



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

Master's Dissertation

Evaluation of the Phase 2A IRT Network in respect to the Principles of Transport Justice



Dissertation for the degree of Master of Engineering (MEng) specialising in Transport Studies
Centre for Transport Studies
Department of Civil Engineering
University of Cape Town
Taariq Parker (PRKTAA002)
Supervisor: Prof. Mark Zuidgeest
October 2023

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

PLAGIARISM DECLARATION

1. I know that plagiarism is wrong. Plagiarism is to use another's work and to pretend that it is one's own.
2. I have used the UCT-Harvard Convention for citation and referencing. Each significant contribution to and quotation in this report form the work or works of other people have been attributed and has been cited and referenced.
3. This report is my own work.
4. I have not allowed and will not allow anyone to copy my work with the intension of passing it as his or her own work.

Student no: PRKTAA002

Surname: Parker

Date: 3rd October 2023

Signature:

Signed by candidate

ABSTRACT

The South African Transport system is inherently designed on transport inequities and spatial segregation. This is still evident in many cities and has not been completely addressed since the prior apartheid regime. Many lower income groups are still residing on the city outskirts, far away from potential job opportunities, including the central business district. These groups are disproportionately affected by the long travel times and consequently higher travel costs, resulting in a large percentage of their time and income being spent on transport.

A high-quality public transport system with a broad catchment area is required to increase the access to opportunities, in an attempt to address the lingering inequalities of the past apartheid regime. There has been a focus in South African cities on bus rapid transit (BRT) as the future of public transport (PT) trunk services. Three key features that distinguish BRT systems from conventional bus systems are the improved infrastructure, operations, and technology.

The key research objectives of this dissertation were:

- To determine appropriate measures of accessibility in South Africa;
- To identify a suitable accessibility threshold that can be used for comparison purposes; and
- To evaluate the effectiveness of Cape Town's Integrated Rapid Transit (IRT) Phase 2A route in terms of transportation planning based on the principles of justice and the identified accessibility threshold.

This study has focused on the approved Phase 2A route of Cape Town's Integrated Rapid Transit (IRT) system, which is currently being built, and did not analyse Phase 1 (which is already built) or Phases 3 and 4 (which are still planned for the future). As such, the study area consisted of the suburbs in the immediate vicinity of the proposed route and not the whole of Cape Town, namely, the Southern Suburbs and Metro Southeast. Due to the rail line not having a direct east-west route between these areas, the study focused on the road-based transport, i.e., private cars, minibus taxis (MBT) and Golden Arrow Bus Services (GABS).

A simplified network model based on zones and road-based transport (as mentioned above) was built of the suburbs surrounding the IRT Phase 2A route using QGIS software. The model zones consist of the demographic data of the population. The existing public transport facilities, i.e. minibus taxis and Golden Arrow Bus Services, were outlined as nodes and links in the model. The model was run to determine travel times and speeds between zones. Potential Mobility Index (PMI) scores were calculated for each zone and used to determine origin to destination accessibility levels (number of jobs available). Using the chosen accessibility measures, the most underserved zones within the study area were identified. The IRT route was then evaluated against this to determine whether these areas would be sufficiently provided for, by plotting the potential accessibility of each TAZ based on the IRT catchment area.

Based on the analysis results, it is evident that having access to a car will allow an individual access to most, if not all, jobs in the study area within a 30-minute period. This can be extrapolated and used to assume that similar patterns would be applicable to other trip purposes such as healthcare services, shopping, education, leisure etc., as well as during different times and days of the week. Those who rely on road-based public transport as their main mode will however be stuck with low levels of accessibility in all circumstances, and even worse in certain cases such as weekends and night-time when PT services are reduced.

In order to evaluate the compliance of Cape Town's Integrated Rapid Transit (IRT) Phase 2A route with transportation planning based on the principles of justice, various accessibility sufficiency thresholds were tested. The number of underserved reliant on public transport based on each of these thresholds that are serviced by the IRT Phase 2A route was used in this assessment. Based on the outcome of this assessment, it is anticipated that the underserved groups within the study area will be sufficiently serviced by the planned future IRT Phase 2A network.

The large inequalities between those who are reliant on road-based public transport and those who have access to a car within the study area, and Cape Town as a whole, are evident in the outcomes of this study, and are exacerbated by the fact that the public transport system is generally inefficient and unreliable.

The assessment of the proposed IRT Phase 2A network through the Southern Suburbs and Metro Southeast has also shown that this method of planning based on transport justice can be used as a tool to confirm whether decision makers are correctly choosing the best solution by which these underserved areas can be aided sufficiently.

Transport planning has the potential to play a critical role in advancing social and economic justice in South Africa. By incorporating the principles of justice, transport planning can help to create more equitable and accessible transport systems for all members of society, including the previously disadvantaged. To support the implementation of transport justice, transportation planners must have a good understanding of the social, economic, and environmental impacts of their decisions. They should also have the knowledge, tools and skills to analyse and address transportation inequalities and implement equitable transportation solutions.

ACKNOWLEDGEMENTS

I would firstly like to thank my supervisor, Professor Mark Zuidgeest, for his support and guidance throughout my master's dissertation. His willingness to give advice has been greatly appreciated.

I would also like to thank the City of Cape Town and Statistics South Africa for effortlessly providing the required data to complete this study.

Lastly, I would like to thank my family, especially my wife, who has patiently supported me throughout this long journey.

CONTENTS

ABSTRACT	ii
ACKNOWLEDGEMENTS	iv
1 INTRODUCTION	1
1.1 Problem Statement	1
1.2 Background.....	1
1.3 Objectives	2
1.4 Scope and Limitations	2
1.5 Research Justification.....	2
2 LITERATURE REVIEW	3
2.1 Traditional Transport Planning.....	3
2.1.1 Four-Step Travel Demand Modelling Method.....	3
2.1.2 Inherent Limitations.....	4
2.2 Accessibility	5
2.3 Principles of Justice and Transport Planning.....	6
2.3.1 Transport Disadvantage	6
2.3.2 Traditional Transport Planning vs. Transport Planning based on Principles of Justice ..	6
2.3.3 Measuring Accessibility.....	7
2.3.4 Walkable Distance.....	9
2.4 Local Research	11
2.4.1 Income Poverty Lines in South Africa	11
2.4.2 Public Transport	13
2.4.3 Transport Accessibility	15
3 METHODOLOGY	17
3.1 Data Collection	17
3.2 Geographic Information Systems (GIS)	17
3.3 Model Development and Analysis Summary	17
4 MODEL DEVELOPMENT.....	18
4.1 Road Network.....	18
4.2 Traffic Analysis Zones	19
4.3 Public Transport Routes and Stops	20
4.4 Households and Jobs Distribution.....	24
4.5 National Household Travel Survey Data (2020)	25
4.6 QGIS Model Analysis Steps.....	26
5 MODEL ANALYSIS AND RESULTS.....	27

5.1	Poverty Severity	27
5.2	Potential Mobility Index.....	28
5.3	Accessibility Sufficiency Threshold.....	31
5.4	IRT Phase 2A Route Assessment	32
5.5	Study Limitations and Further Assessments	35
6	CONCLUSIONS	36
7	REFERENCES	37
	APPENDIX A – Detailed Data Collection.....	39
	APPENDIX B – Detailed Analysis Calculations.....	43

FIGURES

Figure 2-1: Analysis of population groups based on potential mobility vs accessibility (Martens, 2017)	8
Figure 2-2: Transport framework for settlement planning (CSIR, 2005)	10
Figure 2-3: 2006-2021 National poverty lines (per person per month) adjusted by inflation (Statistics SA, 2021a)	13
Figure 4-1: QGIS Model Extents	18
Figure 4-2: Model Road Network	19
Figure 4-3: Traffic Analysis Zones Used by Statistics SA Clipped to Study Area	19
Figure 4-4: Traffic Analysis Zones Used for Model	20
Figure 4-5: GABS Stops and 400m Walking Buffer	21
Figure 4-6: GABS Coverage	21
Figure 4-7: MBT Routes and 400m Walking Buffer	22
Figure 4-8: MBT Coverage	22
Figure 4-9: IRT Stops and 400m Walking Buffer	23
Figure 4-10: BRT Coverage	23
Figure 4-11: Households Distribution	24
Figure 4-12: Jobs Distribution	24
Figure 4-13: Flow Diagram for QGIS Data Input	26
Figure 5-1: Poverty Severity of TAZ's	27
Figure 5-2: Potential mobility and accessibility levels experienced by different population groups, based on job accessibility, for a 30-minute travel time threshold	28
Figure 5-3: Potential mobility and accessibility levels as experienced by different population groups, based on job accessibility, for a 25-minute travel time threshold	29
Figure 5-4: Potential mobility and accessibility levels as experienced by different population groups, based on job accessibility, for a 35-minute travel time threshold	29
Figure 5-5: Share of the population with an accessibility level below the respective sufficiency thresholds, based on job accessibility, for a 30-minute travel time threshold	31
Figure 5-6: BRT Coverage	32
Figure 5-7: BRT Coverage of Accessibility Deficient Population Groups based on GABS Services and 50% Sufficiency Threshold for 30-minute Travel Time	33
Figure 5-8: BRT Coverage of Accessibility Deficient Population Groups based on MBT Services and 50% Sufficiency Threshold for 30-minute Travel Time	34

TABLES

Table 2-1: Reference food basket (Statistics SA, 2015b)	11
Table 2-2: 2021 National poverty lines (person/month) adjusted by inflation (Statistics SA, 2021a)	13
Table 2-3: Typical BRT characteristics (Department of Transport, 2007)	15
Table 4-1: Average Walking Time to Nearest PT Facility (NHTS, 2020)	25
Table 5-1: Assessment of Planned IRT Phase 2A Route based on Transport Justice for a 30-minute Travel Time Threshold	33

ABBREVIATIONS AND ACRONYMS

AFI	Accessibility Fairness Index
BRT	Bus Rapid Transit
CoCT	City of Cape Town
CPI	Consumer Price Index
GABS	Golden Arrow Bus Services
IRT	Integrated Rapid Transit
MBT	Minibus Taxi
NMT	Non-Motorised Transport
PMI	Potential Mobility Index
PT	Public Transport
QGIS	Quantum Geographic Information Services (software)
Stats SA	Statistics South Africa
TOD	Transit-Oriented Development

1 INTRODUCTION

1.1 Problem Statement

The South African Transport system is inherently designed on transport inequities and spatial segregation. This is still evident in many cities and has not been completely addressed since the prior apartheid regime. “The inequitable distribution of access to opportunities and services in South African cities are in large part due to the segregationist planning policies of the Apartheid regime that fragmented the urban form” (Cooke, Behrens & Zuidgeest, 2018:368). Many lower income groups are still residing on the city outskirts, far away from potential job opportunities, including the central business district. These groups are disproportionately affected by the long travel times and consequently higher travel costs, resulting in a large percentage of their time and income being spent on transport (Bickford, 2016).

Walking is a common means of commuting in South Africa, with about 21% of commuters walking all the way to work (Statistics SA, 2014). Walking is also more prevalent in rural areas because of the deliberate social exclusion of these lower income groups during apartheid, exacerbating the lack of private vehicle ownership within those communities. The main mode for roughly 40% of commuters is public transport, which consists of transferring between modes as well as walking to and from stations. Although walking is a healthier alternative to motorised transport, the distances to services and jobs in South African cities are generally far and often unsafe due to crime and violence. The most vulnerable people (i.e. women, school children and the elderly) are usually forced to walk for all of their trip purposes even though they have the greatest need for proper transport facilities (PGWC, 2010).

1.2 Background

Transport planning plays a critical role in shaping the built environment and determining how people move within it. Accessibility has historically been considered as a key concept of transportation and has a major influence on policy making (Venter, 2016). Accessibility can be defined as the potential for or ease at which an activity/ opportunity/ destination can be reached using one or more modes within a transport system (Geurs & van Wee, 2004).

Traditional transport planning, however, has been more focused on mobility. Mobility refers to how easily or efficiently people can travel between places along a transport network and is usually measured in terms of speed-based metrics such as delay, congestion, and level of service (Venter, 2016). Traditional transport planning is thus primarily based on travel demand forecasting (Owens, 1995) and the reduction of travel time and costs, which is purely quantitative. More recently, there has been a shift towards transport planning based on accessibility which allows qualitative measures to be considered such as affordability of transport modes (e.g. access to/ownership of a private vehicle, or income brackets i.e. lower, middle, high), spatial distribution of activities, availability of opportunities and the demographic data of the population. This brings a new concept to the discussion, one of transport equity or justice. This concept refers to providing fairness with regards to the distribution of transport related impacts (Jennings, 2015).

1.3 Objectives

The key research objectives of this dissertation are:

- To determine appropriate measures of accessibility in South Africa – in the context of this study, the appropriateness would be informed by the relevance to the local socio-economic demographics and how easy it is to measure using available data;
- To identify a suitable accessibility threshold that can be used for comparison purposes; and
- To evaluate the effectiveness of Cape Town’s Integrated Rapid Transit (IRT) Phase 2A route in terms of transportation planning based on the principles of justice and the identified accessibility threshold.

1.4 Scope and Limitations

This study has focused on the approved Phase 2A route of Cape Town’s IRT system, which is currently being built, and did not analyse Phase 1 (which is already built) or Phases 3 and 4 (which are still planned for the future). As such, the study area consisted of the suburbs in the immediate vicinity of the proposed route and not the whole of Cape Town, namely, the Southern Suburbs and Metro Southeast. Due to the rail line not having a direct east-west route between these areas, the study focused on the road-based transport, i.e., private cars, minibus taxis and Golden Arrow Bus Services.

1.5 Research Justification

As mentioned, the segregated nature of the South African transport system has caused many problems in the society and economy. This includes a lack of adequate public transport and a high prevalence of walking amongst the transport disadvantaged. The traditional method of transport planning being used does not focus on these minority groups and still predominantly aims to address overall network congestion, delay, and travel speeds. Thus, it is important to introduce a step in the planning process which brings to light the transport inequities that exist and that will allow future proposed public transport systems to be more accessible to those who need it the most.

2 LITERATURE REVIEW

2.1 Traditional Transport Planning

According to Maarseveen and Zuidgeest (2011:5):

Urban transport planning started in the United States in the 1950s with the Detroit and Chicago Transport Studies and was used to inform decision-makers on the transport system. Urban transport planning analyses the transport system, gives forecasts on future performance of the system and suggests measures to improve this performance in order to meet the level desired.

In earlier times the studies were mainly concerned with the provision of capacity for the growing demand of motorcar travel. The rise of urban transport planning included the start of the development of transport models, as they are an essential component of urban transport planning.

Over a number of years of model testing, a standard model skeleton was developed, described as the classic four-step method. After the initial data collection and defining of the road network and model zones, the four steps include trip generation, trip distribution, modal split, and network assignment. The four-step method as well as its limitations are explained in the following sub chapters.

2.1.1 Four-Step Travel Demand Modelling Method

2.1.1.1 Trip Generation

This step refers to the production of trips by households or individuals. Household and land use characteristics are major influences of trip generation. These include household income, availability of transport modes, zone type and land use accessibility. The main outcome of this step is to determine the number of trips that are produced to be applied in the next steps.

2.1.1.2 Trip Distribution

This step determines the trip attraction for all the trips that was calculated in the previous step. More specifically, it determines the origin zones and their corresponding destination zones. This is usually processed in an origin-destination matrix. This would be used for the base year analysis and can also be forecasted to a horizon year to model growth and/or proposed design scenarios.

2.1.1.3 Modal Split

Modal split is used to determine the number of trips that are being performed with each mode of transport. These can include walking, cycling, private vehicles and the various forms of public transport. This step converts person-trips into vehicle-trips to be modelled in the network.

2.1.1.4 Network Assignment

This entails the prediction of which specific routes each vehicle-trip will use along the network. The route will be determined based on the characteristics of the road infrastructure such as the road type, number of lanes, achievable speed, intersection configurations and public transport infrastructure available etc. The routes will then be used to assign traffic volumes to the links of the transport network. This model can then be used to determine the performance of the transport system.

(Maarseveen & Zuidgeest, 2011)

2.1.2 Inherent Limitations

2.1.2.1 Long-term Forecasting

Gifford (2003) explains a number of limitations related to long-term forecasting used in models. Forecasting itself is a best guess estimate of what the future holds. Logically speaking, it is inherently problematic as one cannot accurately determine many of the factors that would affect a project in the future. However, there are some key challenges which can be identified in travel demand forecasting.

Firstly, aggregated data is used for these forecasts because of the ease of measurement and extrapolation, and the simple data models required. However, the changing behaviours of individuals and the socio-economic dynamics which are influenced by advancements in technology are ignored.

Transport models usually focus on higher order roads in the network, which means that many times the intrazonal trips are overlooked. Investment of larger scale infrastructure along the major transport corridor is thus favoured over the smaller more localised infrastructure. This also means that motorised transport modes are favoured over the non-motorised transport facilities as they are more likely to be found on the arterials and highways.

The people in charge of the planning and making the decisions are usually those who have power and influence. This means that the end result could very well be serving their own interests and thus move development in a way which conforms to this. And while they may believe that they are doing something to benefit society, could potentially be detrimental to the individuals living in the affected communities.

Another problem with the long-term forecasting is predicting external factors which can affect the transport system. These can include natural disasters, oil shocks, pandemics (such as the current Covid-19 which prevents people from moving around), and to a lesser degree, the migration of citizens out of a country (which can recently be seen in South Africa).

2.1.2.2 Gravity Model

According to Denmark (1998), the constant use of gravity-based trip distribution models is a great disadvantage found in traditional transport planning. The basis of these models lies in the assumption that the population is more or less homogenous. This does not take into account the heterogeneity of the mobility deprived such as the elderly, people with disabilities, women and school children etc. This is because most public transport is aimed at the masses and planned with broad population characteristics. Local community knowledge is lacking in the planning process, which is required to address the needs of the local population groups.

2.2 Accessibility

People require ways of reaching activities and opportunities from different locations by using various forms of transport systems. Accessibility refers to how easily individuals can achieve this, whether this means accessibility to the destination or accessibility of the transport system itself. There are a few different ways of measuring access; these measures include infrastructure, location, persons, and utility based, and are explained below:

- Infrastructure-based measures entails analysing the performance metrics of a transport system. This can include level of service, average speed, and congestion type measures. This tool is usually used in transport planning analyses and policies, such as the Dutch National Transport Policy Plan which used a national transport model to evaluate transport policy options based on travel speed.
- Location-based measures analyses the spatial distribution of activities based on travel costs and/or travel time. Advanced location-based measures take into account the competition effects of the activity i.e. the fact that a certain activity has a limited capacity of users/consumer/workers. These measures are mainly used in urban planning to determine land use requirements.
- Person-based measures analyses an individual's accessibility to an activity. This is constrained by an individual's time (such as work commitments or dropping children at school etc.) and budget (what mode they can afford and how far they can go using this mode). This can be used in transport planning to determine the type of public transport required and for scheduling and routing.
- Utility-based measures indicate the economic benefit that a particular activity will provide people. This can refer to individuals or an aggregated group of the population. This can be used in economics to determine the demand for an activity or service in various areas. For example, a study has been done in Minneapolis which analyses how residential housing locations are affected by job accessibility.

These approaches to measuring accessibility are all required for different reasons, and they should generally be used in parallel with each other. Accessibility can be used to indicate the status of society and the economy. It is important to know the level of accessibility, within various groups of the population, to socio-economic opportunities to understand the level of equity. This can be a means of identifying who requires attention in order to improve quality of life for the disadvantaged. It is also necessary to be able to determine the economic benefits and costs that a land use or transport development will have, such as increasing jobs and improving the country's GDP.

2.3 Principles of Justice and Transport Planning

2.3.1 Transport Disadvantage

“Transport disadvantage has been associated with an inability to access the goods and services necessary to live one’s daily life” (Jennings, 2015:766). This is a significant problem in South Africa that affects many people. According to Statistics SA (2015a), approximately two thirds of low-income households spend more than 20% of their monthly income on public transport. Comparatively, less than only 3% of high-income households spend more than 20% of their monthly income on public transport.

Traditionally, justice has not played a significant role in transport planning, however, there has recently been an increasingly amount of research being done on transport justice (Jennings, 2015). It is described as a means to provide transport interventions that would allow equitable distribution of the benefits and costs of the transport system. In South Africa, transport justice is particularly meant to reduce the long-lasting negative impacts of the past spatially fragmented transport system. This includes poverty alleviation, reduction of transport disadvantage and social exclusion, and an overall improvement of accessibility.

2.3.2 Traditional Transport Planning vs. Transport Planning based on Principles of Justice

Traditional transportation planning has generally been focused on optimizing mobility and efficiency, often prioritising private vehicle travel, and ignoring the needs and perspectives of marginalised communities. However, there is a growing effort towards transportation planning based on transport justice, which prioritizes equity and the needs of all users, including vulnerable groups such as the elderly, children, people with disabilities, and low-income communities.

One key difference between traditional transport planning and transport justice planning is the level of community involvement. Traditional transportation planning often excludes community members from the decision-making process, whereas transport justice planning seeks to empower communities and incorporate their perspectives and needs into the planning process.

Another difference is the focus on sustainability. Traditional transportation planning may prioritize convenience and speed, even if this means relying on car-centric infrastructure that contributes to environmental degradation. In contrast, transport justice planning prioritizes sustainable transportation options, such as public transportation, cycling, and walking, which have lower environmental impacts and promote healthy and active lifestyles.

To summarise, transport planning based on transport justice brings a more accessibility centred approach instead of focusing purely on mobility.

(Martens, 2017)

2.3.3 Measuring Accessibility

The following points need to be considered when determining an acceptable measurement of accessibility:

- Multiple accessibility measures should be accounted for when determining accessibility patterns. This is because accessibility changes based on purpose, circumstance and with time.
- The accessibility measure should not attempt to predict travel behaviour as there is a weak correlation between accessibility and activity participation. This is due to the variation in activity participation patterns that can be found with different levels of accessibility.
- The differences between people should be considered. However, because it is not possible to determine all the variations in people’s circumstances and interests, the most significant of these differences should be assessed based on the population size that is affected.
- Information that is publicly available to all should be used when determining transport policy that would define accessibility thresholds. This could be used to help determine those groups that are likely to fall below the threshold.
- Accessibility patterns that are used to determine areas where there are accessibility shortfalls, should be analysed with simple accessibility measures.

Although accessibility is the focus of transport justice, the contribution of the transport component needs to be addressed by an indicator. To do this, the potential mobility should be used to evaluate the quality of the transport system. Martens (2017) defines such an indicator as the “Potential Mobility Index (PMI)” which can be used to determine the transport network structure and the speed on the network. The PMI has the potential to outline transport system inefficiencies. It is calculated by dividing the direct aerial distance between an origin and destination by the travel time along the physical transport network. The average PMI values for all destinations from an origin point can be calculated using (2-1 below:

$$PMI(i) = \frac{1}{n} \cdot \sum_{j=1}^n \frac{d(i, j \dots n)}{T(i, j \dots n)}$$

(2-1) (Martens, 2017)

Where: $PMI(i)$ = average aerial speed for zone i
 $d(i, j \dots n)$ = aerial distance between zone i and zone j up to zone n
 $T(i, j \dots n)$ = travel time on the transport network between zone i and zone j up to zone n
 n = total number of zones

One way that Martens explains the complementary nature of potential mobility and accessibility is by comparing them on a set of axes. Accessibility is shown on the vertical axis, and it is evaluated with various measures. Potential mobility is shown on the horizontal axis, and it is measured using calculated PMI values. Population groups are plotted on the graph based on their relative accessibility and potential mobility. This graph can be used to introduce a minimum threshold of accessibility, usually in the bottom half (represented by the dotted lines in Figure 2-1). The left half of the graph represents the role of transport planning, with the population groups here being underserved by the transport system and experiencing low levels of potential mobility. The target groups for transport planning based on the principles of justice lie in the bottom left quadrant, as they also experience low levels of accessibility.

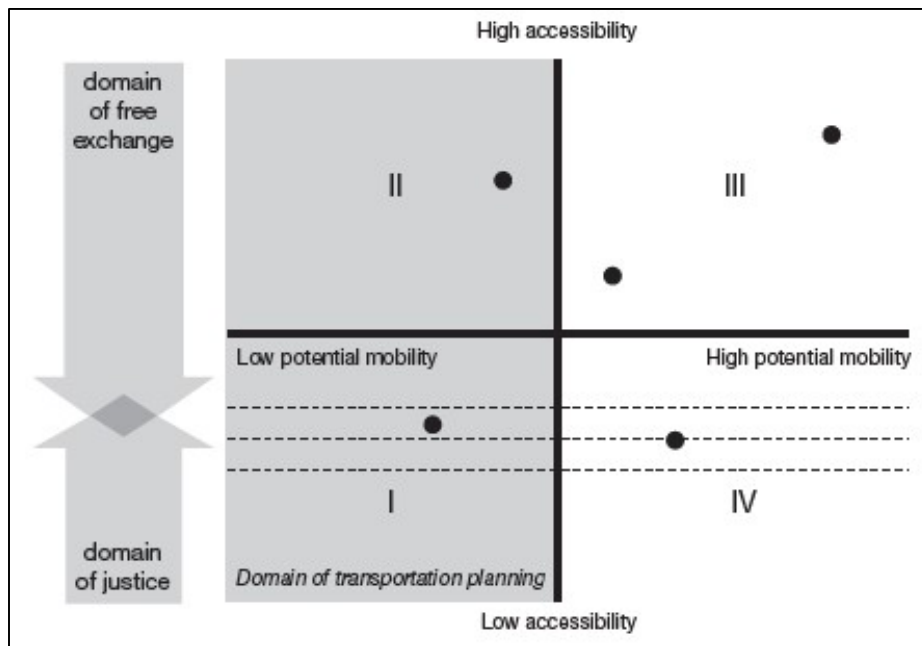


Figure 2-1: Analysis of population groups based on potential mobility vs accessibility (Martens, 2017)

Although the above method will identify population groups who experience insufficient accessibility levels, practically, it is essential to be able to prioritise which groups should be attended to first. To achieve this, Martens has outlined a measure which would help to assess the fairness of a transport system. The basis of his approach stems from using the income poverty line and sufficiency threshold. In addition, it would be important to determine the number of people below the poverty line as well as the distribution of income amongst that population.

A poor person's income is compared to the income poverty line to determine their weight with regards to the overall poverty. The income shortfall can be used to illustrate the severity of income poverty experienced by an individual or group. Equation 3-2 is a tool used to measure this weight and income shortfall.

$$P_2 = \frac{1}{N} \cdot \sum_{i=1}^q n_i \cdot \left(\frac{z - y_i}{z}\right)^2$$

(2-2) (Martens, 2017)

- Where: q = number of groups with income less than or equal to the poverty line
 z = poverty line
 N = total population
 n_i = number of people in group i
 y = income of group i

P_2 can vary with values between 0 and 1. The severity of income poverty increases with increasing values of P_2 . Consequently, a value of 1 indicates that the entire population has an insufficient level of income, while a value of 0 indicates that the entire population has a sufficient level of income.

