shows the same thing, with comments being "Transport links", "Proximity to central London", "Cheap price of products and food", "Asian shops makes me feel like home" and "Sense of community". The results of the most common positive things in each ward are very intriguing, as there are a few similarities. Common themes such as 'transport' are seen, which shows that both places are considered a good location to people. Perhaps even more interestingly, the theme of 'community' also occurred in both wards. This is relevant, because quality of life might be more to do with a 'sense' of place, rather than figures about housing or education.

When interviewed about what people dislike about where they live, figure 3.35 for St. Margret's showed the most common statements were "Cost of living", "Twickenham is underachieving", "Traffic congestion", "Middle class atmosphere" and "Noise and congestion on rugby days". For Hounslow, figure 4.35 shows the most common statements were "Busyness and stressful atmosphere", "Traffic everywhere", "Crime rate", "General tatty appearance" and "Too many independent shops". Again, the information is very interesting. In Hounslow, comments such as "General tatty appearance" suggest a dislike of the town's look and feel, whereas similar comments in St. Margaret's are not about the town itself, but of neighbouring Twickenham, suggesting the negative aspects of the place are more to do with external factors. Safety is also a feature of negative factors, as "Crime rate" is one statement mentioned in Hounslow, whereas "Feel safe" is a common statement in St. Margaret's. This is relevant as figure 5.5. and 5.6 show the importance of crime rate data in relation to other factors that make up quality of life, However, there are still similarities with 'traffic' and 'congestion', which are also important factors in determining quality of life.

4. Education

For the ward of North Twickenham and St. Margaret's, figure 3.35 shows that 62.6% of people have level 4 qualifications or above. However, for the ward of Hounslow Central, figure 4.35 shows that 42.8% have level 4 qualifications or above. This is relevant for the investigation, because more people have better qualifications in St. Margret's. This is important in determining quality of life, because when people have better qualifications, they have better access to higher paid jobs, so that they can earn more money and lead a better lifestyle and diet.

When evaluating this data technique, it is important to consider the time of day in which data was collected. In St. Margret's, assessment of streets ranged from 12pm – 2pm on a Saturday, but in Hounslow it ranged from 12pm – 2pm on a Sunday. This is important, because it may have affected results and therefore the data's reliability. Furthermore, only

Sample M

25 questionnaires were carried out in each ward, which is not a very large sample size. However, the fact that 50 people were interviewed, does allow for the data to be valid. Furthermore, the entirety of each ward is being assessed within this study, but only people on the high street of each ward were interviewed, so to get a better understanding of all resident's opinions, interviews would probably have to have occurred elsewhere as well. This is particularly relevant in the ward of North Twickenham and St. Margaret's, because roads assessed in the region of North Twickenham (e.g. Craneford Way and Whitton Road) are nearer Twickenham High Street, so the questionnaire data may not be representative of people who live there. To increase the questionnaires' validity, ethical dimensions were considered, such as not including names or addresses in the investigation.

5. Unemployment

For the ward of North Twickenham and St. Margaret's, figure 3.36 shows that 19.2% of people are unemployed. However, for the ward of Hounslow Central, figure 4.36 shows that 28.6% of people are unemployed. This is relevant for the investigation, because more people are employed in St. Margret's. This is important in determining quality of life, because employment is an indicator of wealth, education levels and therefore better lifestyle.

6. Average House Price

Figure 3.37 shows that for the ward of North Twickenham and St. Margaret's, the average house price is £1,186,178.14. For the ward of Hounslow Central, figure 4.37 shows that the average house is £480,285.71 (8sf). This shows that house price is higher in the ward of North Twickenham and St. Margret's. This is relevant to the investigation, because as the below graph shows, house price has a positive correlation with factors that have been included in each street's environmental impact assessment, such as "vandalism" and "pollution". The positive correlation demonstrates that house price is important in determining quality of life, because it reflects other elements to consider in discerning it. However, interestingly in the ward of Hounslow Central, there is only little correlation between house price and EIA score. This would have been particularly offset by the high street of the ward, where location and proximity to transport means average house price stands at £1,000,000, but factors such as 'parking', 'safety' and 'litter' mean it has an EIA score of just 2, however this has been signalled out of the trendline as an anomaly. To further analyse this data, a correlation coefficient has been calculated for the relationship between house price and EIA score for each ward. The correlation coefficient is weak for the ward of Hounslow, as it is 0.37 (2dp), but the strength of the correlation for North Twickenham and St. Margret's, which is 0.60 (2dp), showcases the relevance of this data.