Martens further uses this measure to develop an index for measuring accessibility poverty, called the Accessibility Fairness Index (AFI). The severity of accessibility poverty is measured in the same way as income poverty and requires an accessibility sufficiency threshold and distinct population groups.

$$AFI_r = \frac{1}{N} \sum_{i=1}^q n_i \cdot \left(\frac{z - y_i}{z} \right)^2 \quad (2-3) \text{ (Martens, 2017)}$$

Where: q = number of groups with accessibility levels less than or equal to the accessibility threshold
 z = accessibility threshold
 N = total population
 n_i = number of people in group i
 y = accessibility level of group i

The P_2 measure is thus replaced with the AFI measure as seen in Equation 3-3 with the result representing the accessibility deficiency severity of a region. “In other words, the measure generates an overall score of the fairness of the transport-land use system in a city or region” (Martens, 2017:161).

2.3.4 Walkable Distance

One of the strategic objectives of the White Paper on National Transport Policy (2022) is to improve accessibility by reducing walking distances to less than one kilometre to and from public transport facilities, corresponding to roughly 15 minutes for an average person. The Guidelines for Human Settlement Planning and Design (CSIR, 2005), recommends that public transport facilities are to be planned using a theoretical 800 m (approx. 10 minutes) for rail stations and 400 m (approx. 5 minutes) for bus stops. This is further emphasised by the NMT Facility Guidelines (2014:120), which states that “stops should be placed so that persons with disabilities do not have to walk longer than 400 m along a route.”

Figure 2-2 illustrates the 800 m and 400 m walkable buffer from public transport facilities.

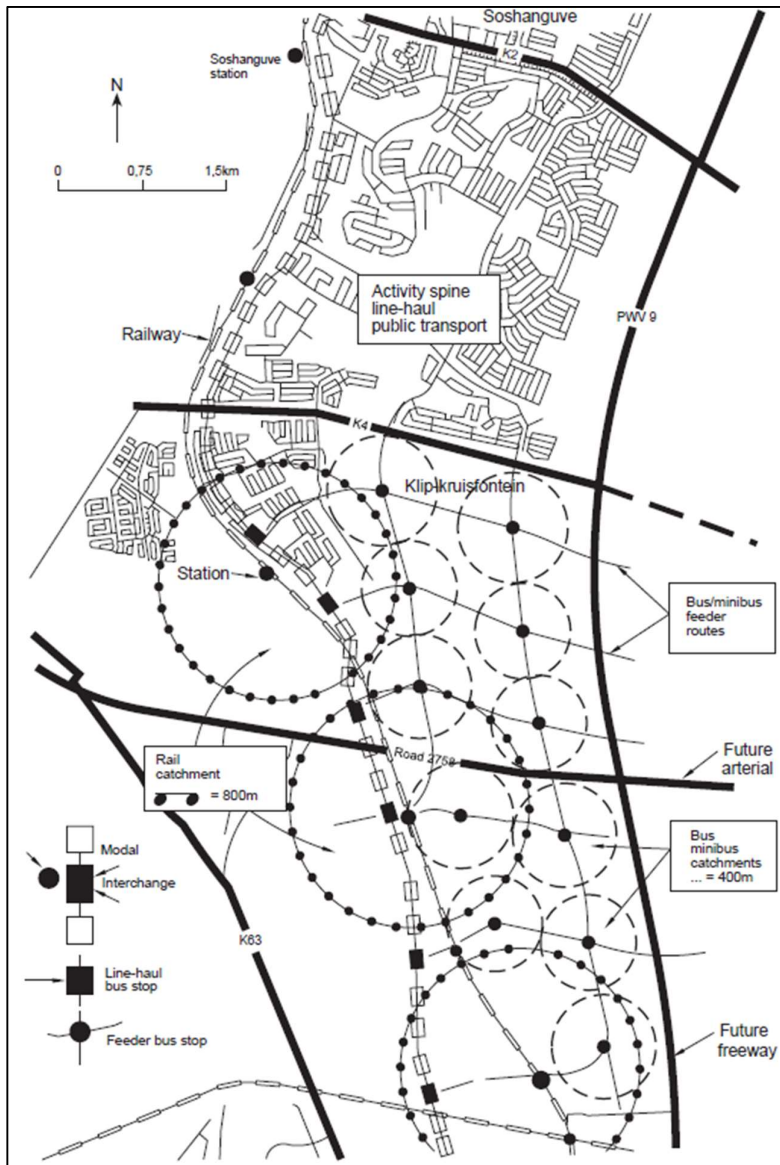


Figure 2-2: Transport framework for settlement planning (CSIR, 2005)

2.4 Local Research

2.4.1 Income Poverty Lines in South Africa

The Methodological Report on Rebasing of National Poverty Lines (NPL's) and Development of Pilot Provincial Poverty Lines developed by Statistics SA (2015b) outlines the approach used to determine the income poverty line in South Africa. It uses a cost-of-basic-needs method to estimate welfare based on the consumption of goods and services. The following three steps explain the method used:

1. Based on the food element of welfare, a reference food basket is determined;
2. The food basket must enable households to meet a food-energy intake requirement per person per day, which is approximately 2100 kilocalories; this food basket cost is then calculated to determine the food poverty line; and
3. Basic necessities of non-food items must be included (e.g., shelter, transport, clothing etc.); this is used to calculate upper and lower bound poverty lines.

When determining the reference food basket, it was found that there are multiple possible food basket alternatives that can be used to meet the food-energy intake requirement due to the various food preferences of South Africans. It was thus important to derive one that would represent the general consumption patterns on a national level.

Initially, the number of food items was refined to 31 items. After considering the income and expenditure levels of different households, especially those of lower to middle income levels, the basket was further refined to 26 items. The final basket of food items can be seen in Table 2-1.

Table 2-1: Reference food basket (Statistics SA, 2015b)

Group	Food Item
Beverages	Aerated cold drinks
	Fruit juices not from food service places
	Instant coffee
Dairy products and Eggs	Fresh full cream milk
	Large eggs
	Long life Full cream milk
	Sour milk/maas
Fish, Meat, Poultry and their products	Poultry (including heads and feet)
	Beef and veal (including heads and feet)
	Boerewors
	Canned pilchards
	Polony
Grain products	Mealie meal/Maize flour
	Brown bread
	White bread
	Rice
	Cake flour
Oils and fats	Edible oils (e.g. cooking oils)
Fruits and vegetables	Cabbage fresh
	Potatoes
	Tomatoes fresh
	Onions
Miscellaneous	Burger
	Powder soup
	Brown sugar
	White sugar

2.4.1.1 The food poverty line

The following extract from Statistics SA (2015b:8) explains the method of calculating the food poverty line:

Costing of the reference food basket was performed using information on item-specific consumption expenditure levels, household composition and price data from the Consumer Price Index (CPI). First, the amount of energy (calories per 100 grams or 100 millilitres in the case of liquids) of each food item contained in the reference food basket was obtained from the Medical Research Council (MRC) food composition tables and from the Department of Health. Secondly, using information on mean annualised consumption expenditure on each food item and information on household size, it was possible to compute approximate per capita kilocalories of each item consumed per day. Thirdly, using the CPI data (averaged for the IES 2010/11 survey period covering September 2010 to August 2011) the cost per 100 grams/millilitres of relevant food item was calculated. Altogether, the three pieces of information make it possible to estimate the average per-person-per-day amount of kilocalories consumed of the reference food basket and the associated cost based on the reported item-specific expenditure levels and prevailing prices.

2.4.1.2 The lower and upper-bound poverty lines

Basic non-food needs are much more difficult to define, thus it is necessary to determine upper and lower limits of a range of possible poverty lines. Two different reference households determine these limits. The reference household for the lower limit is based on the assumption that these households give up some basic food needs so that they can meet their basic non-food needs, meaning that the food needs which they do spend on are for survival only. In other words, their total expenditure is equivalent to the food poverty line. The non-food needs are therefore an absolute minimum amount and are added to the survival food needs to determine the lower limit. The upper limit reference household is based on the assumption that both the basic food and non-food needs can be met. In other words, their food expenditure is equivalent to the food poverty line. Consequently, the upper limit is thus the sum of the expenditure on both categories.

2.4.1.3 Purpose of the national poverty lines

The main objective of the national poverty lines is to quantify poverty in a way that can be applied as a statistical measurement (Statistics SA, 2021a). In particular, the NPL's were established to:

- a) Monitor poverty against a constant standard that can be used to track progress;
- b) Determine groups and/or areas that require attention, and be able to develop programmes and policies to target these demographics; and
- c) Attempt to achieve poverty reduction and eradication through policy development and reform by increasing knowledge production.

2.4.1.4 Adjustments to the national poverty lines

Due to the regular changes of household consumption and the costs of goods and services, the purchasing power and cost of living also tends to change. The poverty line therefore needs to be revised to stay applicable, which is done using inflation index adjustments and by defining new lines.

New poverty lines are defined when household consumption patterns change significantly or usually every 5 to 10 years, the last one being in 2011. This has been adjusted with CPIs to forecast costs up to the current day, with separate CPI categories being used for food and non-food adjustments.

Note: “As a result of the COVID-19 pandemic and subsequent national lockdown, there were some changes made to the collection methodology and compilation of the CPI which was used as an input for the inflation adjustments to the 2021 NPLs. These changes are documented in the CPI statistical release (P0141).” (Statistics SA, 2021a)

Based on April 2021 CPI values, Table 2-2 shows the 2021 national poverty lines.

Table 2-2: 2021 National poverty lines (person/month) adjusted by inflation (Statistics SA, 2021a)

Poverty line	2021 line values
Food poverty line (FPL)	624
Lower-bound poverty line (LBPL)	890
Upper-bound poverty line (UBPL)	1 335

Figure 2-3 shows the national poverty lines for the period between 2006 and 2021.

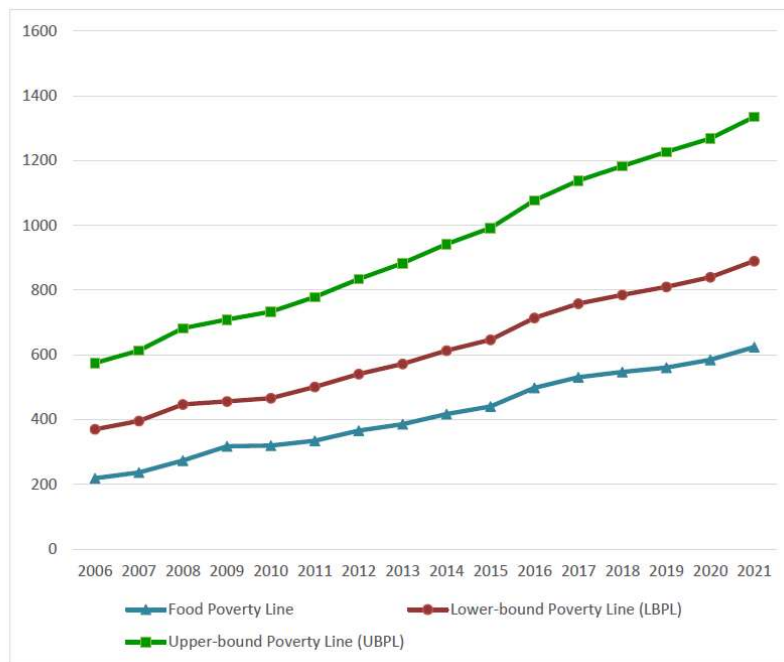


Figure 2-3: 2006-2021 National poverty lines (per person per month) adjusted by inflation (Statistics SA, 2021a)

2.4.2 Public Transport

2.4.2.1 Minibus Taxi Industry

The minibus taxi industry in South Africa is an informal paratransit service that accounts for approximately 80% of the public transport market (Stats SA 2020). Minibus taxis are privately operated and owned, and they can be found at designated taxi ranks or hailed on the street. They are seen as a quick and convenient way to travel short to medium distances in cities and towns. Minibus taxis are also used to connect rural areas with urban centres, providing a vital link for people living in remote areas.

However, the minibus taxi industry is not without its challenges. There are concerns about the safety of passengers due to reckless driving, security problems, and the condition of vehicles and roadworthiness (Schalekamp, 2015). The South African government has implemented various programs and initiatives to improve the safety and reliability of minibus taxis, including mandatory vehicle inspections, training for drivers, and the use of technology to provide passengers with service information (Schalekamp & Klopp, 2018).

2.4.2.2 Urban Bus Services

In addition to minibus taxis, there are also several bus services operating in South Africa, including intercity bus services and city bus services. Intercity bus services connect cities and towns across the country, providing a more affordable and accessible alternative to air travel. City bus services are available in major cities, including Johannesburg, Cape Town, and Durban, and they serve as an important mode of transportation for commuters. (Nowek, 2023)

The bus industry in South Africa has also faced challenges, including a lack of investment in new vehicles and infrastructure, and smaller catchment areas which leads to longer walking time to stops and results in competition from minibus taxis (Mtizi, 2017). The government has been working to improve the bus services, including upgrading bus stops and terminals and promoting the use of public transportation through marketing campaigns and subsidies.

2.4.2.3 Bus Rapid Transit (BRT) Planning

The vast inequality of wealth in South Africa is well-known, however, the inequity of access often goes unnoticed and is of a similar level. A key goal of the governments of South Africa, both national and local, has been to reduce the income and racial segregation by changing cities and their urban form. In particular, responsibility has been taken to improve accessibility of those who are transport disadvantaged (Cooke, Behrens & Zuidgeest, 2018).

A high-quality public transport system with a broad catchment area is required to increase the access to opportunities, in an attempt to address the lingering inequalities of the past apartheid regime. There has been a focus in South African cities on bus rapid transit (BRT) as the future of public transport trunk services.

Three key features that distinguish BRT systems from conventional bus systems are the improved infrastructure, operations and technology. Some common characteristics of these features are summarised in Table 2-3.

Table 2-3: Typical BRT characteristics (Department of Transport, 2007)

BRT feature	Characteristics
Infrastructure	Separated bus lane High quality station facilities Universally accessible platforms and fleet Public Transport Interchanges which combine multiple route/service types and public transport modes
Operations	High frequency services as well as express services directly between major nodes along the network Fare collection and verification done before boarding to reduce boarding and alighting times Fare integration between various route/service types
Technology	Use of Intelligent Transport Systems (ITS) to manage services Grade separation or signal priority at intersections Automatic fare collection and verification

The City of Cape Town’s version of BRT has come about in the form of the MyCiTi bus network. The initial spark to get the system implemented was the requirements for adequate public transport to and from stadiums during the 2010 FIFA World Cup. It has since become an essential part of planning policies and included in the City’s Integrated Public Transport Network (IPTN) Plan to improve the efficiency of the local public transport.

“The City has established its transport authority to be the custodian of all transport matters within the City itself and to be the interface with surrounding municipalities and other transport related stakeholders, with single point responsibility for transportation within the Cape Town functional region.” (Transport Development Authority, 2014:1)

The IPTN 2032 provides an implementation plan for the BRT corridors to be rolled out around the city. These corridors are prioritised by minimising capital and operational costs while maximising affordability and passenger convenience (Transport Development Authority, 2018).

2.4.3 Transport Accessibility

There have been a number of studies regarding urban mobility and transport accessibility in the South African context, and in particular Cape Town. A brief overview of the most relevant studies to this research topic has been included in this subchapter.

A working paper by van der Merwe and Krygsman (2020) aimed to address how employment duration is affected by accessibility, particularly in the context of transport infrastructure investment. The study utilised travel data and a dataset of tax administrative records to analyse the job-housing imbalance, spatial disparities, and income-related factors affecting employment duration for various areas in South Africa such as Cape Town, eThekweni and Gauteng. The results of this study showed a direct relationship between employment duration and gross income of individuals. It also showed that employment duration decreases for all income groups when working in urban or rural areas compared to metropolitan areas. The findings suggest the need for policy changes, such as prioritising investments in public transport, promoting land use planning for lower-income households near job opportunities, and improving urban development without promoting further urban sprawl.

A PHD study by Aivinhenyo (2019) utilised transport network data of Cape Town to develop GIS-based indicators of accessibility for various trip purposes such as employment, education, and healthcare. The study evaluated equity in accessibility by considering affordability for low-income households and comparing accessibility across different population groups. The findings revealed that car travel offers higher potential accessibility compared to public transport; paratransit mode provides high access coverage but is expensive, especially for low-income households; and trains are the most affordable option but offer lower accessibility. It was determined that the consideration of affordability significantly reduces potential accessibility for the poorest groups. The study concluded that the indicators that were developed were adequate due to their ease of interpretation and intuitiveness and were especially suitable in the context of Cape Town.

A research paper by Cooke, Behrens and Zuidgeest (2018) aimed to provide a better understanding of how accessibility, travel behaviour and financial viability are affected by the built environment, particularly regarding diversity, density, distance to transit and design. This study also highlighted Cape Town's current approach of Transit-Oriented Development as a means for improving accessibility and public transport viability. The paper concluded by providing a methodology for building a model that would be able to test these relationships and various scenarios for decision-makers to use in developing more accessible and public transport focused cities.

3 METHODOLOGY

As discussed in Chapter 1, the primary objectives of this research are to determine appropriate measures of accessibility in South Africa, identify a suitable accessibility threshold that can be used for comparison purposes, and evaluate the effectiveness of Cape Town's IRT Phase 2A route in terms of transportation planning based on the principles of justice and this accessibility threshold.

The accessibility measures that were considered are as follows:

- Walking distance to closest public transport station/stop
- Number of public transport modes available within walking distance
- Access to private vehicles
- Income level relative to South African poverty lines
- Employment opportunities

3.1 Data Collection

The demographic data required for this study was attained from the National Household Travel Survey data published by Statistics South Africa (Stats SA). This data came from the 2020 Census (Statistics SA, 2021b). The existing public transport routes and stops were acquired from the City of Cape Town, either directly or by utilising the online Open Data Portal, as well as the future IRT Phase 2A routes and stops (City of Cape Town, 2021). The household and job distribution data throughout the study area were also acquired from the City of Cape Town.

3.2 Geographic Information Systems (GIS)

A Geographic Information System was used to model the IRT route that was proposed by the City of Cape Town and its surrounding areas. Specialized software enables the manipulation and editing of various physical and operational components of a transportation system as layers within a Geographic Information System. "It can provide the following information on geographic elements or features: location, characteristics, logical and geometric relationships with other features, and spatial interdependencies" (Sinha & Labi, 2007:487).

For the purposes of this study, QGIS Version 3.24 was the software that was used to complete the transport analysis model. QGIS is a free and open-source GIS software that supports a number of databases, raster, and vector formats and functionalities.

3.3 Model Development and Analysis Summary

A transport model was built of the suburbs surrounding the IRT Phase 2A route using QGIS software. The model zones consist of the demographic data of the population. The existing public transport facilities were outlined as nodes and links in the model. The detailed model development process is outlined in Chapter 4.

The model was run to determine travel times and speeds between zones. PMI scores were calculated for each zone and used to determine origin to destination accessibility levels (number of jobs available). Using the chosen accessibility measures, the most underserved zones within the study area were identified. The IRT route was then evaluated against this to determine whether these areas would be sufficiently provided for. The model outputs and analysis results are discussed in Chapter 5.

4 MODEL DEVELOPMENT

This chapter details the model development process that was followed for this study.

4.1 Road Network

The analysis study area encompassed the Southern Suburbs and the Metro Southeast as the proposed IRT Phase 2A route has been planned to operate within this area of Cape Town. The chosen study area can be seen in Figure 4-1.

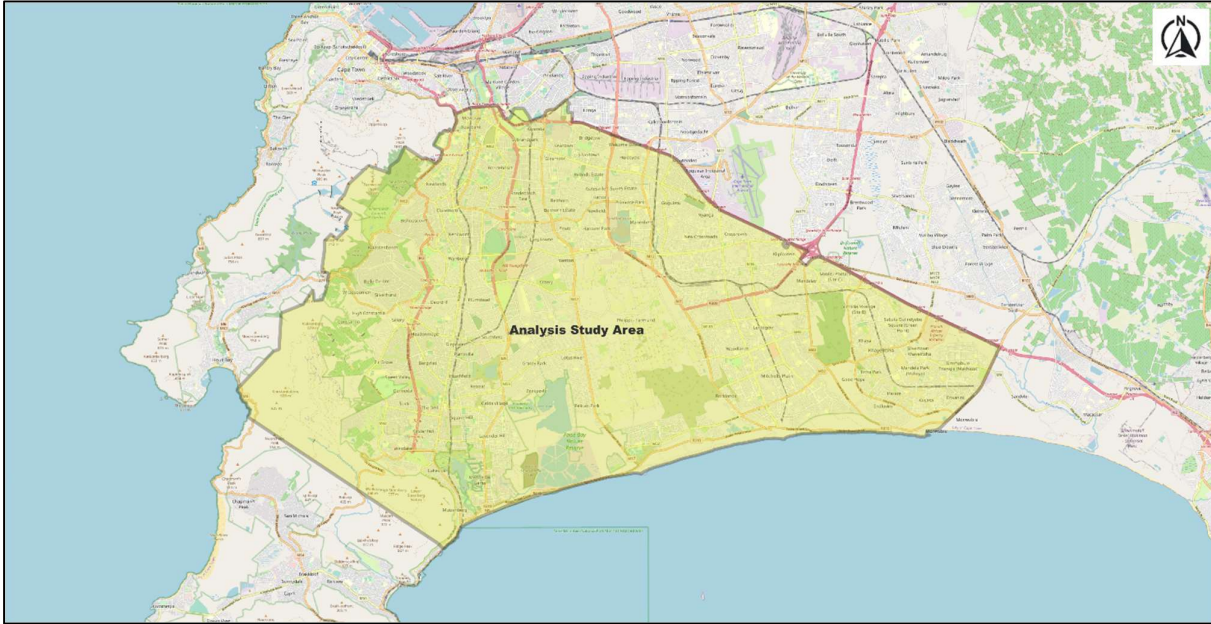


Figure 4-1: QGIS Model Extents

The whole road network within the study area was used for calculating origin to destination speeds and travel times. The transport modes applicable to this network include private vehicles, minibus taxis, buses and the future BRT vehicles. The road network of the model can be seen in Figure 4-2.



Figure 4-2: Model Road Network

4.2 Traffic Analysis Zones

Traffic analysis zones (TAZ) are used to distinguish between origin and destinations and are defined by areas having similar demographic and/or spatial attributes. From the data received by Stats SA, the demographic data was defined by the zoning structure illustrated in Figure 4-3.

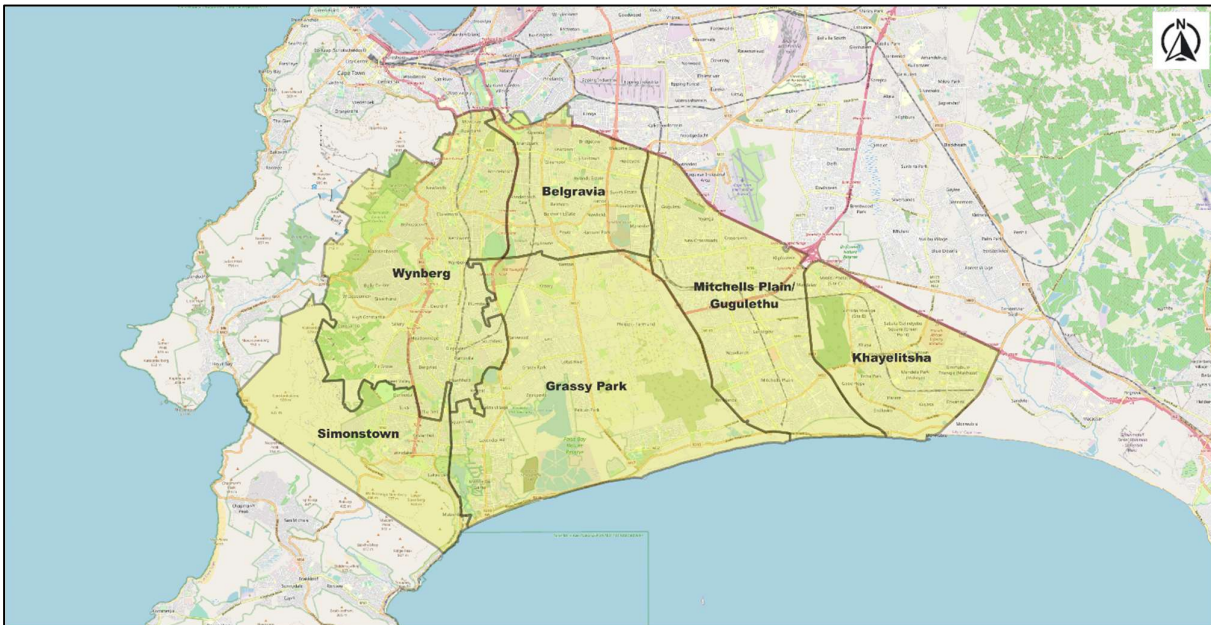


Figure 4-3: Traffic Analysis Zones Used by Statistics SA Clipped to Study Area

The above zoning structure is too simplified to determine realistic speeds and travel times between zones. Thus, it was decided to disaggregate these zones based on the city suburb structure, which would allow more accurate spatial analysis. This new zoning structure was based on the TAZ's that were provided by the City of Cape Town as part of the Cape Town regional transport model and is shown in Figure 4-4.

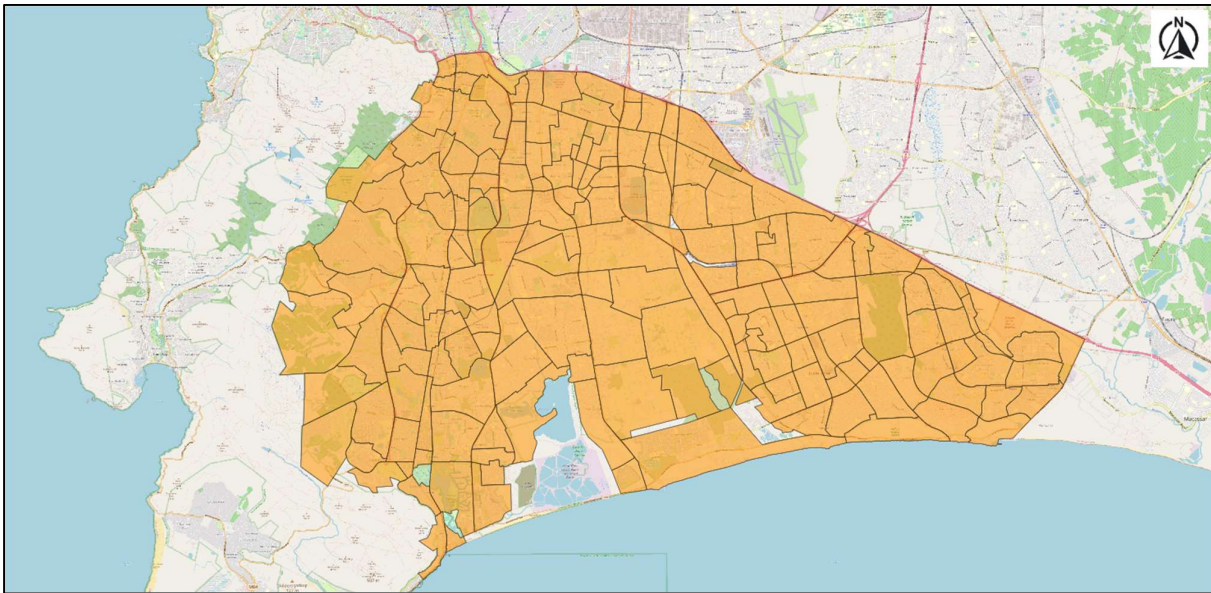


Figure 4-4: Traffic Analysis Zones Used for Model

There was a total of 169 TAZ's used in the QGIS model and consequently used for the analysis of this report.

4.3 Public Transport Routes and Stops

This study only considered road-based public transport such as the MBT's and GABS so these routes were used as part of the transport network. It was necessary to determine the passenger coverage of these services and thus the recommended walking distance of 400 m was used to create a buffer zone from the bus stops. The minibus taxi services do not have fixed stops; therefore, the buffer zone was applied to the routes. These buffers were used to determine the percentage of each zone that has adequate access to these facilities. Figure 4-5 highlights the bus stop locations and consequent walking buffer zone.

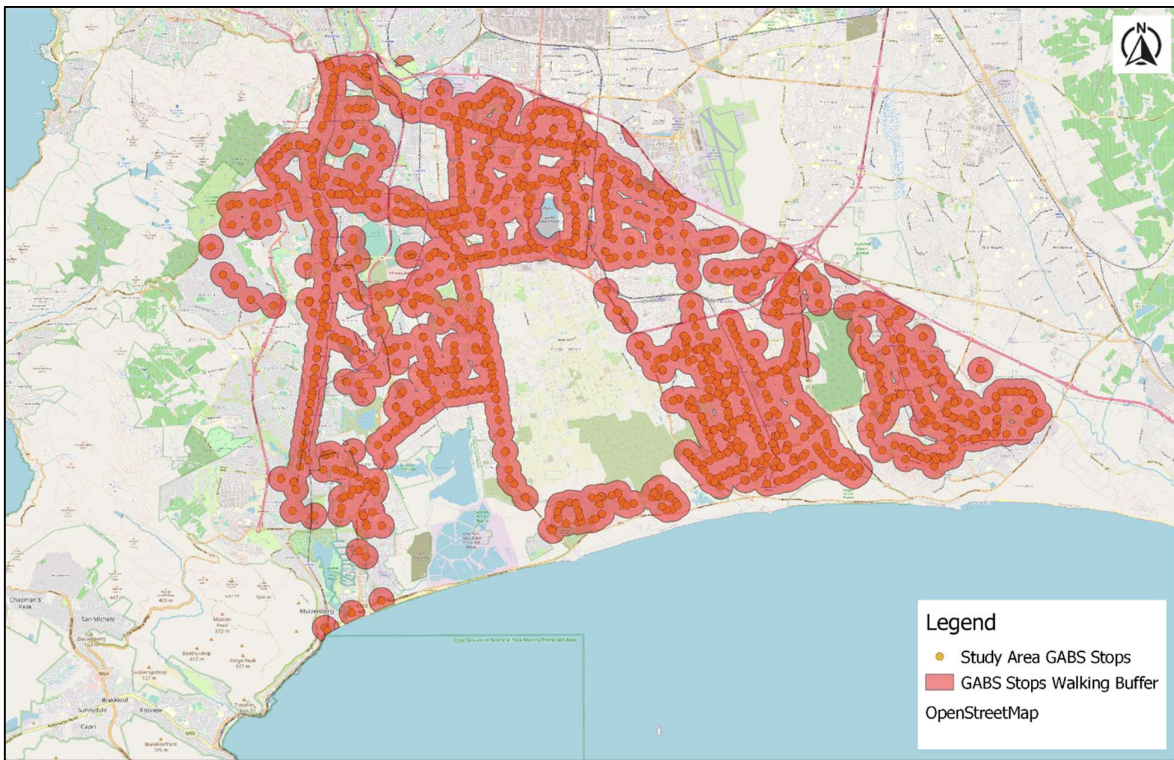


Figure 4-5: GABS Stops and 400m Walking Buffer

In order to determine the number of jobs accessible by GAB users, the bus stop buffer was overlaid onto the TAZ's, and the percentage of overlap was found. This is illustrated in Figure 4-6.

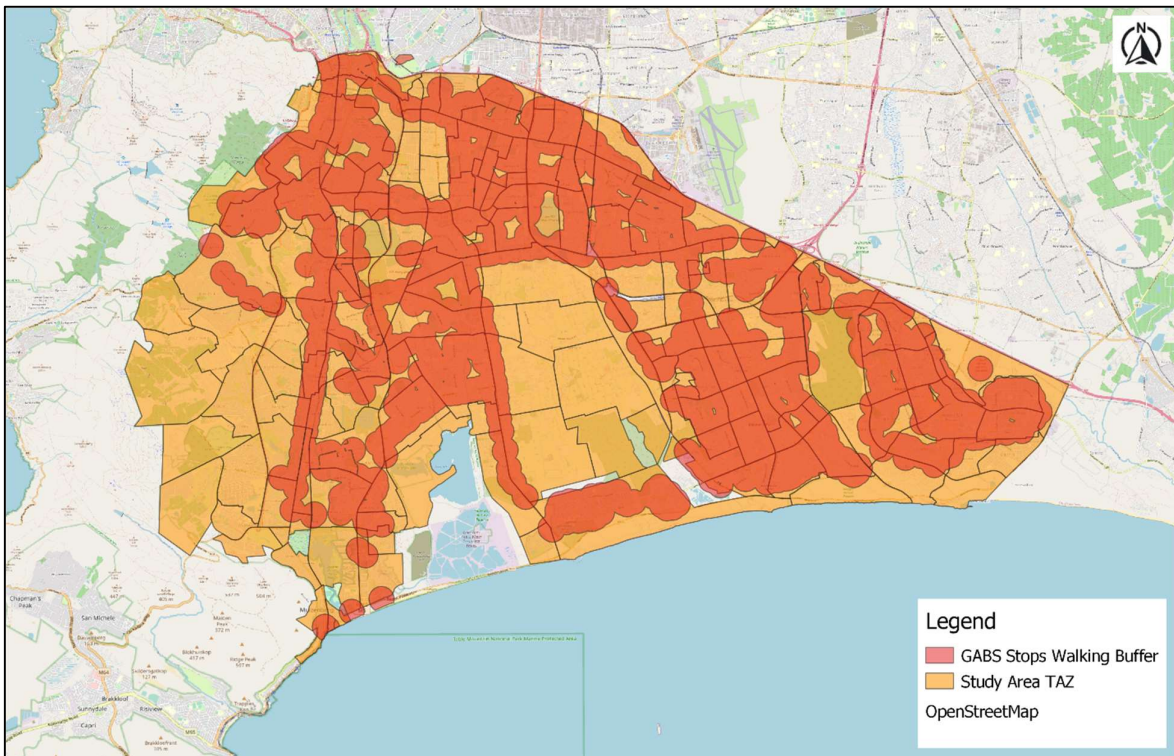


Figure 4-6: GABS Coverage

As mentioned previously, the walking buffer zone for the MBT service was taken from the PT route instead of the stop locations, as is evident in Figure 4-7.

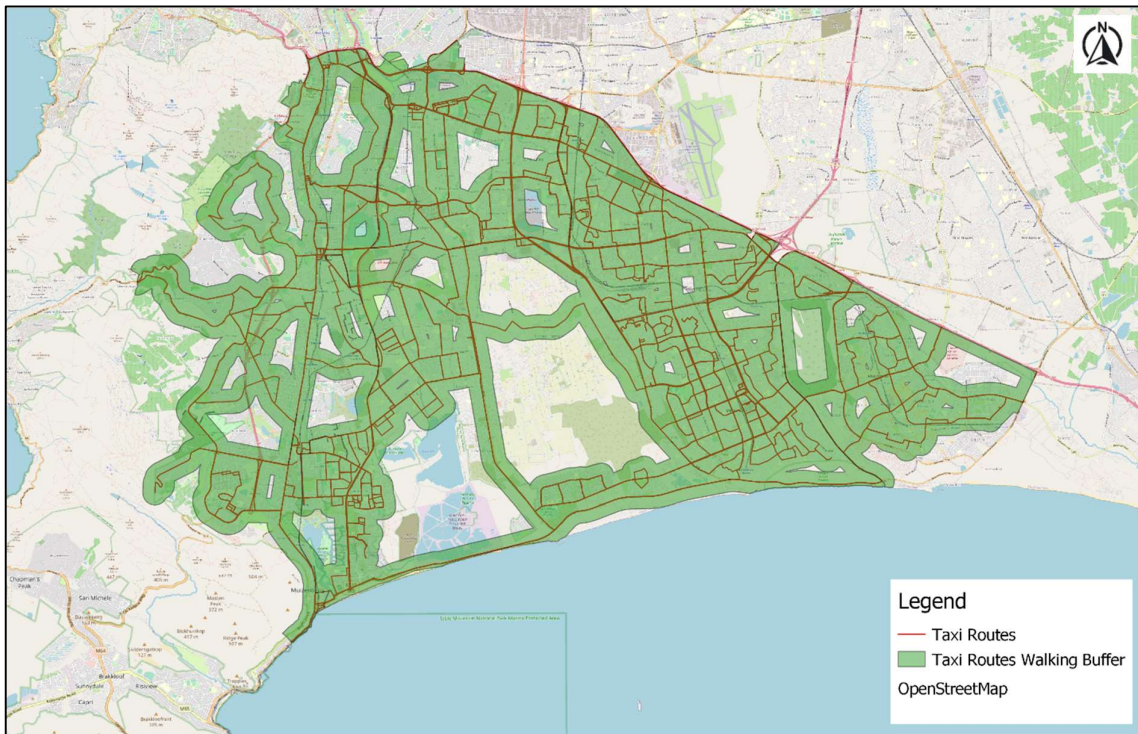


Figure 4-7: MBT Routes and 400m Walking Buffer

Similarly, the number of jobs accessible by MBT users is determined by the percentage of this buffer zone overlapping onto the TAZ's, as seen in Figure 4-8.

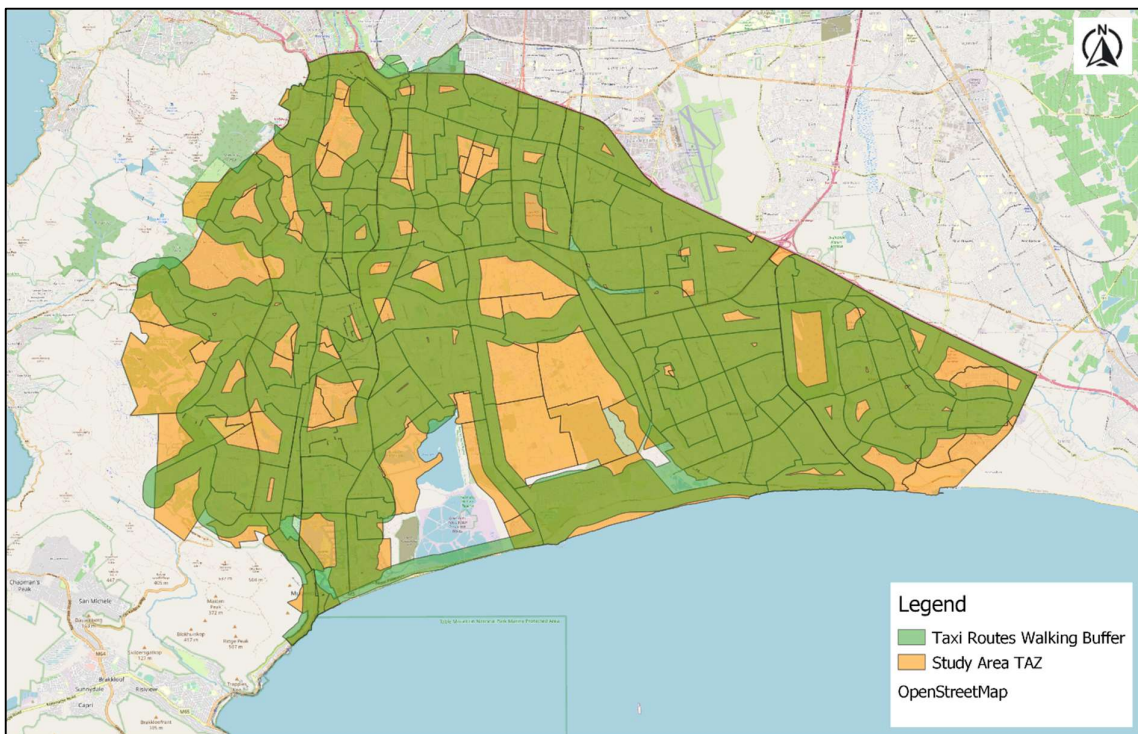


Figure 4-8: MBT Coverage

Similar to the GABS and MBT procedure, the assessment of the IRT Phase 2A route proposed by the City of Cape Town has considered a 400m walking buffer zone around the stations and stops. This is shown in Figure 4-9 for both the trunk route stops and the direct route stops.

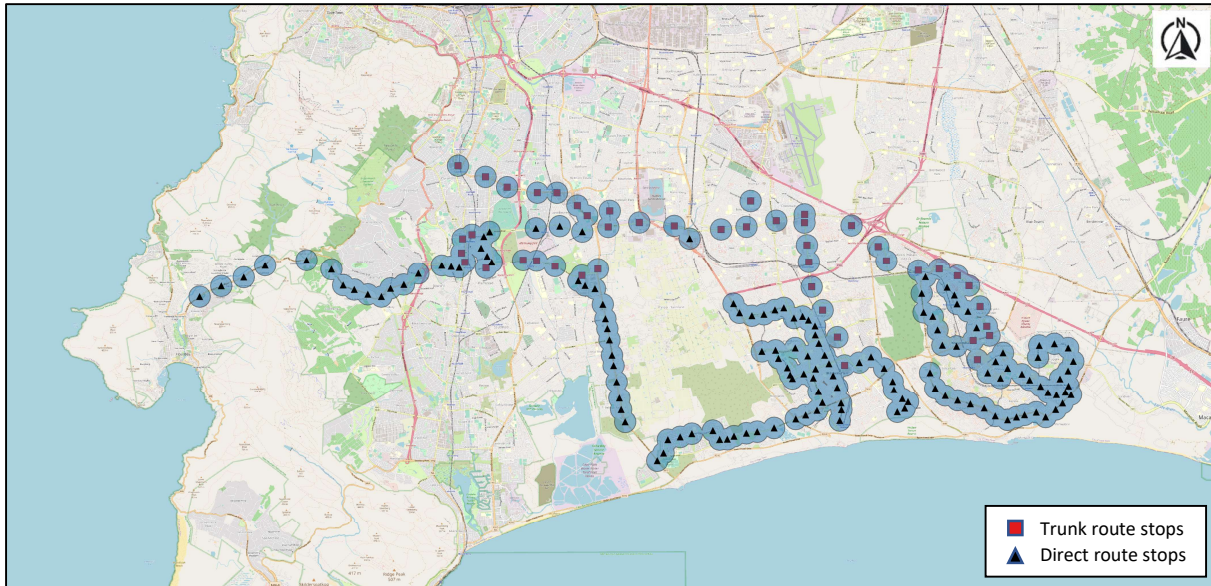


Figure 4-9: IRT Stops and 400m Walking Buffer

The IRT buffer was overlapped onto the TAZ's to establish whether the underserved areas are being catered for. The TAZ's that can be potentially reached using a future MyCiTi bus are shown in Figure 4-10.

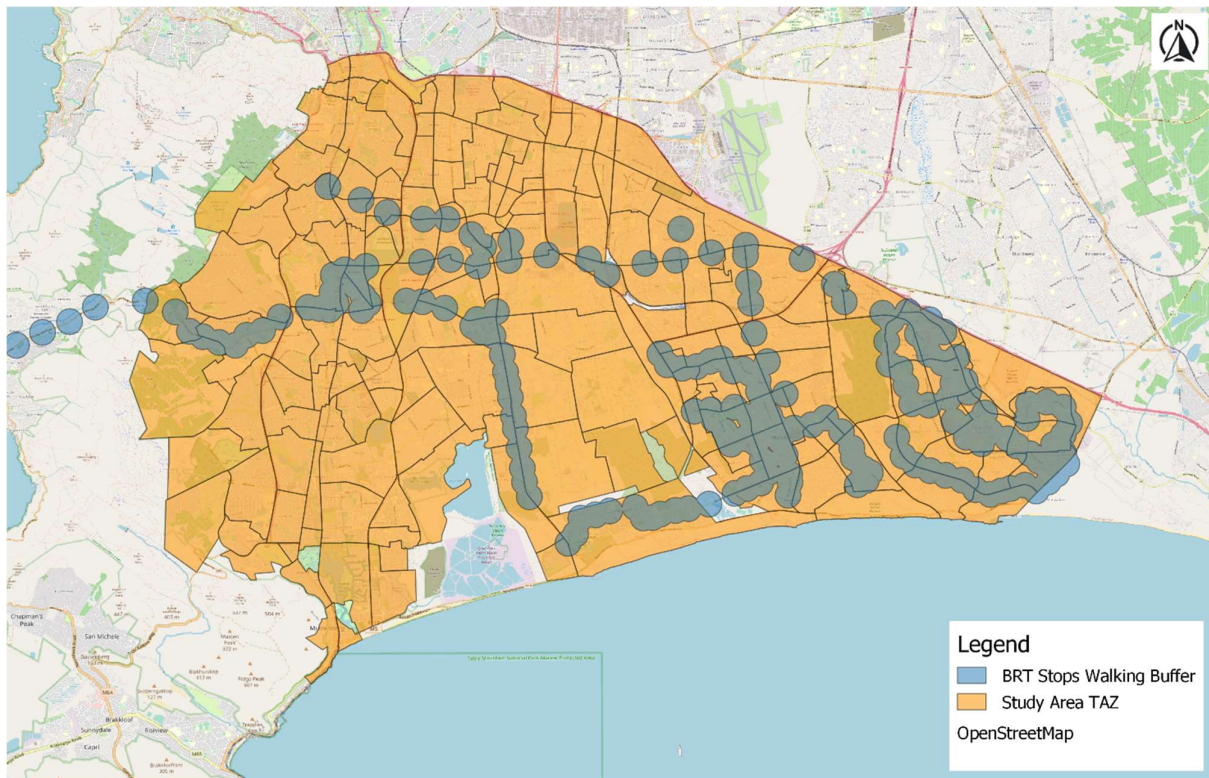


Figure 4-10: BRT Coverage

4.4 Households and Jobs Distribution

It is important to understand the distribution of households and jobs to highlight the spatial segregation within the study area. Figure 4-11 and Figure 4-12 illustrate the household and job distribution respectively, which was derived using the data acquired from the City of Cape Town's transport macro model.

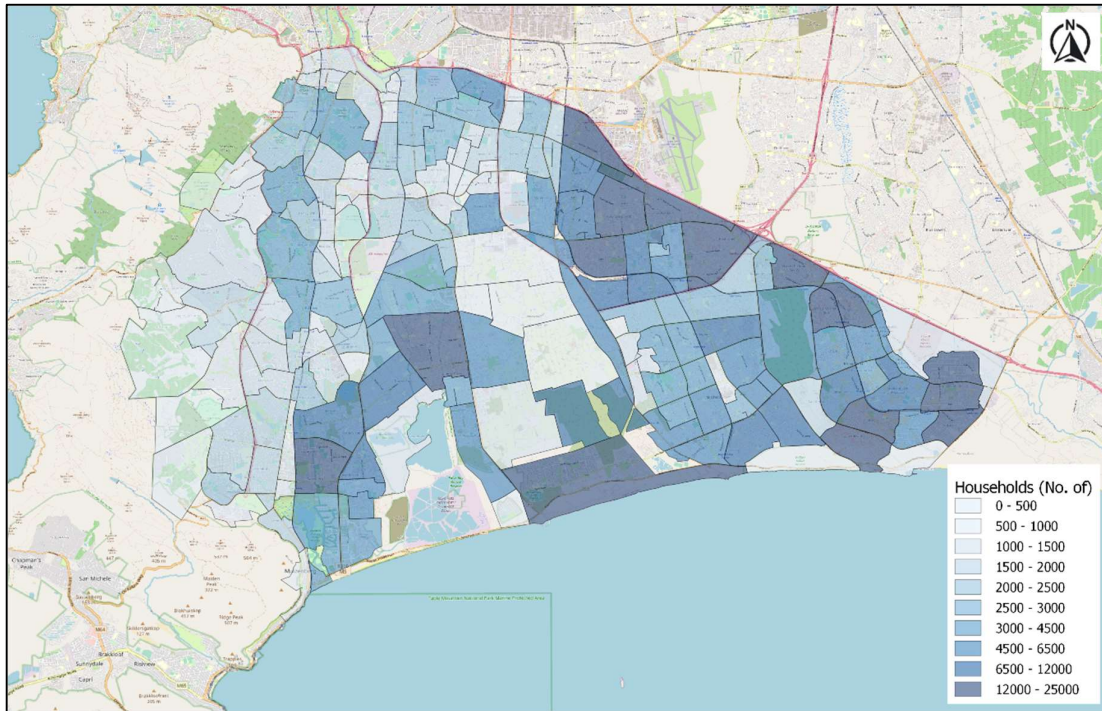


Figure 4-11: Households Distribution

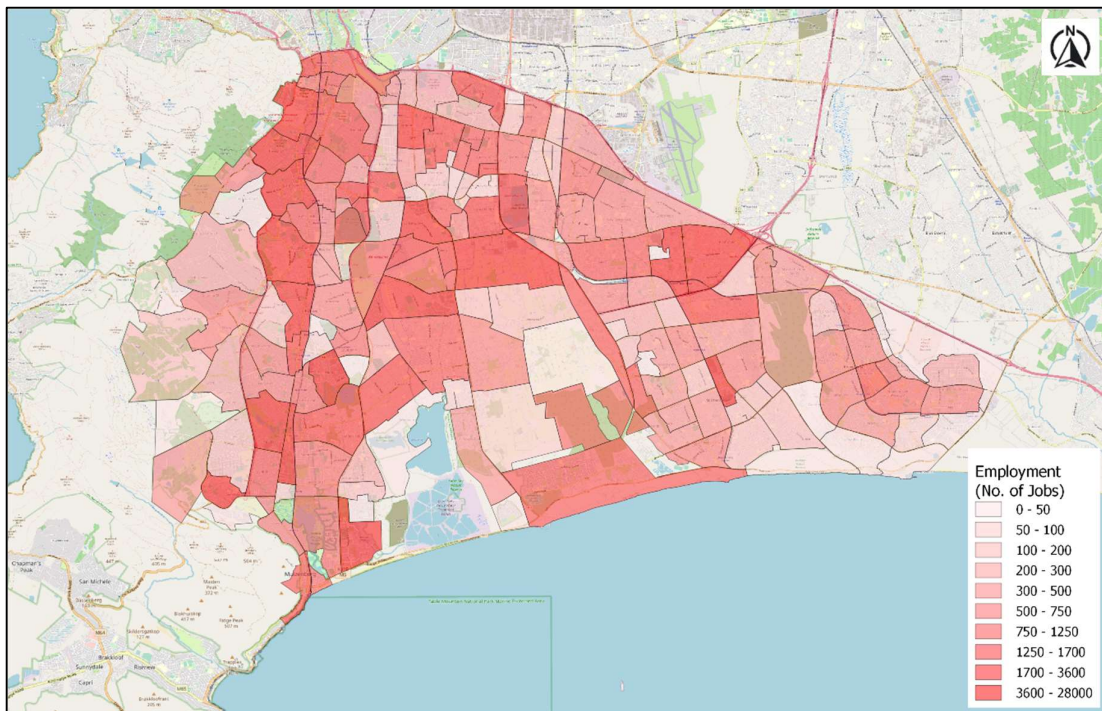


Figure 4-12: Jobs Distribution

The total number of households found within the study area are 724 366 households and the total number of jobs are 247 899 jobs. As seen in the above figures, while the majority of households are located in the Metro Southeast, there are many more job opportunities in the Southern Suburbs. It is well known that those living in the Metro Southeast are more likely to be in the low-income group, which causes a disproportional cost of travelling to get to a job.

4.5 National Household Travel Survey Data (2020)

Although the in-vehicle travel time was calculated using the GIS model, the access and egress times for GABS and MBT services were obtained from the National Household Travel Survey based on average walking time to the nearest facility. These times are summarised in Table 4-1.

Table 4-1: Average Walking Time to Nearest PT Facility (NHTS, 2020)

NHTS TAZ	Average walking time to nearest PT facility (mins)	
	GABS	MBT
Belgravia	12.0	9.5
Grassy Park	14.1	9.3
Mitchells Plain/Gugulethu	12.1	5.3
Khayelitsha	9.9	6.2
Simonstown	22.5	9.2
Wynberg	10.4	9.9

The above walking times for each NHTS TAZ's were used for the corresponding study area TAZ's that are found within that zone. These walking times were then added to the in-vehicle travel time to determine the total origin to destination travel time for each of these modes.

The income poverty line as per Statistics SA (2021) was R1335, and adjusted to current day for inflation, a value of R1500 was used as the income poverty threshold. Based on this, the income levels of the study population groups were used to determine which TAZ's consists of the greatest number of people living below the income poverty line.

4.6 QGIS Model Analysis Steps

The received data had to be coded into the QGIS software and the basic steps are summarised in the figure below:

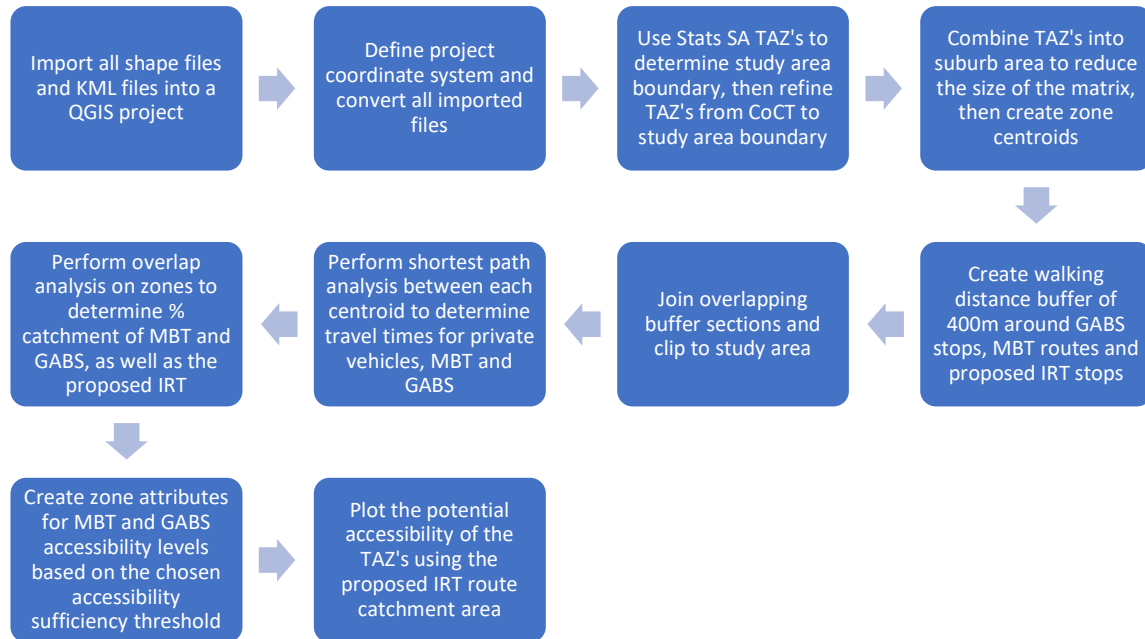


Figure 4-13: Flow Diagram for QGIS Data Input

When performing the shortest path analysis for general traffic, an average speed of 50 km/h was used as the study area consists of mainly arterials, collectors, and local roads. For MBT services, the average speed assumed was reduced to 40 km/h to accommodate stopping and picking up passengers. For GABS services, the average speed was further reduced to 30 km/h, which would take into account the longer dwell times required for boarding and alighting passengers along the route.