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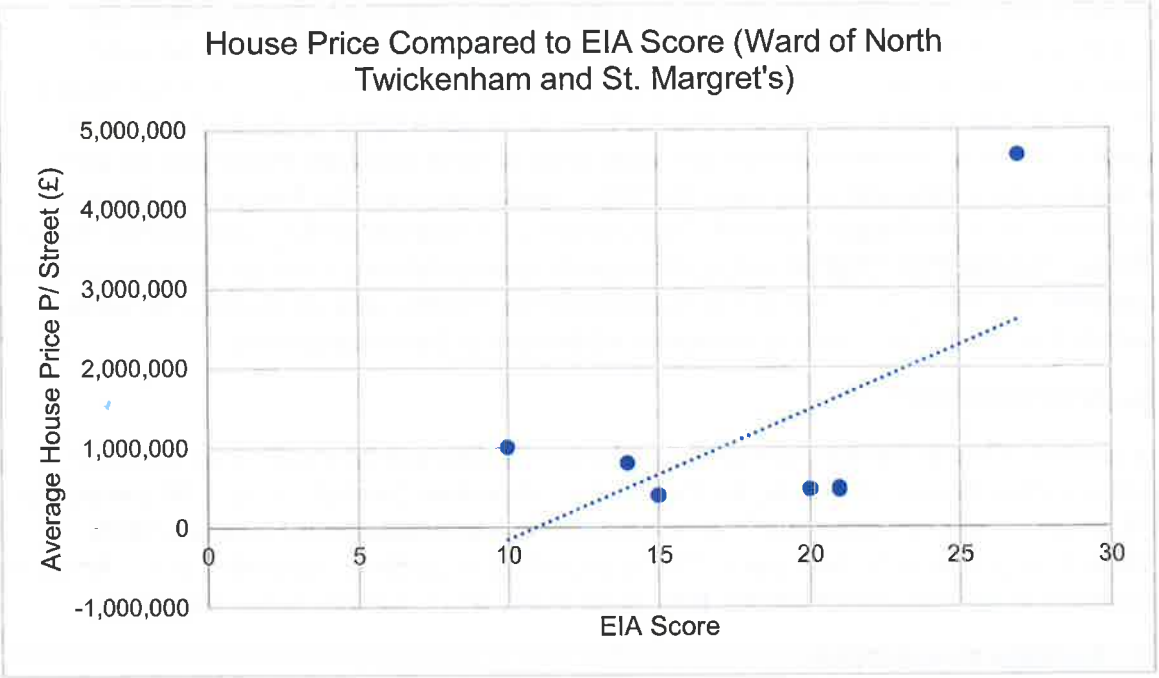
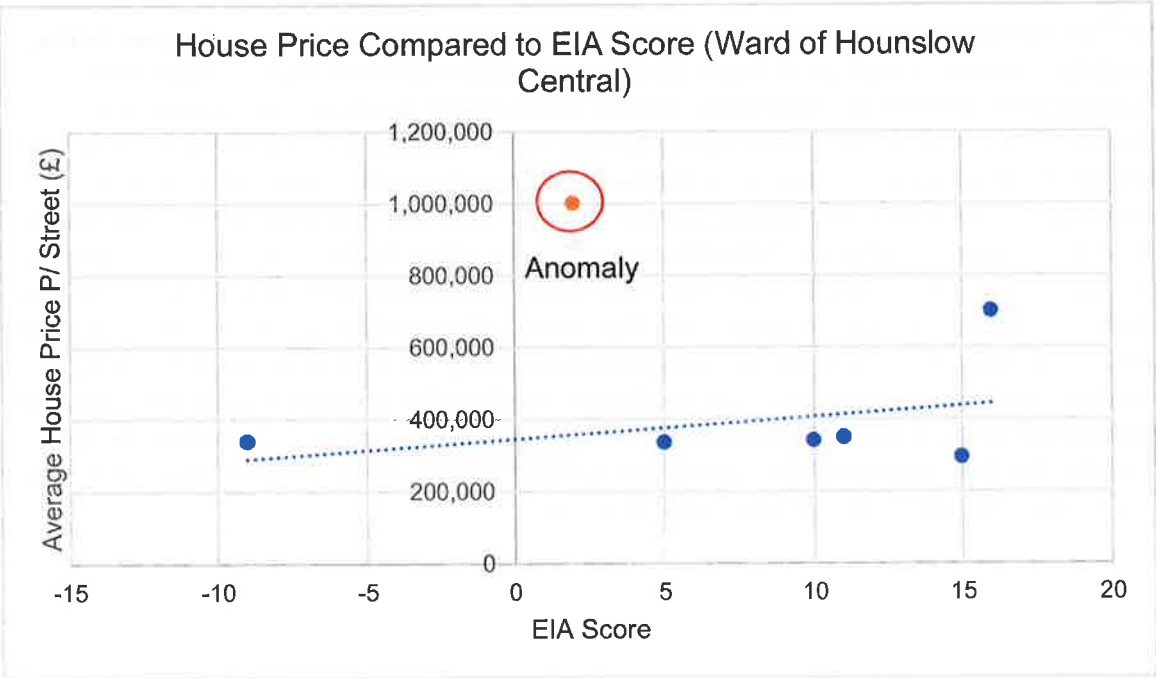