Each mode was assigned to its own network within the model, this meant that the private vehicles could travel along any road, while the PT modes were only able to utilise the roads that could be reached along their coded routes such as arterials. The shortest path analysis provided the in-vehicle travel time from one TAZ to each other TAZ. The model output data was recorded in an Excel spreadsheet which was then used for all further analyses. This included the addition of the access and egress times for GABS and MBT services to calculate the total travel time between origin and destination. The PMI and employment accessibility (number of jobs available) from each zone were determined using 25-, 30- and 35-minute travel time thresholds.

Zone attributes were created for MBT and GABS accessibility levels based on the chosen accessibility sufficiency threshold. The zones where the level of accessibility was determined to be below the sufficiency threshold were highlighted. To show whether these underserved areas will be catered for by the proposed IRT route, the potential accessibility of each TAZ based on the IRT catchment area computed by the model was plotted.

Visual representations of each step were extracted from the QGIS model and used in the Data Analysis chapter to further explain the outputs and results.

5 MODEL ANALYSIS AND RESULTS

The following subchapters summarise the model analysis and results of the model outputs thereof.

5.1 Poverty Severity

A good indicator of the mode availability in a population is the level of income. Thus, it was assumed that the TAZ's with the highest level of poverty would be the least likely to own a private car and would consequently be reliant on public transport.

As mentioned previously, the income poverty line adjusted to current day for inflation was used as the income poverty threshold. Based on this, the income levels of the study population groups were used to determine which TAZ's consists of the greatest number of people living below the income poverty line. Consequently, from the Stats SA TAZ's, it was found that Khayelitsha and Mitchell's Plain/Gugulethu had more of its population living below the income poverty line compared to the other zones. It was decided that the population of Khayelitsha and Mitchell's Plain/Gugulethu would therefore be most likely to rely on public transport. The relative income severity for the study area is illustrated in Figure 5-1.

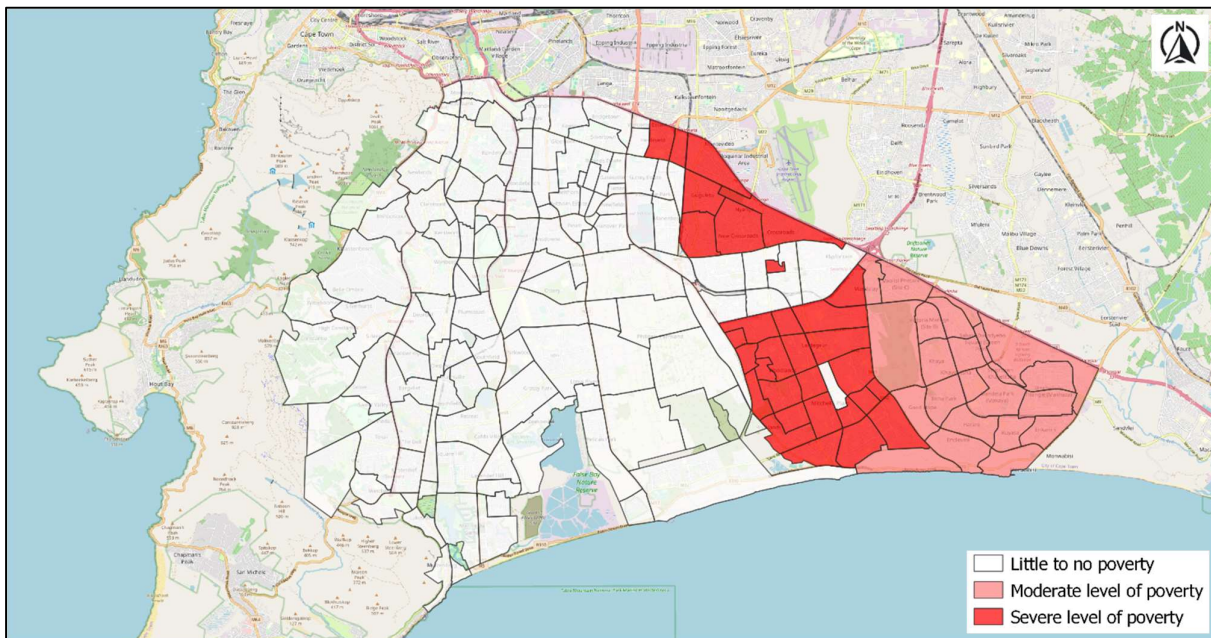


Figure 5-1: Poverty Severity of TAZ's

Based on the analysis above, it was found that within 37 population groups, there is a large proportion of people living with a severe level of poverty. And within 22 population groups, there is a large proportion of people living with a moderate level of poverty. The assumption has been made that these 59 groups will rely on public transport, and the rest of the population groups have sufficient private vehicles available to access jobs.

5.2 Potential Mobility Index

The Potential Mobility Index was determined for private vehicles, minibus taxis, and buses for each TAZ. Thus, the PMI graph consists of 507 dots (i.e. 169 X 3), with each dot representing a TAZ based on residential location and mode availability. Figure 5-2 represents the potential mobility and accessibility (based on the number of jobs) during a 30-minute time threshold for each of the zones.

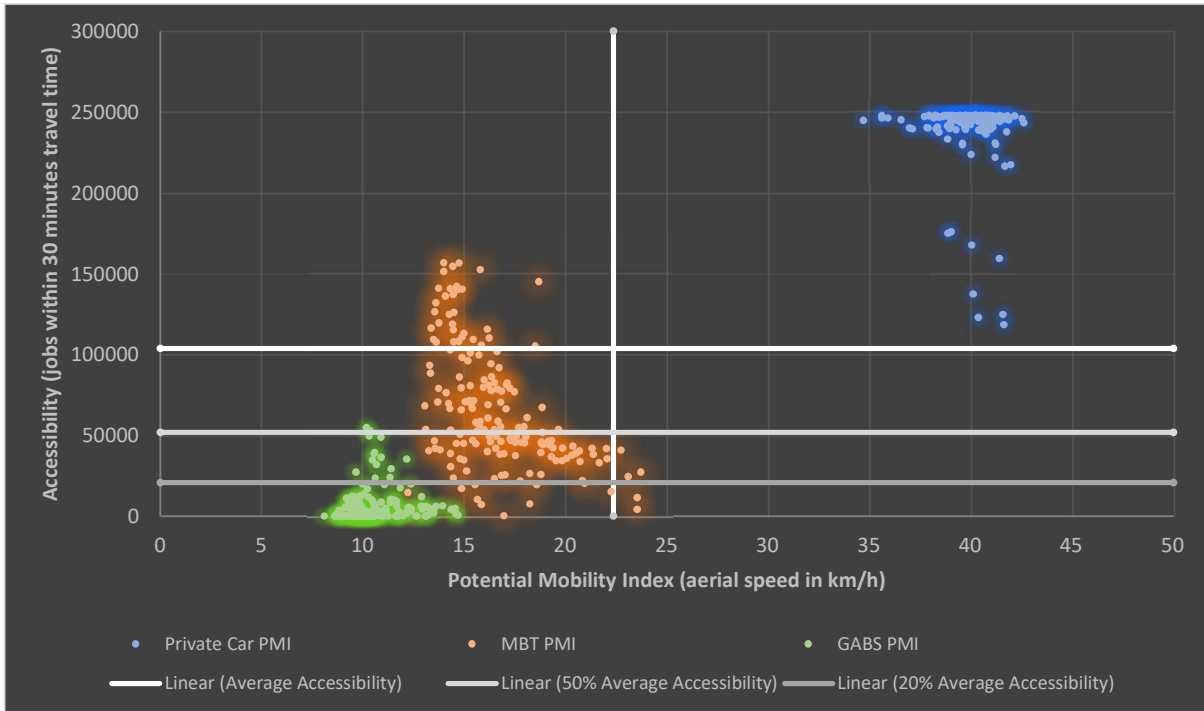


Figure 5-2: Potential mobility and accessibility levels experienced by different population groups, based on job accessibility, for a 30-minute travel time threshold

The origin of the coordinate system was determined by the average potential mobility and accessibility of all transport systems. It can clearly be seen that the population groups that have access to a car are able to access most, if not all of the potential jobs within the study area during a 30-minute period.

The analysis has shown the large inequalities in potential mobility and accessibility within the study area. The weighted average potential mobility for the bus system is 28% of the average potential mobility of the car-based system, while the MBT system is 44% of the car-based system (i.e. 11.0km/h and 17.6km/h compared to 39.7km/h). When looking at the potential accessibilities, the disparities are even more significant, with the bus system's weighted average potential accessibility being only 2% of the car-based system, while the MBT system is 26% of the car-based system (i.e. 3676 jobs and 59240 jobs compared to 230689 jobs).

What can be seen in the graph further reflects the inequalities as it shows the PT reliant population groups in the bottom left quadrant. This means that the PT system is providing services that are below the average potential mobility and accessibility level. Furthermore, the services are operating below the assumed 20% accessibility threshold, so these population groups are being severely underserved.

Figure 5-3 and Figure 5-4 represent the potential mobility and accessibility (based on the number of jobs) during a 25-minute and 35-minute time threshold for each of the zones respectively for comparison purposes.

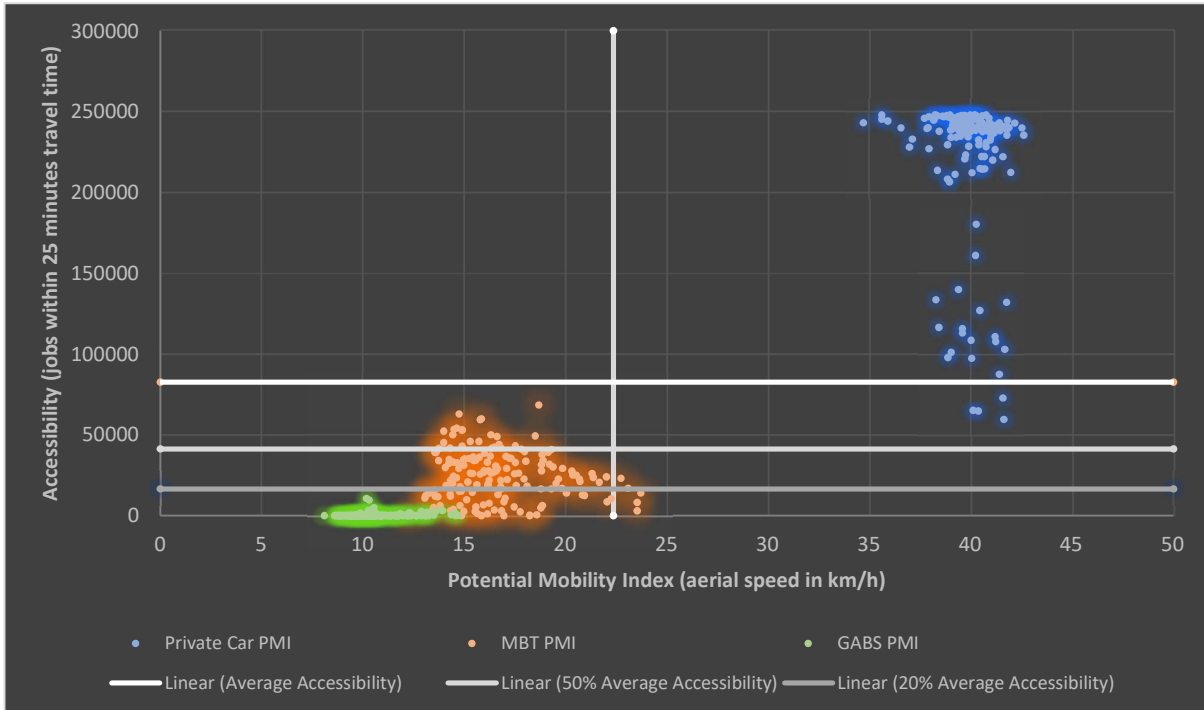


Figure 5-3: Potential mobility and accessibility levels as experienced by different population groups, based on job accessibility, for a 25-minute travel time threshold

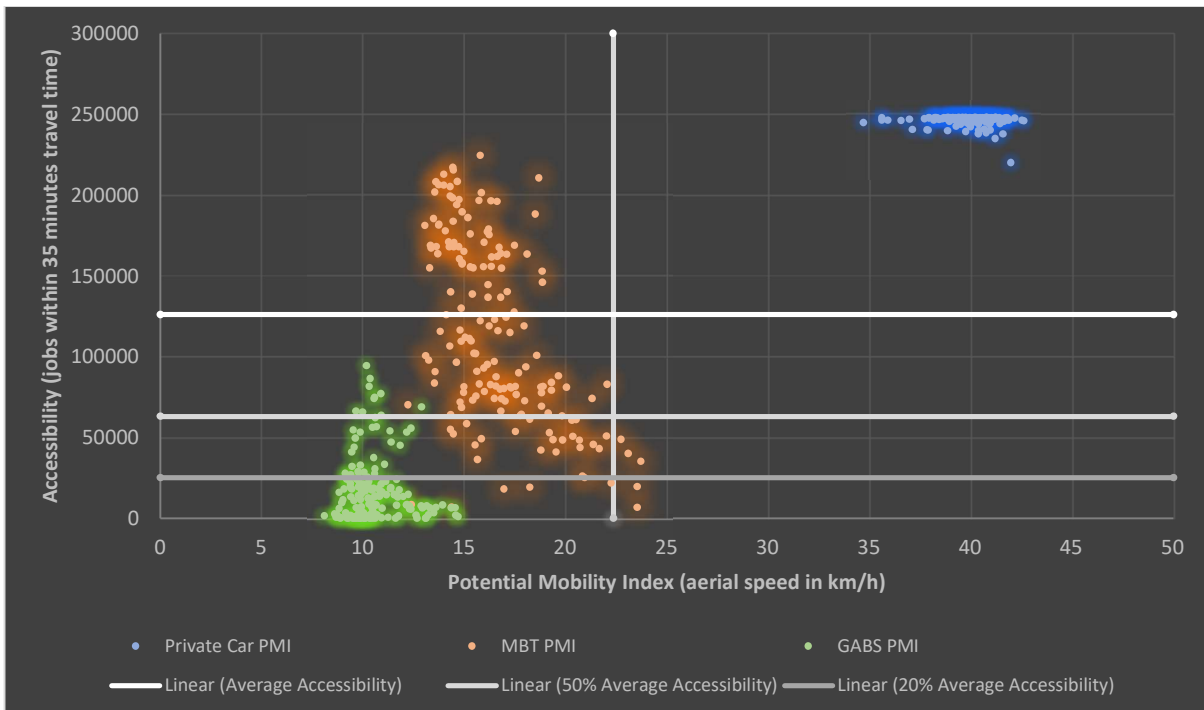


Figure 5-4: Potential mobility and accessibility levels as experienced by different population groups, based on job accessibility, for a 35-minute travel time threshold

The overall pattern between the potential mobility and accessibility of each mode is similar when comparing the results of 25-, 30- and 35-minute travel time thresholds. The car-based transport groups are always found in the top right quadrant of the diagram, indicating mobility and accessibility sufficiency. On the other hand, the population groups that are reliant on public transport are largely found in the bottom left quadrant, indicating the deficiency of mobility and accessibility experienced by these groups. It can also be seen that the PT modes are much more sensitive to the travel time threshold than the car-based mode, as the dots representing the PT population groups show much more variation between the different travel times.

The PMI serves as a good indicator that the population groups without access to a private car should be the first considered when looking at possible interventions while planning transport systems and improvements. It is however still necessary to determine an accessibility threshold to allow planners to prioritise groups based on their level of accessibility shortfall.

Detailed PMI results can be found in Appendix A.

5.3 Accessibility Sufficiency Threshold

To determine which population groups should be prioritised when planning transport interventions to reach a sufficient level of accessibility, several accessibility thresholds would have to be tested. In this case, minimum sufficiency thresholds of 10%, 20%, 30%, 40% and 50% of the average road-based transport accessibility level were tested.

Figure 5-5 represents the percentage of the population zones experiencing accessibility levels below the chosen sufficiency thresholds (based on the number of jobs) during a 30-minute travel time period.

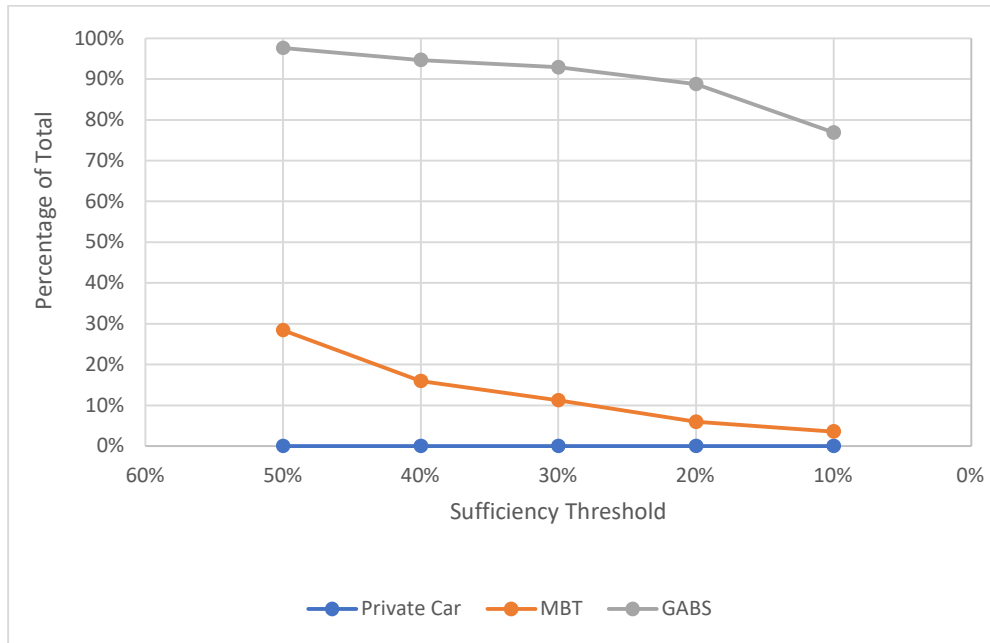


Figure 5-5: Share of the population with an accessibility level below the respective sufficiency thresholds, based on job accessibility, for a 30-minute travel time threshold

The diagram shows that for each sufficiency threshold, a high percentage of people using GABS will experience an accessibility shortfall, ranging from 98% for the 50% threshold to 77% for the 10% threshold. For those who are able to use the MBT services, the accessibility shortfall is much less, ranging from 28% for the 50% threshold to 4% for the 10% threshold. Conversely, those who have access to a car will not experience accessibility shortfalls for any of the sufficiency thresholds.

Based on the above, it is evident that having access to a car will allow an individual access to all, if not most, jobs in the study area within a 30-minute period. This can be extrapolated and used to assume that similar patterns would be applicable to other trip purposes such as healthcare services, shopping, education, leisure etc., as well as during different times and days of the week. Those who rely on public transport as their main mode will however be stuck with low levels of accessibility in all circumstances, and even worse in certain cases such as weekends and night-time when PT services are reduced.

5.4 IRT Phase 2A Route Assessment

The City of Cape Town IRT service is made up of trunk, direct and feeder routes, with the trunk and direct routes making up the backbone of the network while the feeder routes operate locally, collecting passengers, and bringing them to the main line. The IRT Phase 2A routes, stations and stops were provided by the City of Cape Town and used for this study. However, the feeder routes have not been finalised, as they were initially intended to be operated by MyCiTi buses, but further into the IRT planning process, the backlash from the MBT industry has meant that it is more likely that the MBT's would feed the trunk and direct routes themselves. Thus, for the purposes of this study, the feeder system has been excluded.

As mentioned in subchapter 4.3, the assessment of the IRT Phase 2A route proposed by the City of Cape Town has considered a 400m walking buffer zone around the stations and stops. The IRT buffer was overlapped onto the TAZ's to establish whether the underserved areas are being catered for. The TAZ's that can be potentially reached using a future MyCiTi bus are shown in Figure 5-6.

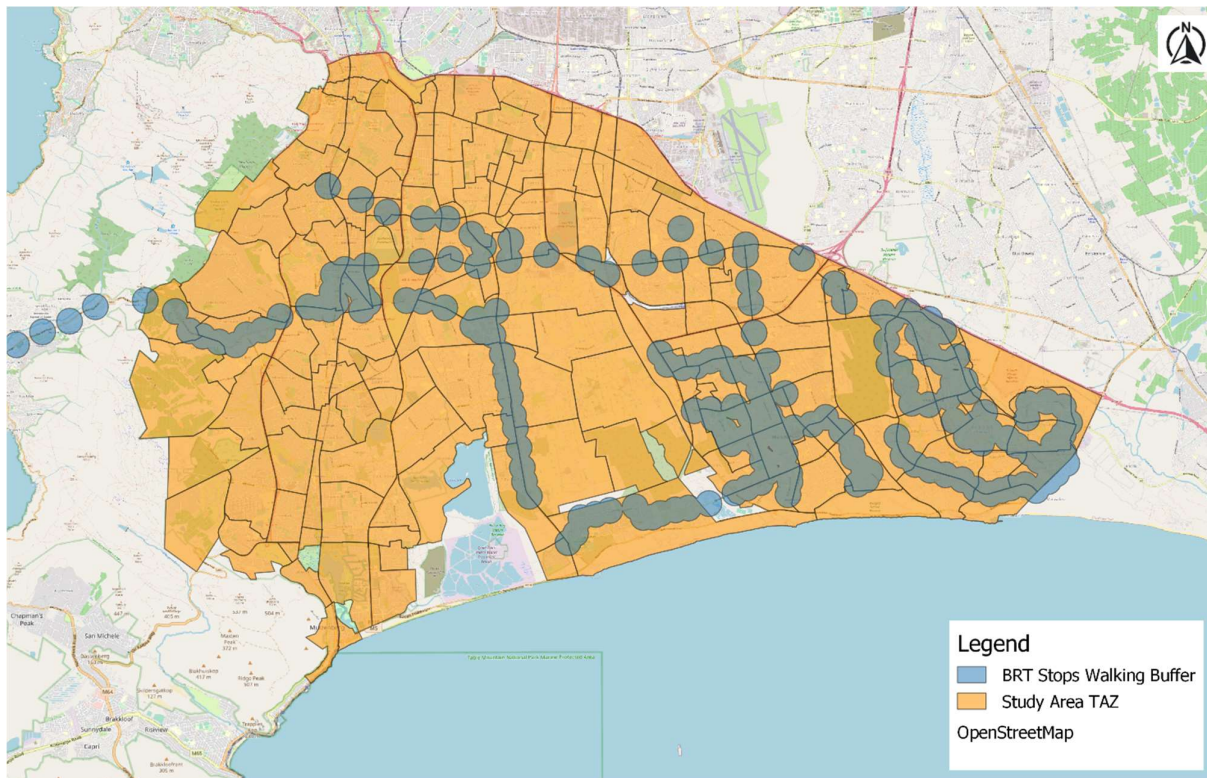


Figure 5-6: BRT Coverage

The number of underserved areas based on each of the accessibility sufficiency thresholds that are serviced by the IRT Phase 2A route was used in this assessment, but only focusing on the 59 zones that were assumed to be reliant on public transport as mentioned in subchapter 5.1, and for the chosen 30-minute travel time threshold. The results are summarised in Table 5-1.

Table 5-1: Assessment of Planned IRT Phase 2A Route based on Transport Justice for a 30-minute Travel Time Threshold

Accessibility Sufficiency Threshold	No of groups experiencing accessibility shortfalls		No of underserved groups that lie along BRT route		Percentage of underserved groups that lie along BRT route	
	GABS	MBT	GABS	MBT	GABS	MBT
50%	59	14	52	14	88%	100%
40%	59	4	52	4	88%	100%
30%	59	1	52	1	88%	100%
20%	59	0	52	0	88%	n/a
10%	59	0	52	0	88%	n/a

It was found that 52 out of the 59 underserved population groups that rely on GABS would be serviced by the planned IRT Phase 2A route for all sufficiency thresholds, which is approximately 88%. It was found that 100% of the underserved population groups that rely on MBT services would be catered for by the planned IRT Phase 2A route for all sufficiency thresholds.

As a visual representation of the above assessment, Figure 5-7 and Figure 5-8 shows the BRT coverage of accessibility deficient population groups based on GABS and MBT services respectively and a 50% sufficiency threshold for 30-minute travel time.

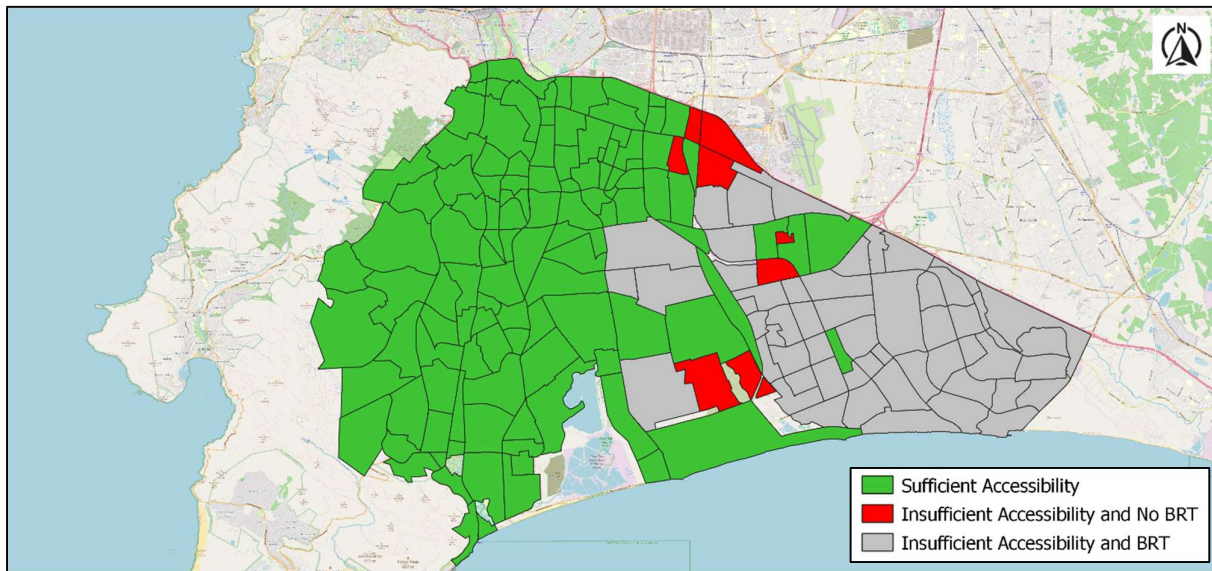


Figure 5-7: BRT Coverage of Accessibility Deficient Population Groups based on GABS Services and 50% Sufficiency Threshold for 30-minute Travel Time

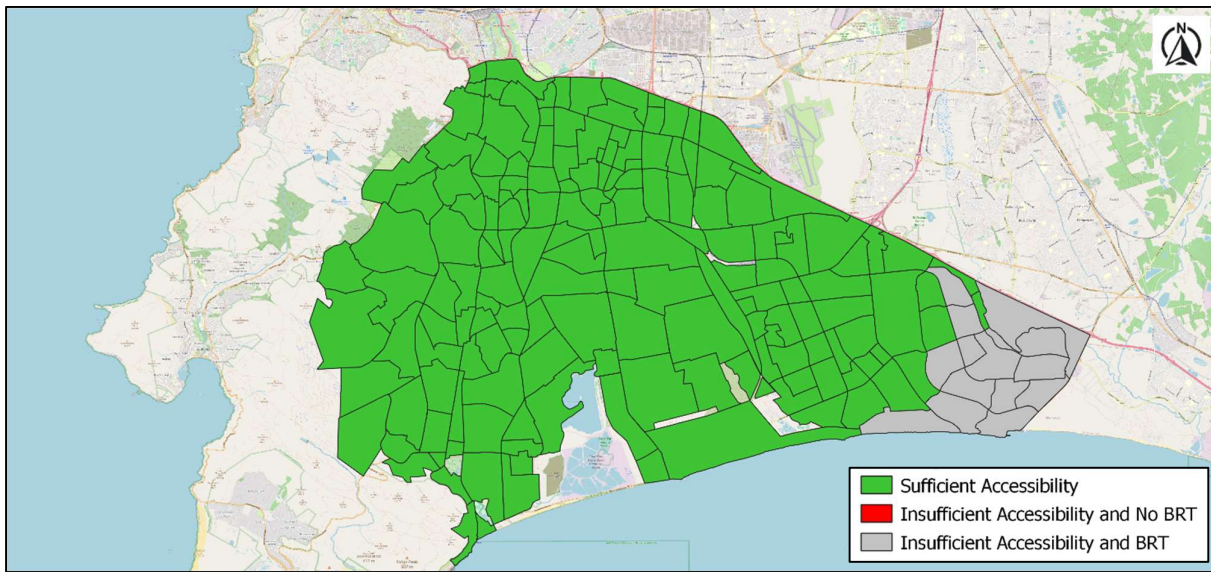


Figure 5-8: BRT Coverage of Accessibility Deficient Population Groups based on MBT Services and 50% Sufficiency Threshold for 30-minute Travel Time

Based on the results of this study, it is anticipated that the underserved groups within the study area that are reliant on public transport will be sufficiently serviced by the planned future IRT Phase 2A network. This applies to all of the sufficiency thresholds that have been tested.