Correlation Coefficient = 0.60 (2dp)

Figure 5.4 EIA Score and Average House Price Scatter Graph



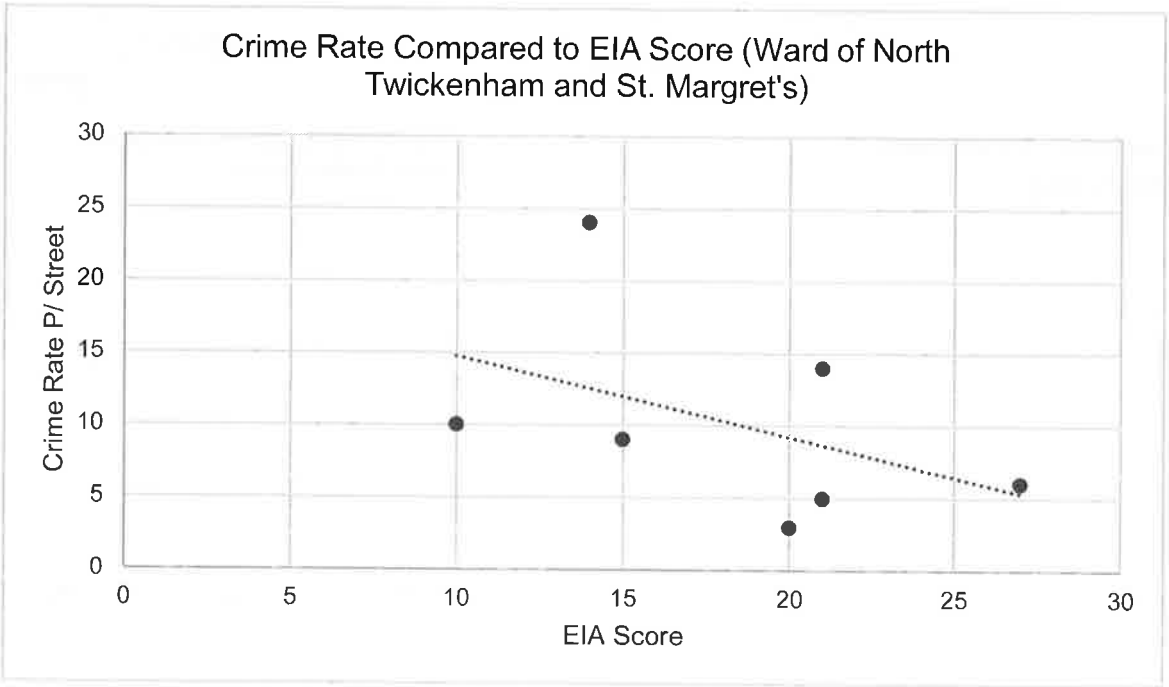
Correlation Coefficient = 0.37 (2dp)

Figure 5.5 EIA Score and Average House Price Scatter Graph

Sample M

7. Crime Rate

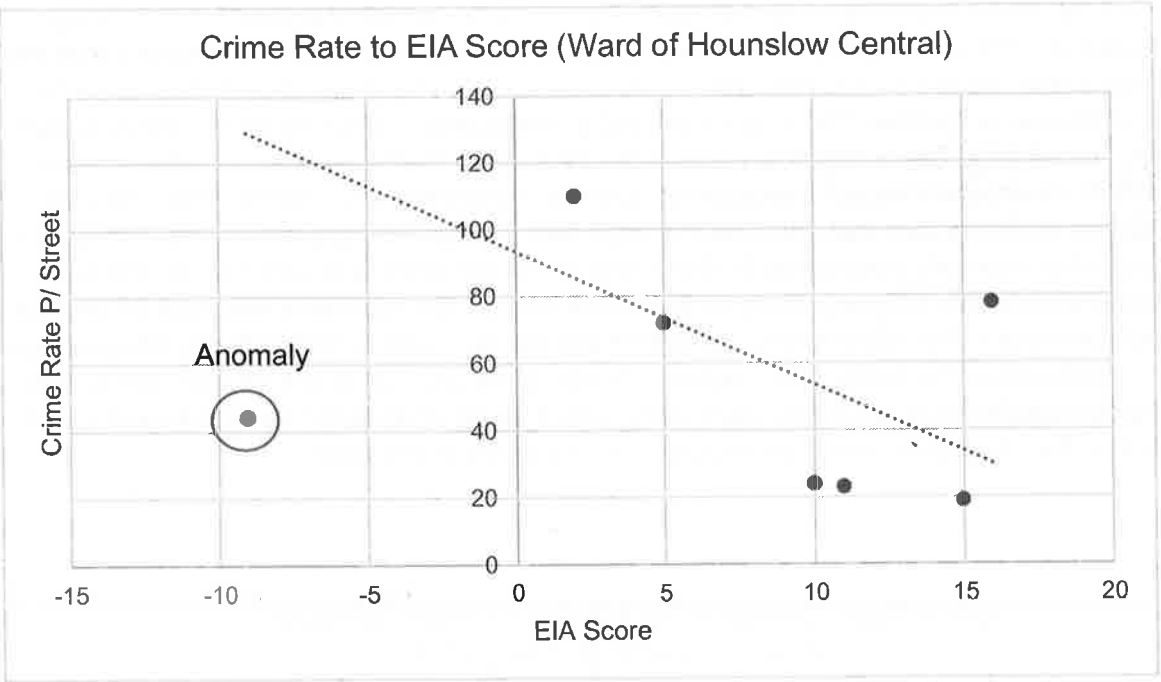
Figure 3.38 shows that for the ward of North Twickenham and St. Margaret's, the average crime rate is 10 incidents (2sf). For the ward of Hounslow Central, figure 4.38 shows that the average crime rate is 53 incidents (2sf) . This shows that crime is significantly higher in the ward of Hounslow Central. This is relevant to the investigation, because as the below graph shows, house price has a negative correlation with factors that have been included in each street's environmental impact assessment, such as 'vandalism' and 'safety'. The negative correlation demonstrates that crime rate is important in determining quality of life, because it reflects other elements to consider in discerning it. For the ward of Hounslow Central there was an anomaly with Kingsely road, as EIA score was so low, but crime rate was 44 and not as high as some of the other roads. To further analyse this data, a correlation coefficient has been calculated for the relationship between house price and EIA score for each ward. The correlation coefficient is strong for each ward, with it being -0.44 (2dp) for St. Margret's and -0.60 (2dp) for Hounslow, which showcases the relevance of this data.