5.5 Study Limitations and Further Assessments

Due to the nature of this Master's dissertation, the scope of this study has been limited, and thus further assessments would be required. This analysis has been based on assumptions of typical travel speeds, and it does not consider the congestion found within peak periods. It is likely that there is less disparity between private and public modes during these times, but perhaps not enough to have a significant impact on the accessibility threshold. Thus, it would be necessary to use actual travel times or use a calibrated transport model to calculate more accurate PMI values.

As mentioned previously, this study only considered the Phase 2A trunk and direct routes. Thus, it would be necessary to include the IRT feeder system in the assessment when the chosen mode has been finalised for this service. This would provide better insight into the capability of the IRT system to penetrate the local neighbourhoods and how it can work as a holistic solution for those in the underserved areas.

The model built for this study was developed as a closed system which only considered origins and destinations that lie within the study area extents itself. Although this is a good tool for assessing the proposed IRT Phase 2A route on a local level, it does not provide any indication regarding the level of transport justice of the PT system on a city-wide scale. The full City of Cape Town transport model would need to be assessed to get an understanding of the broader impact of the proposed IRT network and whether it is capable of providing an adequate service to all the underserved areas across the city, or at least improve the service in targeted areas that experience a severe level of accessibility inequalities. This assessment would require higher travel time thresholds to be used as the distances would be much higher, and thus result in different potential mobility and accessibility thresholds.

This study was limited to road-based transport modes only; thus, further assessments should incorporate rail-based transit, especially for longer distance trips, as well as non-motorised transport such as walking and cycling, especially for shorter distance trips. These travel modes would be critical when taking into account cost of travel, especially considering that this is a key limitation for accessibility experienced by many South Africans.

6 CONCLUSIONS

The accessibility measures identified in this study have been found to be appropriate and have provided realistic assessments of the South African transport system. Income levels are a key defining factor when determining private vehicle ownership, as there are a high number of people living in poverty due to the socio-economic problems faced within South Africa. This results in walking and public transport making up a substantial percentage of the daily commuting trips within the country. These are ideal measures to determine the accessibility to jobs which are unfairly distributed away from higher density and lower income regions. One point to note about the availability of jobs used in this study is that it did not consider the education level of the population. Lack of education is a major factor in South Africa and the potential number of jobs that can be accessed by people should reflect this.

The large inequalities between those who are reliant on public transport and those who have access to a car within the study area, and Cape Town as a whole, are evident in the outcomes of this study, and are exacerbated by the fact that the public transport system is generally inefficient and unreliable. No single accessibility sufficiency threshold has been identified, instead a range of thresholds have been compared. This can be used to identify population groups that require improvements to their available transport systems first, by looking at those below the 10% sufficiency threshold. Prioritisation can then be done by focusing on the population group increment at each threshold level.

The outcomes of this study assessment have shown realistically which areas are most underserved, such as Khayelitsha, Mitchell's Plain and Gugulethu. Based on the study results, it is anticipated that the underserved groups within the study area will be sufficiently serviced by the planned future IRT Phase 2A network. It was found that approximately 88% of the GABS underserved population groups and 100% of the MBT underserved population groups would have access within a walkable distance to a trunk or direct route station/stop.

The assessment of the proposed IRT Phase 2A network through the Southern Suburbs and Metro Southeast has also shown that this method of planning based on transport justice can be used as a tool to confirm whether decision makers are correctly choosing the best solution by which these underserved areas can be aided sufficiently. It can thus be used on a project-based level to design new transport networks and facilities, as well as to improve/upgrade existing transport systems.

Transport planning has the potential to play a critical role in advancing social and economic justice in South Africa. By incorporating the principles of justice, transport planning can help to create more equitable and accessible transport systems for all members of society, including the previously disadvantaged. To support the implementation of transport justice, transportation planners must have a good understanding of the social, economic, and environmental impacts of their decisions. They should also have the knowledge, tools, and skills to analyse and address transportation inequalities and implement equitable transportation solutions.

7 REFERENCES

- Aivinhenyo, I. 2019. Development of Context-Sensitive Accessibility Indicators: A GIS-based Modelling Approach for Cape Town. University of Cape Town.
- Bickford, G. 2016. Transit oriented development in the South African context: an analytical review of Johannesburg's recent urban policy and strategy. University of Cape Town.
- City of Cape Town. 2021. *Public Transport Routes and Stops Data*. Cape Town: City of Cape Town. Available: <https://odp-cctegis.opendata.arcgis.com/>.
- Cooke, S., Behrens, R. & Zuidgeest, M. 2018. The relationship between Transit Oriented Development, accessibility and public transport viability in South African cities: a literature review and problem framing. *Proceedings of the 37th Annual Southern African Transport Conference (SATC 2018)*. (July):365–380.
- Council for Scientific and Industrial Research. 2005. Public transport. In *Guidelines for Human Settlement Planning and Design*. V. 2. Pretoria.
- Denmark, D. 1998. The Outsiders: Planning and Transport Disadvantage. *Journal of Planning Education and Research*. 17(3):231–245.
- Department of Transport. 2007. *Public Transport Strategy*.
- Department of Transport. 2022. *White Paper on National Transport Policy 2021: Revised*. Pretoria. Available: www.gpwonline.co.za.
- Geurs, K. & van Wee, B. 2004. Accessibility evaluation of land-use and transport strategies: review and research directions. *Journal of Transport Geography*. 12:127–140.
- Gifford, J. 2003. The Need for a New Approach. *Flexible Urban Transportation*. 159–174.
- Jennings, G. 2015. Public Transport Interventions and Transport Justice in South Africa: a Literature and Policy Review. *Proceedings of the 34th Annual Southern African Transport Conference (SATC 2018)*. 764–775.
- Maarseveen, Dr.Ir.M.F.A. van & Zuidgeest, Dr.Ir.M.H.P. 2011. Introductory notes in transport planning and travel demand modelling. In *Transport Planning and Travel Demand Modelling*. University of Twente & University of Cape Town.
- Martens, K. 2017. *Transport Justice: Designing Fair Transportation Systems*. New York: Routledge.
- van der Merwe, J. & Krygsman, S. 2020. *The relationship between transport accessibility and employment duration*. V. 2020. (WIDER Working Paper). UNU-WIDER. DOI: 10.35188/UNU-WIDER/2020/813-9.
- Mtizi, C. 2017. *Southern African Solutions to Public Transport Challenges*. Southern African Transport Conference.
- Nowek, A. 2023. *Transportation in South Africa: trains, buses, and taxis*. Available: <https://www.expatica.com/za/living/transportation/public-transportation-in-south-africa-105982/> [2023, February 09].

Owens, S. 1995. From “predict and provide” to “predict and prevent”? Pricing and planning in transport policy. *Transport Policy*. 2(1):43–49. DOI: 10.1016/0967-070X(95)93245-T.

PGWC. 2010. *Draft Non-motorised Transport in the Western Cape Strategy*. Cape Town.

Schalekamp, H.V. 2015. *Paratransit Operators’ Participation in Public Transport Reform in Cape Town: A Qualitative Investigation of their Business Aspirations and Attitudes to Reform*. Cape Town.

Schalekamp, H. & Klopp, J.M. 2018. *Beyond BRT: Innovation in Minibus-Taxi Reform in South African Cities*. Pretoria: South African Transport Conference. Available: www.jukwaa.net.

Sinha, K. & Labi, S. 2007. *Transportation Decision Making: Principles of Project Evaluation and Programming*. New Jersey: John Wiley & Sons.

Statistics SA. 2014. *National Household Travel Survey February to March 2013*. Pretoria.

Statistics SA. 2015a. *Measuring household expenditure on public transport: In-depth analysis of the National Household Travel Survey 2013 data*. Department of Transport.

Statistics SA. 2015b. *Methodological report on rebasing of national poverty lines and development of pilot provincial poverty lines*.

Statistics SA. 2021a. *National Poverty Lines (2021)*. Pretoria. Available: www.statssa.gov.za, info@statssa.gov.za, Tel+27123108911.

Statistics SA. 2021b. *National Household Travel Survey Data*. Pretoria: Statistics South Africa. Available: <http://superweb.statssa.gov.za/webapi/jsf/login.xhtml>.

Transport Development Authority. 2014. *Integrated Public Transport Network Plan 2032*. Cape Town.

Transport Development Authority. 2018. *Comprehensive Integrated Transport Plan 2018-2023*. Cape Town.

Vanderschuren, M. & Phayane, S. 2014. *NMT Facility Guidelines, 2014 For: Department of Transport*. Cape Town.

Venter, C. 2016. *Developing a common narrative on urban accessibility: A transportation perspective*. Washington, D.C.

APPENDIX A – Detailed Data Collection

Study Data Sources		
Data Obtained	Description	Source
Cape Town road network		CoCT Open Data Portal
Public transport routes and stops	Future IRT routes	CoCT EMME Model
	Future IRT stops	CoCT EMME Model
	GABS routes	CoCT Open Data Portal
	GABS stops	CoCT Open Data Portal
	MBT routes	CoCT Open Data Portal
	MBT ranks	CoCT Open Data Portal
Traffic Analysis Zones (TAZ)		CoCT EMME Model
Jobs distribution		CoCT EMME Model
National Household Travel Survey 2020	Income levels	Statistics SA
	Average walking times to PT facilities	Statistics SA

Statistics South Africa																	
National Household Travel Survey 2020																	
Geography (TAZs) by Total household income (Categories)																	
for Person weight																	
TAZ	R0 – R200	R201 – R500	R501 – R1000	R1001 – R1500	R1501 – R2500	R2501 – R3500	R3501 – R4500	R4501 – R6000	R6001 – R8000	R8001 – R11000	R11001 – R16000	R16001 – R30000	R30001 or more	Do not know	Refuse	Unspecified	Total
Belgravia	0	7220	0	0	6336	0	18762	37333	10815	0	16971	6427	0	12065	110123	0	226052
Grassy Park	4863	5729	0	1299	13491	37904	40179	6382	7807	0	19691	7672	0	57330	106731	1570	310648
Mitchells Plain/Gugulethu	958	0	21261	22189	31679	69826	47538	84121	59137	143403	120130	32529	12750	280864	0	0	926385
Khayelitsha	0	0	2340	0	38897	2657	70753	88667	97094	31881	48055	14896	0	112102	847	12799	520988
Wynberg	0	0	0	0	0	0	0	2077	916	0	0	0	18822	60126	61033	2542	145516
Simonstown	0	0	0	0	5532	8371	39347	0	20907	0	0	0	0	8731	20600	12871	116359
																	2245948

From value	0	201	501	1001	1501	2501	3501	4501	6001	8001	11001	16001	30001				
To value	200	500	1000	1500	2500	3500	4500	6000	8000	11000	16000	30000					
Median	100	350.5	750.5	1250.5	2000.5	3000.5	4000.5	5250.5	7000.5	9500.5	13500.5	23000.5	30001				

Statistics South Africa																		
National Household Travel Survey 2020																		
Geography (TAZs) by Time taken to nearest passenger bus																		
for Person weight																		
TAZ	0	1	2	3	5	7	10	15	20	25	30	35	60	Do not know	No service	Total HH	Total Time	Average Time
Belgravia	0	3910	0	0	8286	0	120574	39946	29029	0	0	0	0	6206	18103	201745	2430850	12.0
Grassy Park	4689	0	0	0	11951	0	140186	61602	4365	0	27336	0	4975	1445	54100	255104	3591525	14.1
Mitchells Plain/Gugulethu	0	15330	34042	74132	264608	0	115309	138136	144091	12734	86536	925	0	30416	10125	885843	10682605	12.1
Khayelitsha	0	0	43022	20538	159311	6525	65824	108767	45946	0	13843	0	0	23396	33818	463776	4613843	9.9
Simonstown	10238	0	0	0	0	0	26141	2363	9327	36415	3169	0	12871	0	15835	100524	2261100	22.5
Wynberg	12516	0	0	0	3269	0	72364	39514	0	0	0	0	0	13056	4799	127663	1332695	10.4

Statistics South Africa																	
National Household Travel Survey 2020																	
Geography (TAZs) by Time taken to nearest taxi rank/route																	
for Person weight																	
TAZ	0	1	2	3	4	5	7	10	15	20	25	Do not know	No service	Total HH	Total HH	Total Time	Average Time
Belgravia	0	0	0	0	0	64605	0	114377	36571	3095	0	7405	0	226053	218648	2077260	9.5
Grassy Park	4689	0	0	0	0	71278	0	203096	24565	5576	0	1445	0	310649	309204	2867345	9.3
Mitchells Plain/Gugulethu	0	15330	95388	103401	931	587428	0	82937	20991	10955	0	7710	1314	926385	917361	4820508	5.3
Khayelitsha	0	6525	59277	29026	0	265218	1792	81538	42871	0	0	27445	7297	520989	486247	3009236	6.2
Simonstown	10238	0	18536	0	0	26409	0	26841	17841	9327	7167	0	0	116359	116359	1070857	9.2
Wynberg	17315	0	0	0	0	3269	0	90284	25134	5361	0	4155	0	145518	141363	1403415	9.9

APPENDIX B – Detailed Analysis Calculations

Income Poverty Severity

Suburb	Model Zone	Jobs Available	Households	Stats SA TAZ	If income below poverty line = 1	100	$n((z-y)/z)^2$	351	$n((z-y)/z)^2$	751	$n((z-y)/z)^2$	1251	$n((z-y)/z)^2$	2001	$n((z-y)/z)^2$	3001	$n((z-y)/z)^2$	4001	$n((z-y)/z)^2$	5251	$n((z-y)/z)^2$	7001	$n((z-y)/z)^2$	9501	$n((z-y)/z)^2$	13501	$n((z-y)/z)^2$	23001	$n((z-y)/z)^2$	30001	$n((z-y)/z)^2$	$1/N*\Sigma n((z-y)/z)^2$
ATHLONE	1	164	489	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
ATHLONE	2	3887	2601	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
BARNET MOLOKWANA CORNER	3	49	6338	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
BEACON VALLEY	4	531	6230	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
BELGRAVIA	5	3099	2951	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
BELTHORN ESTATE	6	169	1288	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
BERGVLIT	7	723	1383	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
BERGVLIT/TOKAI	8	5355	1673	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
BISHOPSCOURT	9	28	817	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
BONGANI	10	491	5243	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
BRIDGETOWN	11	3499	5375	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
CLAREMONT	12	27894	4189	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CLAREMONT	13	476	936	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CLAREMONT	14	1693	1773	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CLAREMONT	15	1014	1618	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CLAREMONT	16	3568	855	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
COLORADO PARK	17	289	2901	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
CONSTANTIA	18	193	565	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CONSTANTIA	19	22	245	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CONSTANTIA	20	6	201	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
CONSTANTIA	21	241	977	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CONSTANTIA	22	223	1375	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CONSTANTIA	23	659	1693	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CONSTANTIA	24	108	1178	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
CRAWFORD	25	490	2022	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
CROSSROADS	26	304	16062	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
DIEPRIVER	27	74	1117	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
DIEPRIVER	28	2708	1828	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
EAGLE PARK	29	65	3434	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
EASTRIDGE	30	151	4630	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
EASTRIDGE	31	119	2643	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
EKUPHUMULENI/GRACELAND	32	1336	3216	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
ELFINDALE	33	7394	1242	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
ENDLOVINI INFORMAL SETTLEMENT	34	6	13493	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
ENKANINI INFORMAL SETTLEMENT	35	0	14891	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
EYETHU	36	745	4661	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354

Suburb	Model Zone	Jobs Available	Households	Stats SA TAZ	If income below poverty line = 1	100	$n((z-y)/z)^2$	351	$n((z-y)/z)^2$	751	$n((z-y)/z)^2$	1251	$n((z-y)/z)^2$	2001	$n((z-y)/z)^2$	3001	$n((z-y)/z)^2$	4001	$n((z-y)/z)^2$	5251	$n((z-y)/z)^2$	7001	$n((z-y)/z)^2$	9501	$n((z-y)/z)^2$	13501	$n((z-y)/z)^2$	23001	$n((z-y)/z)^2$	30001	$n((z-y)/z)^2$	$1/N*\Sigma n((z-y)/z)^2$
GATESVILLE	37	1343	1554	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
GOOD HOPE	38	0	1768	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
GRASSY PARK	39	2070	9424	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
GUGULETHU	40	339	13923	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
GUGULETHU	41	1237	7922	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
GUGULETHU	42	739	10856	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
HANOVER PARK	43	710	2143	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
HANOVER PARK	44	1929	5735	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
HARARE	45	465	20759	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
HATTON	46	3366	0	Belgravia	0	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.000
HAZENDAL	47	284	1613	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
HEATHFIELD	48	942	2365	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
HEIDEVELD	49	112	1772	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
HEIDEVELD	50	792	2832	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
IKWEZI PARK	51	188	2211	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
ILITHA PARK	52	598	7457	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
KENILWORTH	53	1367	2157	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
KENILWORTH	54	1759	112	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
KENILWORTH	55	406	989	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
KENILWORTH	56	730	1238	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
KENILWORTH	57	1759	658	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
KEWTOWN	58	204	2907	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
KHAYA	59	713	6361	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
KIRSTENHOF	60	1574	1786	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
KUYASA	61	88	5585	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
LAKESIDE	62	595	1598	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
LANSDOWNE	63	2300	1692	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
LANSDOWNE	64	56	417	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
LANSDOWNE	65	3873	2205	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
LANSDOWNE	66	145	1699	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
LAVENDER HILL	67	247	8766	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
LENTEGEUR	68	1715	2988	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
LENTEGEUR	69	365	7110	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
LENTEGEUR	70	524	3541	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
LOTUS RIVER	71	1626	17488	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.245

Suburb	Model Zone	Jobs Available	Households	Stats SA TAZ	If income below poverty line = 1	100	$n((z-y)/z)^2$	351	$n((z-y)/z)^2$	751	$n((z-y)/z)^2$	1251	$n((z-y)/z)^2$	2001	$n((z-y)/z)^2$	3001	$n((z-y)/z)^2$	4001	$n((z-y)/z)^2$	5251	$n((z-y)/z)^2$	7001	$n((z-y)/z)^2$	9501	$n((z-y)/z)^2$	13501	$n((z-y)/z)^2$	23001	$n((z-y)/z)^2$	30001	$n((z-y)/z)^2$	$1/N*\Sigma n((z-y)/z)^2$
MANDELA PARK	72	1107	11726	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
MANENBERG	73	516	5734	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
MANENBERG	74	102	2461	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
MANENBERG	75	161	2211	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
MEADOWRIDGE	76	520	1444	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
MITCHELLS PLAIN CBD	77	8730	0	Mitchells Plain/Gugulethu	0	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.000
MORGANS VILLAGE	78	5	1157	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
MOUNTVIEW	79	133	618	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
MOWBRAY	80	2060	509	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
MOWBRAY	81	1613	1367	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
MUIZENBERG	82	881	3392	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
MUIZENBERG	83	5781	3787	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
MUIZENBERG	84	1334	619	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
MXOLISI PHETANI	85	311	16469	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
NEW WOODLANDS	86	193	2871	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
NEWFIELDS	87	3128	255	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
NEWFIELDS	88	65	1336	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
NEWLANDS	89	653	877	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
NEWLANDS	90	12971	2485	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
NONQUBELA	91	1046	13921	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
NYANGA	92	590	15935	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
OTTERY	93	864	321	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
OTTERY	94	1639	4072	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
OTTERY	95	7489	4431	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PARKWOOD	96	240	3695	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PELIKAN HEIGHTS	97	40	651	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PELIKAN PARK	98	361	6001	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PENLYN ESTATE	99	92	867	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
PHILIPPI	100	0	0	Grassy Park	0	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.000
PHILIPPI	101	318	4594	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
PHILIPPI	102	3737	24715	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.663
PHILIPPI	103	1569	19040	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
PHILIPPI	104	1669	10712	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662

Suburb	Model Zone	Jobs Available	Households	Stats SA TAZ	If income below poverty line = 1	100	$n((z-y)/z)^2$	351	$n((z-y)/z)^2$	751	$n((z-y)/z)^2$	1251	$n((z-y)/z)^2$	2001	$n((z-y)/z)^2$	3001	$n((z-y)/z)^2$	4001	$n((z-y)/z)^2$	5251	$n((z-y)/z)^2$	7001	$n((z-y)/z)^2$	9501	$n((z-y)/z)^2$	13501	$n((z-y)/z)^2$	23001	$n((z-y)/z)^2$	30001	$n((z-y)/z)^2$	$1/N*\Sigma n((z-y)/z)^2$
PHILIPPI	105	4150	4990	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
PHILIPPI	106	346	10349	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
PHILIPPI	107	741	11946	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
PHILIPPI	108	7812	754	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PHILIPPI	109	883	9164	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PHILIPPI	110	75	1066	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PHILIPPI	111	126	477	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PHILIPPI	112	741	4811	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
PHILIPPI PARK	113	0	2814	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
PINATI ESTATE	114	1608	1425	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
PLUMSTEAD	115	7992	3436	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
PLUMSTEAD	116	623	2659	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
PLUMSTEAD	117	27	465	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
PORTLAND	118	301	4530	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
PORTLAND	119	173	3670	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
RETREAT	120	2760	10497	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
RETREAT	121	7670	718	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
ROCKLANDS	122	312	4643	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
ROCKLANDS	123	585	4885	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
RONDEBOSCH	124	7137	2536	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
RONDEBOSCH	125	743	1106	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
RONDEBOSCH	126	2716	3778	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
RONDEBOSCH EAST	127	167	2156	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
RONDEVLEI PARK	128	129	1452	Mitchells Plain/ Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
ROSEBANK	129	1244	1066	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
ROSEBANK	130	1374	1014	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000
RYLANDS	131	1605	1451	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
SA INFANTRY BATTALION BASE	132	0	1168	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
SABATA DALINDYEBO SQUARE	133	0	6421	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
SEAWINDS	134	117	4816	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
SILVERTOWN	135	220	2673	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
SILWERTOWN	136	231	3516	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
SOUTHFIELD	137	38	817	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	3881	1401139	0.000

Suburb	Model Zone	Jobs Available	Households	Stats SA TAZ	If income below poverty line = 1	100	$n((z-y)/z)^2$	351	$n((z-y)/z)^2$	751	$n((z-y)/z)^2$	1251	$n((z-y)/z)^2$	2001	$n((z-y)/z)^2$	3001	$n((z-y)/z)^2$	4001	$n((z-y)/z)^2$	5251	$n((z-y)/z)^2$	7001	$n((z-y)/z)^2$	9501	$n((z-y)/z)^2$	13501	$n((z-y)/z)^2$	23001	$n((z-y)/z)^2$	30001	$n((z-y)/z)^2$	$1/N*\Sigma n((z-y)/z)^2$
SOUTHFIELD	138	792	2299	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	0	0	0.000
STEENBERG	139	1100	12070	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
STEENBERG	140	90	335	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
STRANDFONTEIN	141	1603	23389	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.245
SURREY ESTATE	142	938	2036	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
SYBRAND PARK	143	365	430	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
TAFELSIG	144	141	9503	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
TAFELSIG	145	116	11468	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.662
THEMBOKWEZI	146	613	2687	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
TOKAI	147	301	670	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
TOKAI	148	163	1514	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
UMRHABULO TRIANGLE	149	271	18523	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
UMRHABULO TRIANGLE	150	610	17011	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
VANGUARD	151	169	1055	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
VICTORIA MXENGE	152	149	12955	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
VRYGOND	153	39	6462	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
WELCOME	154	30	353	Belgravia	1	0	0	12	7	0	0	0	0	57	6	0	0	333	925	868	5426	335	4505	0	0	1014	64901	654	134367	0	0	0.290
WELTEVREDEN VALLEY	155	1334	6285	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
WESTGATE	156	1477	1451	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
WESTLAKE	157	7253	2018	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
WESTLAKE	158	13	333	Simonstown	0	0	0	0	0	0	0	0	0	96	11	216	216	1353	3760	0	0	1258	16916	0	0	0	0	0	0	0	0	0.000
WESTRIDGE	159	356	4343	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
WESTRIDGE	160	442	3780	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
WETTON	161	3341	2464	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244
WILDWOOD	162	55	628	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
WOLFGAT NATURE RESERVE	163	0	20	Khayelitsha	1	0	0	0	0	4	1	0	0	150	17	16	16	544	1512	894	5589	1305	17548	582	16557	1246	79751	658	135189	0	0	0.354
WOODLANDS	164	303	3387	Mitchells Plain/Gugulethu	1	1	1	0	0	18	4	30	1	69	8	227	227	206	572	477	2982	447	6011	1471	41847	1751	112073	808	166007	413	149103	0.661
WYNBERG	165	9516	3035	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	0	0	0.000
WYNBERG	166	80	140	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	0	0	0.000
WYNBERG	167	358	1159	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	0	0	0.000
WYNBERG	168	338	1769	Wynberg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	469	45	605	0	0	0	0	0	0	0	0	0.000
ZEEKOEVLEI	169	46	1488	Grassy Park	1	2	2	7	4	0	0	6	0	87	10	367	367	518	1439	108	675	176	2367	0	0	856	54789	569	116903	0	0	0.244