Correlation Coefficient = -0.44 (2dp)

Figure 5.5 EIA Score and Crime Rate Scatter Graph

Sample M



Correlation Coefficient = -0.60 (2dp)

Figure 5.5 EIA Score and Crime Rate Scatter Graph

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Chapter 5 (Conclusions and Evaluation)

excellent conclusions throughout + well supported by evidence

How do these places differ in quality of life?

The findings of this study are both interesting and expected. As chapter 4 has shown, most of the data fits the hypothesis that "quality of life is higher in the ward of North Twickenham and St. Margret's". As shown in figure 5.1 and 5.2, for traffic and footfall measures, St. Margret's scores significantly lower. On top, standard deviation for data is lower, showing that St Margret's has a more consistently lower rate of traffic and footfall than the ward of Hounslow Central. In figure 5.3, for Environmental Impact Assessment (EIA), it shows that for St. Margret's, average score is significantly lower, with again standard deviation also much lower, allowing the data to appear more consistent. Crime rate within the ward of Hounslow Central is strikingly higher than in the ward of North Twickenham and St. Margret's, as shown in figures 3.38 and 4.38. For house price, figures 3.37 and 4.37 show that average house price is a lot higher in St. Margret's than in Hounslow. Both education and employment are much higher in the ward of North Twickenham and St. Margret's, as shown in figures 3.35, 3.36, 4.35 and 4.36.

What factors determine quality of life?

Traffic and footfall data is evidently a factor in determining quality of life, as it is to do with the lived experience of surroundings and environment. Such factors help determine quality of life, because noise and busyness from traffic and footfall can affect people's mental well being and stress levels, whereas elements of EIAs (such as vandalism and size of gardens) also indicate significant other things about place, such as deprivation, which can be reflected in the up keep of land and buildings. It is evident by the data, that St. Margret's has a better environmental quality. However, the issue with these data collection techniques is that for footfall and traffic, they may not be accurate, as only one person made a tally for each road and could have easily miscalculated either amount. On top, the nature of EIAs mean there must be some bias, as they are driven by opinion (e.g. rating "a lot of vandalism" 2 if strongly agree) however, the same person carried out all 14 assessments, which is important in the study's validity. For the ward of North Twickenham and St. Margaret's, timing of assessing each street ranged from 12pm – 2pm on a Saturday. For the ward of Hounslow central, timing of assessing each street ranged from 12pm – 2pm on a Sunday. This may have also affected the results of the data and therefore its reliability and validity.

Crime rate is perhaps one of the most important indicators of quality of life, as safety is paramount to all people's lives and was mentioned as important factors of both wards in the interviews. To prove this further, figures 5.5 and 5.6 are scatter graphs, which show a fairly strong negative correlation, with coefficients of -0.44 (2dp) and -0.60 (2dp), between crime rate of each street and EIA score, suggesting a link between factors that make up environmental quality and crime are linked, proving crime rate is important in determining quality of life. It is evident by the data, that St. Margaret's has less crime. Averages of crime rate that have been calculated in this investigation are only from the seven roads assessed in each ward and are not averages taken from data of the whole ward, which is a weakness in the data's reliability.