PMI Results for 25-minute Travel Time Threshold

Suburb	Model Zone	Private Vehicle		Minibus Taxi			Golden Arrow Bus Service				
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Jobs Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Jobs Accessible within walking distance of PT facility	Aerial Speed
ATHLONE	1	243023	41.4	100	21885	21885	16.2	54	0	0	10.6
ATHLONE	2	241465	40.4	95	34973	33109	16.1	41	0	0	10.2
BARNET MOLOKWANA CORNER	3	132002	41.8	100	26072	26067	21.3	75	1940	1464	13.3
BEACON VALLEY	4	229423	40.4	100	41090	41091	17.8	91	0	0	10.9
BELGRAVIA	5	243360	39.4	83	31717	26260	15.3	98	0	0	9.8
BELTHORN ESTATE	6	245183	39.4	99	42475	41904	14.3	86	0	0	9.4
BERGVLIT	7	238534	39.0	94	15495	14569	15.4	20	5596	1113	10.6
BERGVLIT/TOKAI	8	234090	39.3	57	28502	16189	16.8	38	723	278	11.5
BISHOPSCOURT	9	239128	40.8	75	10169	7618	16.2	86	0	0	11.3
BONGANI	10	214372	40.6	58	28472	16637	18.8	25	0	0	10.9
BRIDGETOWN	11	242400	41.0	100	18547	18538	16.2	78	0	0	10.2
CLAREMONT	12	212334	42.0	76	34041	25766	15.8	89	0	0	11.4
CLAREMONT	13	241253	41.2	100	52883	52876	14.9	83	5733	4779	10.5
CLAREMONT	14	240036	41.9	56	60471	34062	15.5	89	1014	902	10.6
CLAREMONT	15	240715	41.7	87	61150	53155	14.9	64	1693	1090	10.7
CLAREMONT	16	238161	41.4	100	54203	54203	14.6	100	3371	3371	10.4
COLORADO PARK	17	247610	39.5	100	35394	35394	15.2	78	0	0	9.7
CONSTANTIA	18	222198	40.5	16	410	65	18.2	0	681	0	13.1
CONSTANTIA	19	220725	39.7	71	882	624	18.6	0	193	0	12.7
CONSTANTIA	20	220011	41.1	53	610	325	18.2	0	0	0	10.1
CONSTANTIA	21	227967	37.0	77	1550	1191	16.1	0	723	0	11.6
CONSTANTIA	22	229484	38.9	47	18297	8595	17.0	33	0	0	11.7
CONSTANTIA	23	237165	39.7	88	19104	16807	16.8	4	193	8	11.8
CONSTANTIA	24	239950	39.9	74	22582	16634	14.8	5	0	0	10.3
CRAWFORD	25	243295	39.7	79	39316	31250	15.0	4	0	0	9.5
CROSSROADS	26	237930	41.1	98	36093	35506	17.3	65	0	0	10.9
DIEPRIVER	27	240411	39.7	74	25221	18560	14.1	42	38	16	10.1
DIEPRIVER	28	237777	40.9	99	29535	29231	14.7	99	0	0	9.1
EAGLE PARK	29	247834	40.0	42	6101	2583	15.0	40	0	0	9.3
EASTRIDGE	30	214581	40.7	100	39311	39312	19.1	88	0	0	11.4
EASTRIDGE	31	214776	40.5	100	40952	40952	19.3	100	0	0	11.4
EKUPHUMULENI/GRACELAND	32	108454	40.0	99	23834	23686	21.4	98	2083	2036	13.1
ELFINDALE	33	233091	37.1	31	12573	3958	14.5	38	942	362	9.9
ENDLOVINI INFORMAL SETTLEMENT	34	97926	38.9	55	22411	12412	20.9	25	0	0	13.2
ENKANINI INFORMAL SETTLEMENT	35	59557	41.6	17	17917	2972	23.5	13	698	89	14.7
EYETHU	36	112880	39.6	100	22645	22645	20.7	100	2662	2662	12.9
GATESVILLE	37	246468	40.1	60	39007	23425	14.6	94	0	0	9.8
GOOD HOPE	38	139899	39.4	97	30052	29244	19.9	43	1311	560	12.2
GRASSY PARK	39	244860	40.4	98	21218	20810	15.2	79	0	0	9.4
GUGULETHU	40	237901	39.4	97	50818	49262	18.5	48	0	0	10.5
GUGULETHU	41	237761	38.4	100	48981	48981	16.6	98	0	0	9.8
GUGULETHU	42	245826	37.7	100	59841	59841	15.8	94	0	0	8.7
HANOVER PARK	43	247189	39.5	100	39091	39091	13.6	87	0	0	9.4
HANOVER PARK	44	245970	39.9	100	39250	39250	13.5	87	0	0	9.4
HARARE	45	100966	39.0	99	21432	21256	20.7	88	598	530	12.9
HATTON	46	244533	40.1	100	32185	32168	14.2	100	0	0	9.8
HAZENDAL	47	244470	41.8	95	27295	25899	17.5	68	0	0	10.8
HEATHFIELD	48	239232	39.1	47	37960	17855	14.8	46	7394	3409	10.3
HEIDEVELD	49	238886	40.3	100	68573	68573	18.7	70	0	0	10.4
HEIDEVELD	50	238206	40.8	100	26214	26202	16.3	99	0	0	10.6
IKWEZI PARK	51	227006	37.9	100	30787	30773	16.6	97	0	0	10.5
ILITHA PARK	52	115680	39.6	90	22179	19953	19.5	77	2285	1763	12.3
KENILWORTH	53	239051	41.8	82	52564	42928	14.9	79	0	0	10.9
KENILWORTH	54	239970	39.3	87	40043	34726	14.3	38	0	0	9.2
KENILWORTH	55	241323	41.1	100	62847	62847	14.7	30	4774	1455	10.2
KENILWORTH	56	240999	41.3	99	40536	40119	13.6	64	4670	3010	10.5
KENILWORTH	57	239970	36.6	100	15370	15371	13.4	36	4124	1487	9.9
KEWTOWN	58	241649	39.2	94	18960	17872	16.8	66	0	0	10.8
KHAYA	59	116502	38.4	100	25182	25073	20.4	95	598	569	12.3
KIRSTENHOF	60	237683	40.6	93	28195	26277	17.7	42	0	0	9.6
KUYASA	61	65171	40.1	50	20744	10465	22.2	47	610	288	13.5
LAKESIDE	62	233907	41.0	88	25719	22664	19.6	0	0	0	10.5
LANSLOWNE	63	241485	41.0	87	61414	53364	14.5	80	0	0	9.6
LANSLOWNE	64	245296	40.2	100	50077	50077	14.4	84	0	0	9.5
LANSLOWNE	65	243057	40.9	99	53115	52321	14.0	95	0	0	9.3

Suburb	Model Zone	Private Vehicle		Minibus Taxi				Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Jobs Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Jobs Accessible within walking distance of PT facility	Aerial Speed
LANSDOWNE	66	243640	39.5	88	33779	29819	14.1	52	0	0	9.4
LAVENDER HILL	67	240836	40.0	98	29515	29017	16.6	61	0	0	10.0
LENTEGEUR	68	244321	39.5	91	39269	35607	17.3	71	0	0	10.6
LENTEGEUR	69	238418	40.0	99	43376	43093	17.5	86	0	0	10.8
LENTEGEUR	70	247353	39.6	100	38588	38588	16.0	100	0	0	10.3
LOTUS RIVER	71	245392	39.6	98	24999	24410	14.5	92	0	0	8.7
MANDELA PARK	72	97402	40.0	99	20790	20566	21.7	97	2775	2699	13.6
MANENBERG	73	247383	38.3	93	13289	12354	13.1	95	0	0	9.4
MANENBERG	74	246149	39.1	100	50034	50034	16.3	84	0	0	10.1
MANENBERG	75	246404	39.1	100	17482	17473	14.3	99	0	0	10.0
MEADOWRIDGE	76	239538	39.6	79	8028	6340	14.8	5	0	0	10.2
MITCHELLS PLAIN CBD	77	223127	39.7	100	32891	32891	17.5	100	0	0	10.6
MORGANS VILLAGE	78	247894	40.2	87	30059	26082	15.4	60	0	0	9.6
MOUNTVIEW	79	246797	38.7	99	42233	41612	13.8	100	0	0	9.0
MOWBRAY	80	235409	42.6	100	6238	6233	18.9	95	0	0	12.9
MOWBRAY	81	239859	42.5	100	18159	18157	18.1	74	0	0	11.7
MUIZENBERG	82	238492	40.2	59	23436	13910	20.0	17	0	0	11.7
MUIZENBERG	83	237604	40.0	83	5878	4860	18.8	34	0	0	11.2
MUIZENBERG	84	211240	39.2	83	10320	8535	22.1	27	0	0	10.1
MXOLISI PHETANI	85	212221	40.1	100	34306	34296	18.9	64	1046	673	12.1
NEW WOODLANDS	86	246350	38.2	100	34713	34713	15.0	83	0	0	10.0
NEWFIELDS	87	243078	34.7	68	20620	14043	13.2	61	0	0	8.8
NEWFIELDS	88	246865	37.9	100	34099	34099	13.7	100	0	0	9.5
NEWLANDS	89	228168	40.8	65	28	19	15.8	37	0	0	11.8
NEWLANDS	90	226496	41.2	63	30601	19235	15.6	84	0	0	11.5
NONQUBELA	91	126878	40.4	97	25868	25039	20.5	95	1105	1052	13.0
NYANGA	92	238408	39.4	100	44226	44182	16.7	97	0	0	10.3
OTTERY	93	244257	39.1	86	38406	33153	14.5	60	0	0	9.0
OTTERY	94	245291	35.6	74	19071	14123	13.3	85	0	0	8.1
OTTERY	95	239441	37.8	93	11701	10854	13.1	80	0	0	8.6
PARKWOOD	96	245583	39.3	100	13144	13144	14.3	84	0	0	9.1
PELIKAN HEIGHTS	97	247859	39.0	64	3863	2478	17.8	19	0	0	9.9
PELIKAN PARK	98	247538	38.8	48	7559	3621	16.5	36	0	0	10.2
PENLYN ESTATE	99	246838	38.9	27	43925	12024	14.3	100	0	0	9.3
PHILIPPI	100	247899	40.8	20	4424	863	12.4	0	0	0	9.5
PHILIPPI	101	247581	39.7	100	59463	59411	15.8	65	0	0	9.8
PHILIPPI	102	234282	39.9	97	28539	27779	16.6	77	0	0	10.7
PHILIPPI	103	244695	38.2	99	46321	46047	15.7	32	0	0	9.9
PHILIPPI	104	237329	39.9	99	42050	41743	16.3	63	0	0	10.4
PHILIPPI	105	234842	39.5	86	31410	27097	16.5	49	0	0	10.5
PHILIPPI	106	246219	39.0	98	35065	34210	15.6	50	0	0	9.9
PHILIPPI	107	247158	38.6	100	45926	45926	15.3	33	0	0	9.7
PHILIPPI	108	240087	37.9	44	27828	12130	13.6	20	0	0	9.2
PHILIPPI	109	247016	39.4	13	15922	2000	14.4	3	0	0	9.9
PHILIPPI	110	247824	35.6	20	6818	1337	15.6	18	0	0	9.5
PHILIPPI	111	247773	38.3	61	0	0	12.2	6	0	0	8.8
PHILIPPI	112	247158	40.1	32	9784	3158	14.3	25	0	0	8.9
PHILIPPI PARK	113	238998	39.7	100	42522	42341	16.5	83	0	0	10.3
PINATI ESTATE	114	245322	40.3	100	41284	41284	13.7	92	0	0	9.2
PLUMSTEAD	115	232493	40.4	95	24750	23571	14.5	82	0	0	10.6
PLUMSTEAD	116	241106	40.0	95	2379	2255	13.3	61	27	17	9.6
PLUMSTEAD	117	240458	39.6	67	9185	6137	13.8	91	623	564	10.0
PORTLAND	118	228475	39.9	100	39545	39545	18.0	100	0	0	10.9
PORTLAND	119	247403	40.3	100	41859	41859	16.8	100	0	0	10.4
RETREAT	120	239085	40.3	86	22776	19520	16.2	68	0	0	9.6
RETREAT	121	232504	41.0	100	21735	21735	16.8	86	0	0	9.2
ROCKLANDS	122	247264	40.6	100	33743	33743	18.0	97	0	0	11.2
ROCKLANDS	123	235457	41.8	100	31398	31398	18.8	90	0	0	11.7
RONDEBOSCH	124	222183	40.7	97	0	0	14.9	59	0	0	12.2
RONDEBOSCH	125	240729	40.7	96	7030	6739	15.9	58	1374	802	10.5
RONDEBOSCH	126	238756	40.7	45	11772	5338	15.6	86	0	0	10.9
RONDEBOSCH EAST	127	243020	40.6	59	25623	15185	14.8	0	0	0	9.8
RONDEVLEI PARK	128	247770	40.2	100	35099	35099	15.3	78	0	0	9.9
ROSEBANK	129	236806	41.1	100	5412	5410	17.5	75	1374	1037	12.4
ROSEBANK	130	240098	41.9	58	5282	3062	16.8	67	1987	1330	11.8
RYLANDS	131	245935	40.5	33	29783	9793	15.1	100	0	0	9.8
SA INFANTRY BATTALION BASE	132	87434	41.4	72	19277	13907	23.7	25	0	0	14.6

Suburb	Model Zone	Private Vehicle		Minibus Taxi				Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Jobs Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Jobs Accessible within walking distance of PT facility	Aerial Speed
SABATA DALINDYEBO SQUARE	133	107844	41.2	100	23917	23917	22.0	92	0	0	12.6
SEAWINDS	134	240368	39.6	100	12968	12968	16.7	71	0	0	10.0
SILVERTOWN	135	245986	40.4	100	27647	27647	16.0	97	0	0	10.4
SILWERTOWN	136	102914	41.7	100	23159	23159	22.7	100	3188	3188	13.9
SOUTHFIELD	137	243002	39.7	89	16946	15012	14.8	58	866	505	9.7
SOUTHFIELD	138	242248	39.5	99	11852	11735	13.7	96	38	37	9.7
STEENBERG	139	239385	40.3	100	36767	36712	17.1	76	0	0	10.5
STEENBERG	140	239167	40.8	99	37940	37718	18.8	56	0	0	9.8
STRANDFONTEIN	141	244236	35.9	88	12326	10865	17.0	53	0	0	10.3
SURREY ESTATE	142	245627	40.1	88	24826	21805	14.3	86	0	0	9.9
SYBRAND PARK	143	242822	42.2	80	27810	22277	17.1	55	0	0	11.1
TAFELSIG	144	180251	40.3	100	31900	31900	19.2	91	0	0	11.7
TAFELSIG	145	161023	40.2	100	30225	30226	19.4	90	0	0	12.0
THEMBOKWEZI	146	222102	41.6	79	35247	27719	18.8	73	0	0	12.2
TOKAI	147	206601	38.9	55	0	0	17.0	0	0	0	10.6
TOKAI	148	233931	39.0	82	22749	18559	17.6	0	0	0	9.7
UMRHABULO TRIANGLE	149	64705	40.4	45	18399	8208	23.5	92	610	564	14.4
UMRHABULO TRIANGLE	150	72818	41.6	99	16942	16848	23.1	98	1466	1439	14.6
VANGUARD	151	246095	40.9	100	27775	27775	16.2	100	0	0	10.6
VICTORIA MXENGE	152	133556	38.3	81	33898	27518	20.3	80	49	40	12.4
VRYGOND	153	240135	39.2	94	24232	22664	18.0	40	0	0	10.4
WELCOME	154	238968	41.0	100	29281	29267	17.1	88	0	0	11.0
WELTEVREDEN VALLEY	155	246565	39.7	100	15870	15861	13.5	54	0	0	9.4
WESTGATE	156	246422	39.0	100	27025	27025	16.0	43	0	0	10.4
WESTLAKE	157	208215	38.8	100	16560	16560	19.3	0	0	0	10.0
WESTLAKE	158	213638	38.4	64	26307	16842	19.8	0	0	0	10.4
WESTRIDGE	159	247543	40.2	100	36875	36875	16.3	99	0	0	10.4
WESTRIDGE	160	247134	40.1	100	35425	35425	17.3	100	0	0	10.9
WETTON	161	243589	40.0	95	47869	45309	14.0	93	0	0	8.8
WILDWOOD	162	247844	38.2	100	35173	35173	15.0	86	0	0	9.9
WOLFGAT NATURE RESERVE	163	110764	41.2	57	22466	12899	20.8	7	0	0	13.1
WOODLANDS	164	247596	39.6	98	36769	36072	15.7	95	0	0	10.1
WYNBERG	165	230853	40.8	85	42726	36357	15.4	43	696	299	11.1
WYNBERG	166	241649	39.1	100	5078	5078	13.5	63	2455	1551	9.9
WYNBERG	167	241371	41.2	100	32761	32762	14.7	100	10664	10665	10.2
WYNBERG	168	241391	41.0	100	19980	19981	14.4	91	10684	9673	10.3
ZEEKOEVLEI	169	246884	38.8	27	9618	2620	15.5	2	0	0	8.9
Average		222775	39.9			24538	16.6			399	10.6
% of Private Vehicle						11.0%	41.6%			0.2%	26.6%

Accessibility Deficiency for 25-minute Travel Time Threshold

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
ATHLONE	1	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
ATHLONE	2	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
BARNET MOLOKWANA CORNER	3	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
BEACON VALLEY	4	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
BELGRAVIA	5	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
BELTHORN ESTATE	6	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BERGVLIET	7	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
BERGVLIET/TOKAI	8	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
BISHOPSCOURT	9	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
BONGANI	10	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
BRIDGETOWN	11	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
CLAREMONT	12	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
CLAREMONT	13	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CLAREMONT	14	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
CLAREMONT	15	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CLAREMONT	16	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
COLORADO PARK	17	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
CONSTANTIA	18	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CONSTANTIA	19	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CONSTANTIA	20	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CONSTANTIA	21	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CONSTANTIA	22	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
CONSTANTIA	23	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
CONSTANTIA	24	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
CRAWFORD	25	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
CROSSROADS	26	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
DIEPRIVER	27	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
DIEPRIVER	28	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
EAGLE PARK	29	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
EASTRIDGE	30	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
EASTRIDGE	31	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
EKUPHUMULENI/GRACELAND	32	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
ELFINDALE	33	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
ENDLOVINI INFORMAL SETTLEMENT	34	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
ENKANINI INFORMAL SETTLEMENT	35	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
EYETHU	36	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
GATESVILLE	37	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
GOOD HOPE	38	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
GRASSY PARK	39	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
GUGULETHU	40	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	41	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	42	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HANOVER PARK	43	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
HANOVER PARK	44	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
HARARE	45	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
HATTON	46	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
HAZENDAL	47	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
HEATHFIELD	48	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
HEIDEVELD	49	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HEIDEVELD	50	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
IKWEZI PARK	51	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
ILITHA PARK	52	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
KENILWORTH	53	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KENILWORTH	54	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
KENILWORTH	55	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KENILWORTH	56	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
KENILWORTH	57	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
KEWTOWN	58	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
KHAYA	59	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
KIRSTENHOF	60	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
KUYASA	61	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
LAKESIDE	62	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
LANSLOWNE	63	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSLOWNE	64	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSLOWNE	65	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSLOWNE	66	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
LAVENDER HILL	67	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
LENTEGEUR	68	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
LENTEGEUR	69	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LENTEGEUR	70	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
LOTUS RIVER	71	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
MANDELA PARK	72	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
MANENBERG	73	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
MANENBERG	74	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MANENBERG	75	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
MEADOWRIDGE	76	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
MITCHELLS PLAIN CBD	77	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
MORGANS VILLAGE	78	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
MOUNTVIEW	79	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MOWBRAY	80	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
MOWBRAY	81	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
MUIZENBERG	82	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
MUIZENBERG	83	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
MUIZENBERG	84	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
MXOLISI PHETANI	85	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
NEW WOODLANDS	86	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
NEWFIELDS	87	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
NEWFIELDS	88	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
NEWLANDS	89	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
NEWLANDS	90	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
NONQUBELA	91	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
NYANGA	92	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
OTTERY	93	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
OTTERY	94	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
OTTERY	95	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PARKWOOD	96	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PELIKAN HEIGHTS	97	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PELIKAN PARK	98	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PENLYN ESTATE	99	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PHILIPPI	100	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	101	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	102	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
PHILIPPI	103	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	104	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	105	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
PHILIPPI	106	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
PHILIPPI	107	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	108	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PHILIPPI	109	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	110	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	111	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	112	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI PARK	113	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PINATI ESTATE	114	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
PLUMSTEAD	115	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
PLUMSTEAD	116	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PLUMSTEAD	117	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PORTLAND	118	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
PORTLAND	119	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RETREAT	120	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
RETREAT	121	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
ROCKLANDS	122	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
ROCKLANDS	123	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
RONDEBOSCH	124	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
RONDEBOSCH	125	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
RONDEBOSCH	126	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
RONDEBOSCH EAST	127	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
RONDEVLEI PARK	128	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
ROSEBANK	129	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
ROSEBANK	130	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
RYLANDS	131	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
SA INFANTRY BATTALION BASE	132	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
SABATA DALINDYEBO SQUARE	133	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
SEAWINDS	134	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
SILVERTOWN	135	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
SILWERTOWN	136	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
SOUTHFIELD	137	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
SOUTHFIELD	138	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
STEENBERG	139	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
STEENBERG	140	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
STRANDFONTEIN	141	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
SURREY ESTATE	142	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
SYBRAND PARK	143	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
TAFELSIG	144	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
TAFELSIG	145	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
THEMBOKWEZI	146	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
TOKAI	147	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
TOKAI	148	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
UMRHABULO TRIANGLE	149	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
UMRHABULO TRIANGLE	150	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
VANGUARD	151	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
VICTORIA MXENGE	152	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
VRYGOND	153	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
WELCOME	154	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
WELTEVREDEN VALLEY	155	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
WESTGATE	156	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
WESTLAKE	157	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
WESTLAKE	158	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
WESTRIDGE	159	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WESTRIDGE	160	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WETTON	161	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WILDWOOD	162	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WOLFGAT NATURE RESERVE	163	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
WOODLANDS	164	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WYNBERG	165	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WYNBERG	166	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
WYNBERG	167	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0
WYNBERG	168	0	0	0	0	0	1	1	1	0	0	1	1	1	1	0
ZEEKOEVLEI	169	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
Total		0	0	0	0	0	145	116	87	54	30	169	169	169	169	167
% of 169 Zones		0%	0%	0%	0%	0%	86%	69%	51%	32%	18%	100%	100%	100%	100%	99%

PMI Results for 30-minute Travel Time Threshold

Suburb	Model Zone	Private Vehicle		Minibus Taxi				Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed
ATHLONE	1	247735	41.4	100	110347	110347	16.2	54	11639	6281	10.6
ATHLONE	2	244012	40.4	95	122249	115732	16.1	41	2354	967	10.2
BARNET MOLOKWANA CORNER	3	237729	41.8	100	41999	41990	21.3	75	6251	4715	13.3
BEACON VALLEY	4	247368	40.4	100	45747	45748	17.8	91	9365	8563	10.9
BELGRAVIA	5	244800	39.4	83	121945	100964	15.3	98	657	647	9.8
BELTHORN ESTATE	6	247730	39.4	99	142662	140742	14.3	86	11574	9909	9.4
BERGVLIED	7	243653	39.0	94	70850	66615	15.4	20	14699	2922	10.6
BERGVLIED/TOKAI	8	239021	39.3	57	67398	38282	16.8	38	24454	9370	11.5
BISHOPSCOURT	9	242414	40.8	75	65988	49430	16.2	86	27894	23922	11.3
BONGANI	10	247408	40.6	58	44227	25842	18.8	25	0	0	10.9
BRIDGETOWN	11	244400	41.0	100	60863	60832	16.2	78	0	0	10.2
CLAREMONT	12	217458	42.0	76	77370	58562	15.8	89	32865	29213	11.4
CLAREMONT	13	247152	41.2	100	140415	140395	14.9	83	46400	38679	10.5
CLAREMONT	14	245237	41.9	56	126920	71492	15.5	89	44339	39433	10.6
CLAREMONT	15	245916	41.7	87	127430	110768	14.9	64	49628	31940	10.7
CLAREMONT	16	244331	41.4	100	142118	142118	14.6	100	52988	52988	10.4
COLORADO PARK	17	247610	39.5	100	71477	71477	15.2	78	358	278	9.7
CONSTANTIA	18	239981	40.5	16	48041	7597	18.2	0	1012	0	13.1
CONSTANTIA	19	240347	39.7	71	27611	19524	18.6	0	852	0	12.7
CONSTANTIA	20	240479	41.1	53	49347	26244	18.2	0	0	0	10.1
CONSTANTIA	21	240244	37.0	77	52014	39966	16.1	0	15181	0	11.6
CONSTANTIA	22	241506	38.9	47	82209	38615	17.0	33	18468	6134	11.7
CONSTANTIA	23	241070	39.7	88	87911	77339	16.8	4	19018	749	11.8
CONSTANTIA	24	245484	39.9	74	89344	65811	14.8	5	27053	1329	10.3
CRAWFORD	25	247409	39.7	79	142341	113139	15.0	4	10833	457	9.5
CROSSROADS	26	247595	41.1	98	80541	79231	17.3	65	2259	1470	10.9
DIEPRIVER	27	246944	39.7	74	103780	76371	14.1	42	32787	13704	10.1
DIEPRIVER	28	244310	40.9	99	109246	108118	14.7	99	5355	5287	9.1
EAGLE PARK	29	247834	40.0	42	82098	34747	15.0	40	0	0	9.3
EASTRIDGE	30	247748	40.7	100	46192	46193	19.1	88	9521	8378	11.4
EASTRIDGE	31	247780	40.5	100	46863	46863	19.3	100	10555	10555	11.4
EKUPHUMULENI/GRACELAND	32	223837	40.0	99	38426	38187	21.4	98	6078	5940	13.1
ELFINDALE	33	239624	37.1	31	74805	23545	14.5	38	16265	6234	9.9
ENDLOVINI INFORMAL SETTLEMENT	34	175090	38.9	55	36742	20349	20.9	25	3139	780	13.2
ENKANINI INFORMAL SETTLEMENT	35	118499	41.6	17	25170	4175	23.5	13	5451	692	14.7
EYETHU	36	229747	39.6	100	40254	40254	20.7	100	6150	6150	12.9
GATESVILLE	37	246556	40.1	60	74704	44862	14.6	94	7277	6834	9.8
GOOD HOPE	38	246730	39.4	97	43309	42144	19.9	43	4444	1899	12.2
GRASSY PARK	39	245829	40.4	98	98057	96171	15.2	79	792	630	9.4
GUGULETHU	40	247560	39.4	97	108463	105142	18.5	48	0	0	10.5
GUGULETHU	41	246662	38.4	100	101891	101891	16.6	98	1643	1606	9.8
GUGULETHU	42	247160	37.7	100	105779	105779	15.8	94	1237	1168	8.7
HANOVER PARK	43	247189	39.5	100	132062	132061	13.6	87	5508	4777	9.4
HANOVER PARK	44	245970	39.9	100	126403	126403	13.5	87	5632	4911	9.4
HARARE	45	176005	39.0	99	34136	33856	20.7	88	4960	4388	12.9
HATTON	46	244533	40.1	100	69694	69656	14.2	100	9355	9355	9.8
HAZENDAL	47	247615	41.8	95	81046	76900	17.5	68	4916	3364	10.8
HEATHFIELD	48	245988	39.1	47	75289	35413	14.8	46	25369	11695	10.3
HEIDEVELD	49	247787	40.3	100	145117	145117	18.7	70	2029	1429	10.4
HEIDEVELD	50	247107	40.8	100	77750	77712	16.3	99	1518	1499	10.6
IKWEZI PARK	51	247711	37.9	100	41904	41885	16.6	97	613	593	10.5
ILITHA PARK	52	230585	39.6	90	38158	34328	19.5	77	6612	5100	12.3
KENILWORTH	53	245563	41.8	82	120227	98187	14.9	79	61852	48903	10.9
KENILWORTH	54	245171	39.3	87	143780	124686	14.3	38	29651	11138	9.2
KENILWORTH	55	247222	41.1	100	156561	156561	14.7	30	55148	16803	10.2
KENILWORTH	56	246200	41.3	99	108847	107727	13.6	64	53781	34662	10.5
KENILWORTH	57	245171	36.6	100	116413	116414	13.4	36	34070	12285	9.9
KEWTOWN	58	247695	39.2	94	74724	70435	16.8	66	3552	2331	10.8
KHAYA	59	237622	38.4	100	43437	43249	20.4	95	5657	5375	12.3
KIRSTENHOF	60	242802	40.6	93	58712	54717	17.7	42	0	0	9.6
KUYASA	61	137492	40.1	50	29964	15116	22.2	47	4618	2176	13.5
LAKESIDE	62	246374	41.0	88	60828	53602	19.6	0	0	0	10.5
LANSLOWNE	63	245599	41.0	87	145085	126067	14.5	80	10182	8140	9.6
LANSLOWNE	64	247843	40.2	100	154494	154494	14.4	84	8940	7526	9.5
LANSLOWNE	65	244026	40.9	99	153681	151383	14.0	95	8053	7625	9.3

Suburb	Model Zone	Private Vehicle		Minibus Taxi				Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed
LANSDOWNE	66	247754	39.5	88	154290	136203	14.1	52	7187	3765	9.4
LAVENDER HILL	67	246771	40.0	98	79965	78615	16.6	61	0	0	10.0
LENTEGEUR	68	246184	39.5	91	53122	48167	17.3	71	1137	803	10.6
LENTEGEUR	69	247534	40.0	99	45913	45614	17.5	86	724	622	10.8
LENTEGEUR	70	247375	39.6	100	53130	53130	16.0	100	2374	2374	10.3
LOTUS RIVER	71	246273	39.6	98	118020	115239	14.5	92	0	0	8.7
MANDELA PARK	72	167845	40.0	99	33365	33005	21.7	97	6158	5990	13.6
MANENBERG	73	247383	38.3	93	57699	53639	13.1	95	0	0	9.4
MANENBERG	74	247797	39.1	100	94278	94278	16.3	84	3845	3216	10.1
MANENBERG	75	247738	39.1	100	66489	66453	14.3	99	3533	3503	10.0
MEADOWRIDGE	76	245072	39.6	79	63854	50421	14.8	5	5355	263	10.2
MITCHELLS PLAIN CBD	77	239169	39.7	100	37511	37511	17.5	100	801	801	10.6
MORGANS VILLAGE	78	247894	40.2	87	54117	46957	15.4	60	0	0	9.6
MOUNTVIEW	79	247766	38.7	99	121325	119539	13.8	100	0	0	9.0
MOWBRAY	80	243292	42.6	100	51910	51866	18.9	95	12640	12006	12.9
MOWBRAY	81	245921	42.5	100	60885	60877	18.1	74	12099	8935	11.7
MUIZENBERG	82	246747	40.2	59	60020	35623	20.0	17	0	0	11.7
MUIZENBERG	83	242118	40.0	83	47480	39256	18.8	34	0	0	11.2
MUIZENBERG	84	245324	39.2	83	42931	35505	22.1	27	0	0	10.1
MXOLISI PHETANI	85	245747	40.1	100	44267	44254	18.9	64	3315	2132	12.1
NEW WOODLANDS	86	247706	38.2	100	44999	44999	15.0	83	840	699	10.0
NEWFIELDS	87	244771	34.7	68	59468	40500	13.2	61	3431	2102	8.8
NEWFIELDS	88	247834	37.9	100	79052	79052	13.7	100	12242	12242	9.5
NEWLANDS	89	241076	40.8	65	10911	7147	15.8	37	7137	2659	11.8
NEWLANDS	90	230814	41.2	63	83244	52323	15.6	84	11815	9943	11.5
NONQUBELA	91	238661	40.4	97	40226	38936	20.5	95	5852	5569	13.0
NYANGA	92	247309	39.4	100	91885	91792	16.7	97	304	296	10.3
OTTERY	93	247035	39.1	86	158808	137086	14.5	60	0	0	9.0
OTTERY	94	246260	35.6	74	126135	93404	13.3	85	0	0	8.1
OTTERY	95	240410	37.8	93	73486	68162	13.1	80	0	0	8.6
PARKWOOD	96	247659	39.3	100	102752	102752	14.3	84	792	667	9.1
PELIKAN HEIGHTS	97	247859	39.0	64	33966	21784	17.8	19	0	0	9.9
PELIKAN PARK	98	247538	38.8	48	48311	23137	16.5	36	0	0	10.2
PENLYN ESTATE	99	247807	38.9	27	141944	38853	14.3	100	9229	9228	9.3
PHILIPPI	100	247899	40.8	20	22313	4352	12.4	0	344	0	9.5
PHILIPPI	101	247581	39.7	100	152582	152447	15.8	65	843	549	9.8
PHILIPPI	102	244162	39.9	97	50742	49391	16.6	77	613	473	10.7
PHILIPPI	103	246330	38.2	99	100332	99738	15.7	32	0	0	9.9
PHILIPPI	104	246230	39.9	99	86811	86177	16.3	63	304	193	10.4
PHILIPPI	105	243749	39.5	86	61953	53446	16.5	49	346	171	10.5
PHILIPPI	106	247553	39.0	98	59458	58008	15.6	50	4343	2192	9.9
PHILIPPI	107	247158	38.6	100	80746	80746	15.3	33	318	105	9.7
PHILIPPI	108	240087	37.9	44	96306	41978	13.6	20	0	0	9.2
PHILIPPI	109	247016	39.4	13	33412	4197	14.4	3	0	0	9.9
PHILIPPI	110	247824	35.6	20	52167	10227	15.6	18	0	0	9.5
PHILIPPI	111	247773	38.3	61	23755	14560	12.2	6	0	0	8.8
PHILIPPI	112	247158	40.1	32	94934	30634	14.3	25	0	0	8.9
PHILIPPI PARK	113	247899	39.7	100	82870	82516	16.5	83	1569	1304	10.3
PINATI ESTATE	114	246291	40.3	100	140979	140979	13.7	92	6832	6299	9.2
PLUMSTEAD	115	238938	40.4	95	113259	107862	14.5	82	28950	23608	10.6
PLUMSTEAD	116	246395	40.0	95	93426	88522	13.3	61	19710	12036	9.6
PLUMSTEAD	117	246991	39.6	67	61455	41056	13.8	91	21828	19757	10.0
PORTLAND	118	247598	39.9	100	45332	45332	18.0	100	877	877	10.9
PORTLAND	119	247726	40.3	100	46170	46170	16.8	100	301	301	10.4
RETREAT	120	245139	40.3	86	80335	68848	16.2	68	6297	4313	9.6
RETREAT	121	239260	41.0	100	55344	55344	16.8	86	0	0	9.2
ROCKLANDS	122	247587	40.6	100	49017	49017	18.0	97	2504	2440	11.2
ROCKLANDS	123	247314	41.8	100	45935	45935	18.8	90	1174	1063	11.7
RONDEBOSCH	124	237617	40.7	97	17649	17035	14.9	59	59386	35290	12.2
RONDEBOSCH	125	247068	40.7	96	83231	79785	15.9	58	13574	7917	10.5
RONDEBOSCH	126	243743	40.7	45	98577	44698	15.6	86	42308	36461	10.9
RONDEBOSCH EAST	127	247732	40.6	59	133892	79347	14.8	0	9826	0	9.8
RONDEVLEI PARK	128	247770	40.2	100	69273	69273	15.3	78	3004	2357	9.9
ROSEBANK	129	244108	41.1	100	47039	47016	17.5	75	26263	19816	12.4
ROSEBANK	130	245550	41.9	58	43410	25165	16.8	67	26133	17492	11.8
RYLANDS	131	246294	40.5	33	85009	27951	15.1	100	8973	8932	9.8
SA INFANTRY BATTALION BASE	132	159314	41.4	72	37796	27266	23.7	25	5912	1482	14.6

Suburb	Model Zone	Private Vehicle			Minibus Taxi			Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed
SABATA DALINDYEBO SQUARE	133	229910	41.2	100	41806	41806	22.0	92	0	0	12.6
SEAWINDS	134	246901	39.6	100	58706	58706	16.7	71	39	28	10.0
SILVERTOWN	135	247679	40.4	100	84295	84295	16.0	97	10462	10185	10.4
SILWERTOWN	136	216572	41.7	100	40768	40768	22.7	100	6321	6321	13.9
SOUTHFIELD	137	247861	39.7	89	97247	86148	14.8	58	17952	10466	9.7
SOUTHFIELD	138	247107	39.5	99	71259	70552	13.7	96	28373	27231	9.7
STEENBERG	139	245918	40.3	100	66437	66338	17.1	76	5355	4094	10.5
STEENBERG	140	245502	40.8	99	67748	67351	18.8	56	0	0	9.8
STRANDFONTEIN	141	246296	35.9	88	29013	25574	17.0	53	0	0	10.3
SURREY ESTATE	142	246961	40.1	88	60713	53324	14.3	86	0	0	9.9
SYBRAND PARK	143	247534	42.2	80	102785	82333	17.1	55	8729	4762	11.1
TAFELSIG	144	247758	40.3	100	44012	44012	19.2	91	386	352	11.7
TAFELSIG	145	247761	40.2	100	42245	42246	19.4	90	260	234	12.0
THEMBOKWEZI	146	247286	41.6	79	57271	45039	18.8	73	7195	5256	12.2
TOKAI	147	239873	38.9	55	375	208	17.0	0	0	0	10.6
TOKAI	148	241633	39.0	82	60450	49314	17.6	0	0	0	9.7
UMRHABULO TRIANGLE	149	122868	40.4	45	25436	11346	23.5	92	4435	4099	14.4
UMRHABULO TRIANGLE	150	124689	41.6	99	24560	24423	23.1	98	4841	4750	14.6
VANGUARD	151	247730	40.9	100	81002	81002	16.2	100	1042	1042	10.6
VICTORIA MXENGE	152	239558	38.3	81	46335	37614	20.3	80	4100	3271	12.4
VRYGOND	153	247589	39.2	94	59259	55423	18.0	40	117	47	10.4
WELCOME	154	247869	41.0	100	81345	81305	17.1	88	169	149	11.0
WELTEVREDEN VALLEY	155	246565	39.7	100	46672	46645	13.5	54	129	70	9.4
WESTGATE	156	246422	39.0	100	53545	53545	16.0	43	1294	560	10.4
WESTLAKE	157	233232	38.8	100	36665	36665	19.3	0	0	0	10.0
WESTLAKE	158	240759	38.4	64	53614	34324	19.8	0	0	0	10.4
WESTRIDGE	159	247543	40.2	100	45987	45987	16.3	99	2304	2279	10.4
WESTRIDGE	160	247457	40.1	100	46817	46817	17.3	100	2374	2374	10.9
WETTON	161	244558	40.0	95	165601	156745	14.0	93	3873	3609	8.8
WILDWOOD	162	247844	38.2	100	70870	70870	15.0	86	1766	1514	9.9
WOLFGAT NATURE RESERVE	163	221998	41.2	57	38417	22056	20.8	7	0	0	13.1
WOODLANDS	164	247596	39.6	98	57356	56269	15.7	95	1169	1116	10.1
WYNBERG	165	236307	40.8	85	128512	109355	15.4	43	45239	19374	11.1
WYNBERG	166	246938	39.1	100	109266	109266	13.5	63	19310	12199	9.9
WYNBERG	167	247270	41.2	100	140026	140027	14.7	100	54776	54777	10.2
WYNBERG	168	246680	41.0	100	118894	118895	14.4	91	54796	49607	10.3
ZEEKOEVLEI	169	247853	38.8	27	71429	19454	15.5	2	0	0	8.9
Average		239861	39.9			65188	16.6			6313	10.6
% of Private Vehicle						27.2%	41.6%			2.6%	26.6%

Accessibility Deficiency for 30-minute Travel Time Threshold

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
ATHLONE	1	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ATHLONE	2	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BARNET MOLOKWANA CORNER	3	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BEACON VALLEY	4	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
BELGRAVIA	5	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BELTHORN ESTATE	6	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
BERGVLIT	7	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BERGVLIT/TOKAI	8	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0
BISHOPSCOURT	9	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
BONGANI	10	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
BRIDGETOWN	11	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CLAREMONT	12	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
CLAREMONT	13	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
CLAREMONT	14	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
CLAREMONT	15	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
CLAREMONT	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORADO PARK	17	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	18	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
CONSTANTIA	19	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
CONSTANTIA	20	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
CONSTANTIA	21	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
CONSTANTIA	22	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
CONSTANTIA	23	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	24	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CRAWFORD	25	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CROSSROADS	26	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
DIEPRIVER	27	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
DIEPRIVER	28	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
EAGLE PARK	29	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
EASTRIDGE	30	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
EASTRIDGE	31	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
EKUPHUMULENI/GRACELAND	32	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
ELFINDALE	33	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
ENDLOVINI INFORMAL SETTLEMENT	34	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
ENKANINI INFORMAL SETTLEMENT	35	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
EYETHU	36	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
GATESVILLE	37	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GOOD HOPE	38	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GRASSY PARK	39	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	40	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	41	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	42	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HANOVER PARK	43	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HANOVER PARK	44	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HARARE	45	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
HATTON	46	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
HAZENDAL	47	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HEATHFIELD	48	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0
HEIDEVELD	49	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HEIDEVELD	50	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
IKWEZI PARK	51	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ILITHA PARK	52	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
KENILWORTH	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KENILWORTH	54	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
KENILWORTH	55	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
KENILWORTH	56	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
KENILWORTH	57	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
KEWTOWN	58	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KHAYA	59	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KIRSTENHOF	60	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KUYASA	61	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
LAKESIDE	62	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSDOWNE	63	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSDOWNE	64	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSDOWNE	65	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSDOWNE	66	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LAVENDER HILL	67	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
LENTEGEUR	68	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LENTEGEUR	69	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LENTEGEUR	70	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LOTUS RIVER	71	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MANDELA PARK	72	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
MANENBERG	73	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MANENBERG	74	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MANENBERG	75	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MEADOWRIDGE	76	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MITCHELLS PLAIN CBD	77	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
MORGANS VILLAGE	78	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MOUNTVIEW	79	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MOWBRAY	80	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
MOWBRAY	81	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
MUIZENBERG	82	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
MUIZENBERG	83	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
MUIZENBERG	84	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
MXOLISI PHETANI	85	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
NEW WOODLANDS	86	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
NEWFIELDS	87	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
NEWFIELDS	88	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
NEWLANDS	89	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
NEWLANDS	90	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
NONQUBELA	91	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
NYANGA	92	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
OTTERY	93	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
OTTERY	94	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
OTTERY	95	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PARKWOOD	96	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PELIKAN HEIGHTS	97	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
PELIKAN PARK	98	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
PENLYN ESTATE	99	0	0	0	0	0	1	0	0	0	0	1	1	1	1	0
PHILIPPI	100	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	101	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	102	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	103	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	104	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	105	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	106	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	107	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	108	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	109	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	110	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PHILIPPI	111	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PHILIPPI	112	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
PHILIPPI PARK	113	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PINATI ESTATE	114	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PLUMSTEAD	115	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
PLUMSTEAD	116	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
PLUMSTEAD	117	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0
PORTLAND	118	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PORTLAND	119	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RETREAT	120	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RETREAT	121	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ROCKLANDS	122	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ROCKLANDS	123	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RONDEBOSCH	124	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0
RONDEBOSCH	125	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RONDEBOSCH	126	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
RONDEBOSCH EAST	127	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RONDEVLEI PARK	128	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ROSEBANK	129	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
ROSEBANK	130	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0
RYLANDS	131	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0
SA INFANTRY BATTALION BASE	132	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
SABATA DALINDYEBO SQUARE	133	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
SEAWINDS	134	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
SILVERTOWN	135	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
SILWERTOWN	136	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
SOUTHFIELD	137	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
SOUTHFIELD	138	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
STEENBERG	139	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
STEENBERG	140	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
STRANDFONTEIN	141	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
SURREY ESTATE	142	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
SYBRAND PARK	143	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
TAFELSIG	144	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
TAFELSIG	145	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
THEMBOKWEZI	146	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
TOKAI	147	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
TOKAI	148	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
UMRHABULO TRIANGLE	149	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
UMRHABULO TRIANGLE	150	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
VANGUARD	151	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
VICTORIA MXENGE	152	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
VRYGOND	153	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WELCOME	154	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WELTEVREDEN VALLEY	155	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTGATE	156	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTLAKE	157	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WESTLAKE	158	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
WESTRIDGE	159	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTRIDGE	160	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WETTON	161	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WILDWOOD	162	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WOLFGAT NATURE RESERVE	163	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
WOODLANDS	164	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WYNBERG	165	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
WYNBERG	166	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
WYNBERG	167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WYNBERG	168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZEEKOEVLEI	169	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
Total		0	0	0	0	0	48	27	19	10	6	165	160	157	150	130
% of 169 Zones		0	0%	0%	0%	0%	28%	16%	11%	6%	4%	98%	95%	93%	89%	77%

PMI Results for 35-minute Travel Time Threshold

Suburb	Model Zone	Private Vehicle		Minibus Taxi				Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed
ATHLONE	1	247735	41.4	100	175329	175329	16.2	54	56821	30663	10.6
ATHLONE	2	244012	40.4	95	187153	177176	16.1	41	30014	12319	10.2
BARNET MOLOKWANA CORNER	3	247850	41.8	100	74145	74129	21.3	75	8477	6394	13.3
BEACON VALLEY	4	247368	40.4	100	64231	64232	17.8	91	23162	21177	10.9
BELGRAVIA	5	244800	39.4	83	187824	155508	15.3	98	14248	14031	9.8
BELTHORN ESTATE	6	247730	39.4	99	202037	199317	14.3	86	31297	26794	9.4
BERGVLIT	7	247176	39.0	94	147543	138723	15.4	20	41287	8206	10.6
BERGVLIT/TOKAI	8	242544	39.3	57	140655	79891	16.8	38	38683	14822	11.5
BISHOPSCOURT	9	247871	40.8	75	158826	118973	16.2	86	63014	54040	11.3
BONGANI	10	247408	40.6	58	72051	42100	18.8	25	613	155	10.9
BRIDGETOWN	11	244400	41.0	100	136646	136575	16.2	78	1103	865	10.2
CLAREMONT	12	220005	42.0	76	161425	122183	15.8	89	52972	47086	11.4
CLAREMONT	13	247423	41.2	100	189469	189442	14.9	83	88844	74060	10.5
CLAREMONT	14	246206	41.9	56	181173	102051	15.5	89	84283	74956	10.6
CLAREMONT	15	246885	41.7	87	181852	158074	14.9	64	88061	56674	10.7
CLAREMONT	16	244331	41.4	100	194047	194047	14.6	100	86495	86495	10.4
COLORADO PARK	17	247610	39.5	100	111098	111098	15.2	78	8579	6656	9.7
CONSTANTIA	18	246737	40.5	16	121107	19150	18.2	0	20180	0	13.1
CONSTANTIA	19	245099	39.7	71	142536	100789	18.6	0	19655	0	12.7
CONSTANTIA	20	246924	41.1	53	115226	61280	18.2	0	0	0	10.1
CONSTANTIA	21	246777	37.0	77	123927	95221	16.1	0	41769	0	11.6
CONSTANTIA	22	246795	38.9	47	170816	80235	17.0	33	24235	8049	11.7
CONSTANTIA	23	246359	39.7	88	175907	154753	16.8	4	37462	1476	11.8
CONSTANTIA	24	247791	39.9	74	176458	129979	14.8	5	38013	1868	10.3
CRAWFORD	25	247409	39.7	79	207867	165221	15.0	4	22880	965	9.5
CROSSROADS	26	247595	41.1	98	116712	114813	17.3	65	9594	6242	10.9
DIEPRIVER	27	247825	39.7	74	171018	125851	14.1	42	68116	28470	10.1
DIEPRIVER	28	245191	40.9	99	169604	167853	14.7	99	28146	27786	9.1
EAGLE PARK	29	247834	40.0	42	192327	81400	15.0	40	126	51	9.3
EASTRIDGE	30	247748	40.7	100	64976	64977	19.1	88	20852	18349	11.4
EASTRIDGE	31	247780	40.5	100	79251	79251	19.3	100	19068	19068	11.4
EKUPHUMULENI/GRACELAND	32	246563	40.0	99	45998	45712	21.4	98	7944	7763	13.1
ELFINDALE	33	240505	37.1	31	165532	52101	14.5	38	39361	15086	9.9
ENDLOVINI INFORMAL SETTLEMENT	34	247871	38.9	55	45431	25161	20.9	25	8209	2040	13.2
ENKANINI INFORMAL SETTLEMENT	35	245573	41.6	17	40999	6801	23.5	13	7265	923	14.7
EYETHU	36	247154	39.6	100	48290	48290	20.7	100	7744	7744	12.9
GATESVILLE	37	246556	40.1	60	160708	96508	14.6	94	29982	28157	9.8
GOOD HOPE	38	247899	39.4	97	49841	48500	19.9	43	19841	8475	12.2
GRASSY PARK	39	245829	40.4	98	189618	185971	15.2	79	16610	13198	9.4
GUGULETHU	40	247560	39.4	97	194100	188157	18.5	48	1356	651	10.5
GUGULETHU	41	246662	38.4	100	195962	195962	16.6	98	3614	3532	9.8
GUGULETHU	42	247160	37.7	100	201438	201438	15.8	94	2141	2021	8.7
HANOVER PARK	43	247189	39.5	100	208083	208081	13.6	87	24798	21503	9.4
HANOVER PARK	44	245970	39.9	100	201769	201769	13.5	87	22103	19272	9.4
HARARE	45	247412	39.0	99	44086	43724	20.7	88	7227	6394	12.9
HATTON	46	244533	40.1	100	170969	170876	14.2	100	28850	28850	9.8
HAZENDAL	47	247615	41.8	95	178012	168906	17.5	68	19982	13674	10.8
HEATHFIELD	48	246957	39.1	47	152814	71877	14.8	46	42693	19680	10.3
HEIDEVELD	49	247787	40.3	100	210504	210504	18.7	70	13439	9465	10.4
HEIDEVELD	50	247107	40.8	100	155898	155822	16.3	99	13281	13113	10.6
IKWEZI PARK	51	247711	37.9	100	81818	81780	16.6	97	7470	7222	10.5
ILITHA PARK	52	247301	39.6	90	45680	41095	19.5	77	7503	5788	12.3
KENILWORTH	53	246532	41.8	82	192634	157320	14.9	79	97642	77200	10.9
KENILWORTH	54	246140	39.3	87	193671	167951	14.3	38	64611	24269	9.2
KENILWORTH	55	247493	41.1	100	197198	197198	14.7	30	83738	25514	10.2
KENILWORTH	56	247169	41.3	99	169940	168191	13.6	64	87208	56205	10.5
KENILWORTH	57	246140	36.6	100	167161	167162	13.4	36	91273	32909	9.9
KEWTOWN	58	247695	39.2	94	173784	163809	16.8	66	20866	13688	10.8
KHAYA	59	247186	38.4	100	50975	50754	20.4	95	8152	7745	12.3
KIRSTENHOF	60	246325	40.6	93	96447	89884	17.7	42	0	0	9.6
KUYASA	61	246636	40.1	50	43221	21804	22.2	47	7177	3382	13.5
LAKESIDE	62	247304	41.0	88	100050	88165	19.6	0	0	0	10.5
LANSLOWNE	63	245599	41.0	87	196320	170586	14.5	80	61918	49497	9.6
LANSLOWNE	64	247843	40.2	100	216986	216986	14.4	84	64867	54604	9.5
LANSLOWNE	65	244026	40.9	99	216006	212776	14.0	95	27927	26443	9.3