House price is also evidently a factor in determining quality of life, because although house price may indicate affluence of an area, a too high average house price may also indicate that people could struggle with a higher cost of living. One of the most common things mentioned as positives in Hounslow, in the interviews, was the "Cheap price of products and food", whereas one of the most common negative statements for St. Margret's was simply

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"Cost of living". Perhaps if comparing two other areas, a slight increase in house price in one may be a good thing, because it reflects demand to live in the area, wealth of the population and generally the quality of the surroundings. However, in this case, the highest house price of the streets assessed in St. Margret's was…. and for Hounslow, it was…. This shows a stark difference between regions. This difference may show that for some people in St. Margret's, they are struggling with the cost of living significantly higher than people in Hounslow, which may be affecting their quality of life. The findings of these particular results are from the site checkmystreet.com, which is a problem in itself because some averages are from different years and are not up to date, or homes may have not sold in certain streets for some time and if they were to be sold in 2018, they would be worth a lot more. As well as this, the averages of house price in this investigation that have been calculated are only from the seven roads assessed in each ward and are not averages taken from data of the whole ward, which again is a weakness in the data's reliability.

Education and employment figures are important in determining quality of life, because a smaller educated population means less people have skills, which limits their access into better paying jobs and therefore economic prosperity and it may also prevent political awareness (i.e. facilitate apathy). Education is also a driving force for economic development of a region, so if more people are better educated and employed, more people are working and in turn paying tax and spending money in the local economy.

Questionnaire data provided a more nuanced understanding of factors that determine quality of life. This is because, although it was clear that people were more content with their surroundings in St. Margret's by the mention of things like "Feel safe", many common themes occurred. One of the most recurrent statements for each ward was the mention of "Community" or in the case of St. Margret's "Village atmosphere". This is important, because those two lines may say more about what quality of life is or means than any other form of numerical data. In Hounslow, another common positive was the amount of "Asian shops" which made a lot of migrants in the area feel like home. Perhaps this sense of belonging is the most key factor in determining quality of life, as it is arguably our greatest human need. Even with negative statements, there was some common ground, especially with things like 'traffic' and 'congestion'. This suggests that these areas may not be so strikingly different, despite such stark contrasts in other forms of data. The collection of interviews was not without pitfalls, as only 25 questionnaires were carried out in each ward, which is not a very large sample size. However, the fact that 50 people were interviewed, does allow for the data to be valid. Furthermore, the entirety of each ward is being assessed within this study, but only people on the high street of each ward were interviewed, so to get a better understanding of all resident's opinions, interviews would probably have to have occurred elsewhere as well. This is particularly relevant in the ward of North Twickenham and St. Margaret's, because roads assessed in the region of North Twickenham (e.g. Craneford Way and Whitton Road) are nearer Twickenham High Street, so the questionnaire data may not be representative of people who live there.

Why do these places differ in quality of life?

Finally, the reason these places appear to differ in quality of life is perhaps due to different political governance and more structural factors, which are explained by the Hoyt Sector model (figure 1.3) where by economic sectors of a city are explained by transport routes running out of the CBD. This is relevant in this investigation, because Hounslow is just South of the A4 corridor, which goes through Brentford and Isleworth - typically deprived areas. However, St. Margaret's is by the A316, which goes through Fulham, Richmond and Twickenham - typically affluent areas. When compared with other Local Authorities in

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London and England as a whole, Richmond borough is one of the least deprived, being the 296th least deprived out of 326 local authorities (Data Rich, 2015). However, Hounslow borough is ranked 151st of 326 local authorities (Hounslow Intelligence Briefing, 2015). This is relevant, because it indicates how each ward's quality of life is probably affected by the deprivation of the borough they are in, because each local authority controls the levels of investment within each ward.

Ultimately, quality of life is too much of a broad topic to assess within the confines of the data collected and other types of data, such as health, were not included and could be potentially important in determining quality of life. As well as this, the data collected from the roads of each ward was only a sample size, whereas results may have been different if all roads in each ward had been assessed and much of the data could have contained bias, as it was all carried out by one person. However, the investigation has allowed answers to questions posed at the beginning of the study. These places differ in quality of life by through many factors, including crime, house price, congestion and education. Factors that should be included in quality of life are diverse and nuanced. This is because quality of life is not a statistic, but a vague understanding of a person's wellbeing. However, the most important role of this investigation is that it has proved the original hypothesis that "quality of life will be higher in the ward of North Twickenham and St. Margaret's" is correct.

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