Suburb	Model Zone	Private Vehicle		Minibus Taxi				Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed
LANSDOWNE	66	247754	39.5	88	201424	177811	14.1	52	78306	41018	9.4
LAVENDER HILL	67	247652	40.0	98	164717	161935	16.6	61	5355	3254	10.0
LENTEGEUR	68	246184	39.5	91	89763	81391	17.3	71	19496	13764	10.6
LENTEGEUR	69	247534	40.0	99	82100	81565	17.5	86	21276	18265	10.8
LENTEGEUR	70	247375	39.6	100	78481	78481	16.0	100	22799	22799	10.3
LOTUS RIVER	71	246273	39.6	98	220566	215368	14.5	92	741	682	8.7
MANDELA PARK	72	246469	40.0	99	43444	42975	21.7	97	6885	6697	13.6
MANENBERG	73	247383	38.3	93	108138	100529	13.1	95	19111	18146	9.4
MANENBERG	74	247797	39.1	100	196393	196393	16.3	84	20113	16821	10.1
MANENBERG	75	247738	39.1	100	106574	106515	14.3	99	19369	19202	10.0
MEADOWRIDGE	76	247379	39.6	79	147385	116380	14.8	5	18730	919	10.2
MITCHELLS PLAIN CBD	77	239169	39.7	100	53710	53710	17.5	100	8279	8279	10.6
MORGANS VILLAGE	78	247894	40.2	87	84091	72964	15.4	60	1339	798	9.6
MOUNTVIEW	79	247766	38.7	99	184542	181825	13.8	100	9571	9571	9.0
MOWBRAY	80	245839	42.6	100	146078	145953	18.9	95	72629	68985	12.9
MOWBRAY	81	246286	42.5	100	163467	163446	18.1	74	32528	24022	11.7
MUIZENBERG	82	247018	40.2	59	136361	80931	20.0	17	6881	1181	11.7
MUIZENBERG	83	242118	40.0	83	98236	81220	18.8	34	1981	666	11.2
MUIZENBERG	84	246565	39.2	83	100107	82789	22.1	27	0	0	10.1
MXOLISI PHETANI	85	247588	40.1	100	81695	81671	18.9	64	12692	8160	12.1
NEW WOODLANDS	86	247706	38.2	100	77882	77882	15.0	83	25415	21145	10.0
NEWFIELDS	87	244771	34.7	68	143643	97825	13.2	61	9848	6032	8.8
NEWFIELDS	88	247834	37.9	100	181257	181257	13.7	100	32151	32149	9.5
NEWLANDS	89	246277	40.8	65	75097	49187	15.8	37	47109	17550	11.8
NEWLANDS	90	234928	41.2	63	144696	90949	15.6	84	17244	14511	11.5
NONQUBELA	91	246853	40.4	97	63124	61099	20.5	95	7559	7194	13.0
NYANGA	92	247309	39.4	100	167779	167609	16.7	97	9151	8885	10.3
OTTERY	93	247035	39.1	86	212965	183836	14.5	60	18938	11389	9.0
OTTERY	94	246260	35.6	74	209258	154957	13.3	85	1759	1501	8.1
OTTERY	95	240410	37.8	93	195353	181199	13.1	80	3391	2697	8.6
PARKWOOD	96	247659	39.3	100	205219	205219	14.3	84	21625	18193	9.1
PELIKAN HEIGHTS	97	247859	39.0	64	99112	63563	17.8	19	0	0	9.9
PELIKAN PARK	98	247538	38.8	48	154893	74179	16.5	36	741	268	10.2
PENLYN ESTATE	99	247807	38.9	27	201128	55053	14.3	100	23509	23507	9.3
PHILIPPI	100	247899	40.8	20	43729	8528	12.4	0	3575	0	9.5
PHILIPPI	101	247581	39.7	100	224633	224434	15.8	65	29858	19437	9.8
PHILIPPI	102	244162	39.9	97	89953	87558	16.6	77	2781	2146	10.7
PHILIPPI	103	246330	38.2	99	197825	196653	15.7	32	15972	5153	9.9
PHILIPPI	104	246230	39.9	99	162827	161637	16.3	63	15600	9862	10.4
PHILIPPI	105	243749	39.5	86	112413	96976	16.5	49	8866	4359	10.5
PHILIPPI	106	247553	39.0	98	104438	101890	15.6	50	23148	11679	9.9
PHILIPPI	107	247158	38.6	100	175891	175891	15.3	33	4264	1400	9.7
PHILIPPI	108	240087	37.9	44	208027	90674	13.6	20	17239	3486	9.2
PHILIPPI	109	247016	39.4	13	55765	7005	14.4	3	1339	36	9.9
PHILIPPI	110	247824	35.6	20	185793	36422	15.6	18	0	0	9.5
PHILIPPI	111	247773	38.3	61	114693	70297	12.2	6	10611	680	8.8
PHILIPPI	112	247158	40.1	32	198721	64124	14.3	25	1987	490	8.9
PHILIPPI PARK	113	247899	39.7	100	123466	122938	16.5	83	14890	12374	10.3
PINATI ESTATE	114	246291	40.3	100	206205	206205	13.7	92	27961	25777	9.2
PLUMSTEAD	115	239907	40.4	95	176404	167998	14.5	82	76205	62143	10.6
PLUMSTEAD	116	247276	40.0	95	178206	168851	13.3	61	72008	43969	9.6
PLUMSTEAD	117	247872	39.6	67	173229	115727	13.8	91	72749	65844	10.0
PORTLAND	118	247598	39.9	100	72634	72634	18.0	100	16522	16522	10.9
PORTLAND	119	247726	40.3	100	66266	66266	16.8	100	18062	18062	10.4
RETREAT	120	245139	40.3	86	168497	144403	16.2	68	15755	10791	9.6
RETREAT	121	240229	41.0	100	136634	136634	16.8	86	0	0	9.2
ROCKLANDS	122	247587	40.6	100	93674	93674	18.0	97	15041	14653	11.2
ROCKLANDS	123	247314	41.8	100	69316	69316	18.8	90	14564	13176	11.7
RONDEBOSCH	124	240762	40.7	97	70987	68517	14.9	59	89664	53282	12.2
RONDEBOSCH	125	247156	40.7	96	162434	155708	15.9	58	64223	37457	10.5
RONDEBOSCH	126	245183	40.7	45	166594	75538	15.6	86	73889	63678	10.9
RONDEBOSCH EAST	127	247732	40.6	59	184736	109478	14.8	0	60284	0	9.8
RONDEVLEI PARK	128	247770	40.2	100	109711	109711	15.3	78	21650	16981	9.9
ROSEBANK	129	246655	41.1	100	127658	127595	17.5	75	73855	55724	12.4
ROSEBANK	130	246525	41.9	58	127528	73928	16.8	67	67282	45035	11.8
RYLANDS	131	246294	40.5	33	177672	58418	15.1	100	22494	22391	9.8
SA INFANTRY BATTALION BASE	132	247136	41.4	72	48788	35196	23.7	25	7725	1936	14.6

Suburb	Model Zone	Private Vehicle			Minibus Taxi			Golden Arrow Bus Service			
		Jobs Accessible	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed	% of model zone within walking distance	Jobs Accessible	Job Accessible within walking distance of PT facility	Aerial Speed
SABATA DALINDYEBO SQUARE	133	247899	41.2	100	50882	50882	22.0	92	2151	1972	12.6
SEAWINDS	134	247782	39.6	100	116102	116102	16.7	71	5394	3839	10.0
SILVERTOWN	135	247679	40.4	100	170745	170745	16.0	97	18076	17596	10.4
SILWERTOWN	136	247646	41.7	100	48804	48804	22.7	100	8176	8176	13.9
SOUTHFIELD	137	247861	39.7	89	181250	160562	14.8	58	41611	24258	9.7
SOUTHFIELD	138	247107	39.5	99	165270	163630	13.7	96	69157	66373	9.7
STEENBERG	139	246799	40.3	100	124639	124453	17.1	76	24077	18407	10.5
STEENBERG	140	247809	40.8	99	153690	152789	18.8	56	0	0	9.8
STRANDFONTEIN	141	246296	35.9	88	82270	72518	17.0	53	0	0	10.3
SURREY ESTATE	142	246961	40.1	88	159353	139957	14.3	86	22729	19641	9.9
SYBRAND PARK	143	247534	42.2	80	175109	140265	17.1	55	41697	22744	11.1
TAFELSIG	144	247758	40.3	100	52854	52854	19.2	91	14987	13664	11.7
TAFELSIG	145	247783	40.2	100	48624	48625	19.4	90	14972	13450	12.0
THEMBOKWEZI	146	247286	41.6	79	98778	77681	18.8	73	20282	14815	12.2
TOKAI	147	245522	38.9	55	32689	18125	17.0	0	0	0	10.6
TOKAI	148	247465	39.0	82	93893	76596	17.6	0	0	0	9.7
UMRHABULO TRIANGLE	149	237901	40.4	45	43879	19573	23.5	92	6994	6464	14.4
UMRHABULO TRIANGLE	150	237738	41.6	99	40389	40164	23.1	98	6655	6530	14.6
VANGUARD	151	247730	40.9	100	178876	178876	16.2	100	27671	27671	10.6
VICTORIA MXENGE	152	247750	38.3	81	74577	60540	20.3	80	7094	5658	12.4
VRYGOND	153	247860	39.2	94	127287	119047	18.0	40	5472	2175	10.4
WELCOME	154	247869	41.0	100	163295	163214	17.1	88	26571	23360	11.0
WELTEVREDEN VALLEY	155	246565	39.7	100	83758	83710	13.5	54	3204	1715	9.4
WESTGATE	156	246422	39.0	100	92991	92991	16.0	43	15463	6682	10.4
WESTLAKE	157	239765	38.8	100	84043	84043	19.3	0	0	0	10.0
WESTLAKE	158	247615	38.4	64	98873	63300	19.8	0	0	0	10.4
WESTRIDGE	159	247543	40.2	100	82786	82786	16.3	99	18204	18007	10.4
WESTRIDGE	160	247457	40.1	100	80596	80596	17.3	100	15257	15257	10.9
WETTON	161	244558	40.0	95	217690	206048	14.0	93	17261	16084	8.8
WILDWOOD	162	247844	38.2	100	111909	111909	15.0	86	8265	7086	9.9
WOLFGAT NATURE RESERVE	163	247899	41.2	57	45437	26086	20.8	7	698	48	13.1
WOODLANDS	164	247596	39.6	98	84672	83066	15.7	95	18116	17284	10.1
WYNBERG	165	238383	40.8	85	182109	154962	15.4	43	77794	33315	11.1
WYNBERG	166	247819	39.1	100	185379	185379	13.5	63	84416	53329	9.9
WYNBERG	167	247541	41.2	100	208255	208256	14.7	100	94405	94406	10.2
WYNBERG	168	247561	41.0	100	198279	198280	14.4	91	90076	81546	10.3
ZEEKOEVLEI	169	247853	38.8	27	166150	45250	15.5	2	0	0	8.9
Average		246221	39.9			114511	16.6			17645	10.6
% of Private Vehicle						46.5%	41.6%			7.2%	26.6%

Accessibility Deficiency for 35-minute Travel Time Threshold

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
ATHLONE	1	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
ATHLONE	2	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
BARNET MOLOKWANA CORNER	3	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BEACON VALLEY	4	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
BELGRAVIA	5	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
BELTHORN ESTATE	6	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
BERGVLIT	7	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BERGVLIT/TOKAI	8	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
BISHOPSCOURT	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BONGANI	10	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
BRIDGETOWN	11	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CLAREMONT	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLAREMONT	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLAREMONT	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLAREMONT	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CLAREMONT	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COLORADO PARK	17	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	18	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
CONSTANTIA	19	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	20	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	21	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	22	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	23	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CONSTANTIA	24	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CRAWFORD	25	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
CROSSROADS	26	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
DIEPRIVER	27	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
DIEPRIVER	28	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
EAGLE PARK	29	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
EASTRIDGE	30	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
EASTRIDGE	31	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
EKUPHUMULENI/GRACELAND	32	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ELFINDALE	33	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
ENDLOVINI INFORMAL SETTLEMENT	34	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
ENKANINI INFORMAL SETTLEMENT	35	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
EYETHU	36	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GATESVILLE	37	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
GOOD HOPE	38	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
GRASSY PARK	39	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
GUGULETHU	40	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	41	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
GUGULETHU	42	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HANOVER PARK	43	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
HANOVER PARK	44	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
HARARE	45	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
HATTON	46	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
HAZENDAL	47	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
HEATHFIELD	48	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
HEIDEVELD	49	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
HEIDEVELD	50	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
IKWEZI PARK	51	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ILITHA PARK	52	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
KENILWORTH	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KENILWORTH	54	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
KENILWORTH	55	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
KENILWORTH	56	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KENILWORTH	57	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
KEWTOWN	58	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
KHAYA	59	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KIRSTENHOF	60	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
KUYASA	61	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
LAKESIDE	62	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
LANSDOWNE	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LANSDOWNE	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LANSDOWNE	65	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
LANSDOWNE	66	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
LAVENDER HILL	67	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
LENTEGEUR	68	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
LENTEGEUR	69	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
LENTEGEUR	70	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
LOTUS RIVER	71	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MANDELA PARK	72	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MANENBERG	73	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
MANENBERG	74	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
MANENBERG	75	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
MEADOWRIDGE	76	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MITCHELLS PLAIN CBD	77	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
MORGANS VILLAGE	78	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MOUNTVIEW	79	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
MOWBRAY	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MOWBRAY	81	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
MUIZENBERG	82	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MUIZENBERG	83	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MUIZENBERG	84	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
MXOLISI PHETANI	85	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
NEW WOODLANDS	86	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
NEWFIELDS	87	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
NEWFIELDS	88	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
NEWLANDS	89	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
NEWLANDS	90	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
NONQUBELA	91	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
NYANGA	92	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
OTTERY	93	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
OTTERY	94	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
OTTERY	95	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PARKWOOD	96	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
PELIKAN HEIGHTS	97	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PELIKAN PARK	98	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PENLYN ESTATE	99	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
PHILIPPI	100	0	0	0	0	0	1	1	1	1	0	1	1	1	1	1
PHILIPPI	101	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
PHILIPPI	102	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	103	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	104	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
PHILIPPI	105	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	106	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
PHILIPPI	107	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	108	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	109	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1
PHILIPPI	110	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
PHILIPPI	111	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI	112	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
PHILIPPI PARK	113	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
PINATI ESTATE	114	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
PLUMSTEAD	115	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLUMSTEAD	116	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PLUMSTEAD	117	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PORTLAND	118	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
PORTLAND	119	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
RETREAT	120	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
RETREAT	121	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
ROCKLANDS	122	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
ROCKLANDS	123	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
RONDEBOSCH	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RONDEBOSCH	125	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
RONDEBOSCH	126	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RONDEBOSCH EAST	127	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
RONDEVLEI PARK	128	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
ROSEBANK	129	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ROSEBANK	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RYLANDS	131	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
SA INFANTRY BATTALION BASE	132	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
SABATA DALINDYEBO SQUARE	133	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
SEAWINDS	134	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
SILVERTOWN	135	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
SILWERTOWN	136	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1

Suburb	Zone	Groups using Private Vehicles that Fall Below Sufficiency Threshold					Groups using Minibus Taxis that Fall Below Sufficiency Threshold					Groups using Golden Arrow Bus Services that Fall Below Sufficiency Threshold				
		50%	40%	30%	20%	10%	50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
SOUTHFIELD	137	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
SOUTHFIELD	138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STEENBERG	139	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
STEENBERG	140	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
STRANDFONTEIN	141	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
SURREY ESTATE	142	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
SYBRAND PARK	143	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
TAFELSIG	144	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
TAFELSIG	145	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
THEMBOKWEZI	146	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
TOKAI	147	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
TOKAI	148	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
UMRHABULO TRIANGLE	149	0	0	0	0	0	1	1	1	0	0	1	1	1	1	1
UMRHABULO TRIANGLE	150	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1
VANGUARD	151	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0
VICTORIA MXENGE	152	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
VRYGOND	153	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WELCOME	154	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
WELTEVREDEN VALLEY	155	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTGATE	156	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTLAKE	157	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTLAKE	158	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WESTRIDGE	159	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
WESTRIDGE	160	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
WETTON	161	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0
WILDWOOD	162	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
WOLFGAT NATURE RESERVE	163	0	0	0	0	0	1	1	0	0	0	1	1	1	1	1
WOODLANDS	164	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0
WYNBERG	165	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
WYNBERG	166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WYNBERG	167	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WYNBERG	168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ZEEKOEVLEI	169	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1
Total		0	0	0	0	0	13	9	7	3	2	147	144	132	102	75
% of 169 Zones		0%	0%	0%	0%	0%	8%	5%	4%	2%	1%	87%	85%	78%	60%	44%

IRT Phase 2A Route Assessment based on GABS

Zone	Suburb	Jobs Available	Households	BRT Stops 400m Buffer Area	BRT Stops 400m Buffer %	No. of PT reliant groups experiencing accessibility shortfalls					No. of PT reliant underserved groups that lie along IRT route				
						50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
1	ATHLONE	164	489	0	0	0	0	0	0	0	0	0	0	0	0
2	ATHLONE	3887	2601	0	0	0	0	0	0	0	0	0	0	0	0
3	BARNET MOLOKWANA CORNER	49	6338	513123	83	1	1	1	1	1	1	1	1	1	1
4	BEACON VALLEY	531	6230	609118	32	1	1	1	1	1	1	1	1	1	1
5	BELGRAVIA	3099	2951	0	0	0	0	0	0	0	0	0	0	0	0
6	BELTHORN ESTATE	169	1288	0	0	0	0	0	0	0	0	0	0	0	0
7	BERGVLIT	723	1383	0	0	0	0	0	0	0	0	0	0	0	0
8	BERGVLIT/TOKAI	5355	1673	0	0	0	0	0	0	0	0	0	0	0	0
9	BISHOPSCOURT	28	817	0	0	0	0	0	0	0	0	0	0	0	0
10	BONGANI	491	5243	656893	12	1	1	1	1	1	1	1	1	1	1
11	BRIDGETOWN	3499	5375	0	0	0	0	0	0	0	0	0	0	0	0
13	CLAREMONT	476	936	5394	1	0	0	0	0	0	0	0	0	0	0
12	CLAREMONT	27894	4189	311156	15	0	0	0	0	0	0	0	0	0	0
14	CLAREMONT	1693	1773	306863	25	0	0	0	0	0	0	0	0	0	0
15	CLAREMONT	1014	1618	232388	33	0	0	0	0	0	0	0	0	0	0
16	CLAREMONT	3568	855	428396	71	0	0	0	0	0	0	0	0	0	0
17	COLORADO PARK	289	2901	595926	43	1	1	1	1	1	1	1	1	1	1
20	CONSTANTIA	6	201	0	0	0	0	0	0	0	0	0	0	0	0
21	CONSTANTIA	241	977	0	0	0	0	0	0	0	0	0	0	0	0
24	CONSTANTIA	108	1178	66638	4	0	0	0	0	0	0	0	0	0	0
18	CONSTANTIA	193	565	358965	5	0	0	0	0	0	0	0	0	0	0
22	CONSTANTIA	223	1375	318457	5	0	0	0	0	0	0	0	0	0	0
19	CONSTANTIA	22	245	1096929	42	0	0	0	0	0	0	0	0	0	0
23	CONSTANTIA	659	1693	1626173	46	0	0	0	0	0	0	0	0	0	0
25	CRAWFORD	490	2022	0	0	0	0	0	0	0	0	0	0	0	0
26	CROSSROADS	304	16062	482306	17	1	1	1	1	1	1	1	1	1	1
27	DIEPRIVER	74	1117	0	0	0	0	0	0	0	0	0	0	0	0
28	DIEPRIVER	2708	1828	0	0	0	0	0	0	0	0	0	0	0	0
29	EAGLE PARK	65	3434	304475	35	0	0	0	0	0	0	0	0	0	0
31	EASTRIDGE	119	2643	78751	12	1	1	1	1	1	1	1	1	1	1
30	EASTRIDGE	151	4630	682235	70	1	1	1	1	1	1	1	1	1	1
32	EKUPHUMULENI/GRACE LAND	1336	3216	726300	88	1	1	1	1	1	1	1	1	1	1
33	ELFINDALE	7394	1242	0	0	0	0	0	0	0	0	0	0	0	0
34	ENDLOVINI INFORMAL SETTLEMENT	6	13493	768352	34	1	1	1	1	1	1	1	1	1	1
35	ENKANINI INFORMAL SETTLEMENT	0	14891	1359651	92	1	1	1	1	1	1	1	1	1	1
36	EYETHU	745	4661	1055823	83	1	1	1	1	1	1	1	1	1	1
37	GATESVILLE	1343	1554	0	0	0	0	0	0	0	0	0	0	0	0
38	GOOD HOPE	0	1768	542092	33	1	1	1	1	1	1	1	1	1	1
39	GRASSY PARK	2070	9424	0	0	0	0	0	0	0	0	0	0	0	0
40	GUGULETHU	339	13923	0	0	1	1	1	1	1	0	0	0	0	0
41	GUGULETHU	1237	7922	0	0	1	1	1	1	1	0	0	0	0	0
42	GUGULETHU	739	10856	226220	11	1	1	1	1	1	1	1	1	1	1
44	HANOVER PARK	1929	5735	492801	33	0	0	0	0	0	0	0	0	0	0
43	HANOVER PARK	710	2143	433789	80	0	0	0	0	0	0	0	0	0	0
45	HARARE	465	20759	777501	45	1	1	1	1	1	1	1	1	1	1
46	HATTON	3366	0	0	0	0	0	0	0	0	0	0	0	0	0
47	HAZENDAL	284	1613	0	0	0	0	0	0	0	0	0	0	0	0
48	HEATHFIELD	942	2365	0	0	0	0	0	0	0	0	0	0	0	0
49	HEIDEVELD	112	1772	0	0	1	1	1	1	1	0	0	0	0	0
50	HEIDEVELD	792	2832	0	0	0	0	0	0	0	0	0	0	0	0
51	IKWEZI PARK	188	2211	33225	2	1	1	1	1	1	1	1	1	1	1
52	ILITHA PARK	598	7457	729539	41	1	1	1	1	1	1	1	1	1	1
53	KENILWORTH	1367	2157	98006	8	0	0	0	0	0	0	0	0	0	0
55	KENILWORTH	406	989	31273	13	0	0	0	0	0	0	0	0	0	0
54	KENILWORTH	1759	112	133737	13	0	0	0	0	0	0	0	0	0	0
56	KENILWORTH	730	1238	133342	22	0	0	0	0	0	0	0	0	0	0
57	KENILWORTH	1759	658	92650	23	0	0	0	0	0	0	0	0	0	0
58	KEWTOWN	204	2907	0	0	0	0	0	0	0	0	0	0	0	0
59	KHAYA	713	6361	1238536	70	1	1	1	1	1	1	1	1	1	1
60	KIRSTENHOF	1574	1786	0	0	0	0	0	0	0	0	0	0	0	0
61	KUYASA	88	5585	523053	39	1	1	1	1	1	1	1	1	1	1
62	LAKESIDE	595	1598	0	0	0	0	0	0	0	0	0	0	0	0
63	LANSDOWNE	2300	1692	291113	27	0	0	0	0	0	0	0	0	0	0
66	LANSDOWNE	145	1699	535972	35	0	0	0	0	0	0	0	0	0	0

Zone	Suburb	Jobs Available	Households	BRT Stops 400m Buffer Area	BRT Stops 400m Buffer %	No. of PT reliant groups experiencing accessibility shortfalls					No. of PT reliant underserved groups that lie along IRT route				
						50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
64	LANSDOWNE	56	417	189261	59	0	0	0	0	0	0	0	0	0	0
65	LANSDOWNE	3873	2205	1050014	65	0	0	0	0	0	0	0	0	0	0
67	LAVENDER HILL	247	8766	0	0	0	0	0	0	0	0	0	0	0	0
68	LENTEGEUR	1715	2988	507618	22	1	1	1	1	1	1	1	1	1	1
69	LENTEGEUR	365	7110	552132	26	1	1	1	1	1	1	1	1	1	1
70	LENTEGEUR	524	3541	1050864	87	1	1	1	1	1	1	1	1	1	1
71	LOTUS RIVER	1626	17488	843316	17	0	0	0	0	0	0	0	0	0	0
72	MANDELA PARK	1107	11726	1868147	83	1	1	1	1	1	1	1	1	1	1
74	MANENBERG	102	2461	0	0	0	0	0	0	0	0	0	0	0	0
75	MANENBERG	161	2211	0	0	1	1	1	1	1	0	0	0	0	0
73	MANENBERG	516	5734	239498	14	0	0	0	0	0	0	0	0	0	0
76	MEADOWRIDGE	520	1444	0	0	0	0	0	0	0	0	0	0	0	0
77	MITCHELLS PLAIN CBD	8730	0	631058	81	0	0	0	0	0	0	0	0	0	0
78	MORGANS VILLAGE	5	1157	251107	53	1	1	1	1	1	1	1	1	1	1
79	MOUNTVIEW	133	618	0	0	0	0	0	0	0	0	0	0	0	0
80	MOWBRAY	2060	509	0	0	0	0	0	0	0	0	0	0	0	0
81	MOWBRAY	1613	1367	0	0	0	0	0	0	0	0	0	0	0	0
82	MUIZENBERG	881	3392	0	0	0	0	0	0	0	0	0	0	0	0
83	MUIZENBERG	5781	3787	0	0	0	0	0	0	0	0	0	0	0	0
84	MUIZENBERG	1334	619	0	0	0	0	0	0	0	0	0	0	0	0
85	MXOLISI PHETANI	311	16469	644541	34	1	1	1	1	1	1	1	1	1	1
86	NEW WOODLANDS	193	2871	113299	14	1	1	1	1	1	1	1	1	1	1
88	NEWFIELDS	65	1336	0	0	0	0	0	0	0	0	0	0	0	0
87	NEWFIELDS	3128	255	45303	2	0	0	0	0	0	0	0	0	0	0
89	NEWLANDS	653	877	0	0	0	0	0	0	0	0	0	0	0	0
90	NEWLANDS	12971	2485	73999	3	0	0	0	0	0	0	0	0	0	0
91	NONQUBELA	1046	13921	1317540	96	1	1	1	1	1	1	1	1	1	1
92	NYANGA	590	15935	854528	30	1	1	1	1	1	1	1	1	1	1
93	OTTERY	864	321	733679	30	0	0	0	0	0	0	0	0	0	0
95	OTTERY	7489	4431	1249662	39	0	0	0	0	0	0	0	0	0	0
94	OTTERY	1639	4072	867281	43	0	0	0	0	0	0	0	0	0	0
96	PARKWOOD	240	3695	0	0	0	0	0	0	0	0	0	0	0	0
97	PELIKAN HEIGHTS	40	651	176153	16	0	0	0	0	0	0	0	0	0	0
98	PELIKAN PARK	361	6001	788080	27	0	0	0	0	0	0	0	0	0	0
99	PENLYN ESTATE	92	867	0	0	0	0	0	0	0	0	0	0	0	0
100	PHILIPPI	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	PHILIPPI	346	10349	0	0	1	1	1	1	1	0	0	0	0	0
109	PHILIPPI	883	9164	0	0	1	1	1	1	1	0	0	0	0	0
107	PHILIPPI	741	11946	4783	0	1	1	1	1	1	1	1	1	1	1
111	PHILIPPI	126	477	175592	3	1	1	1	1	1	1	1	1	1	1
108	PHILIPPI	7812	754	766576	14	1	1	1	1	1	1	1	1	1	1
110	PHILIPPI	75	1066	905380	15	1	1	1	1	1	1	1	1	1	1
103	PHILIPPI	1569	19040	428607	19	1	1	1	1	1	1	1	1	1	1
104	PHILIPPI	1669	10712	302089	22	0	0	0	0	0	0	0	0	0	0
112	PHILIPPI	741	4811	956030	23	0	0	0	0	0	0	0	0	0	0
102	PHILIPPI	3737	24715	1125787	30	0	0	0	0	0	0	0	0	0	0
105	PHILIPPI	4150	4990	695631	39	0	0	0	0	0	0	0	0	0	0
101	PHILIPPI	318	4594	642484	71	0	0	0	0	0	0	0	0	0	0
113	PHILIPPI PARK	0	2814	0	0	1	1	1	1	1	0	0	0	0	0
114	PINATI ESTATE	1608	1425	337512	45	0	0	0	0	0	0	0	0	0	0
117	PLUMSTEAD	27	465	0	0	0	0	0	0	0	0	0	0	0	0
116	PLUMSTEAD	623	2659	289127	14	0	0	0	0	0	0	0	0	0	0
115	PLUMSTEAD	7992	3436	494042	30	0	0	0	0	0	0	0	0	0	0
118	PORTLAND	301	4530	1451107	99	1	1	1	1	1	1	1	1	1	1
119	PORTLAND	173	3670	902091	99	1	1	1	1	1	1	1	1	1	1
120	RETREAT	2760	10497	0	0	0	0	0	0	0	0	0	0	0	0
121	RETREAT	7670	718	0	0	0	0	0	0	0	0	0	0	0	0
122	ROCKLANDS	312	4643	632351	44	1	1	1	1	1	1	1	1	1	1
123	ROCKLANDS	585	4885	1177843	71	1	1	1	1	1	1	1	1	1	1
124	RONDEBOSCH	7137	2536	0	0	0	0	0	0	0	0	0	0	0	0
125	RONDEBOSCH	743	1106	0	0	0	0	0	0	0	0	0	0	0	0
126	RONDEBOSCH	2716	3778	0	0	0	0	0	0	0	0	0	0	0	0
127	RONDEBOSCH EAST	167	2156	0	0	0	0	0	0	0	0	0	0	0	0
128	RONDEVLEI PARK	129	1452	279662	47	1	1	1	1	1	1	1	1	1	1
129	ROSEBANK	1244	1066	0	0	0	0	0	0	0	0	0	0	0	0
130	ROSEBANK	1374	1014	0	0	0	0	0	0	0	0	0	0	0	0
131	RYLANDS	1605	1451	0	0	0	0	0	0	0	0	0	0	0	0

Zone	Suburb	Jobs Available	Households	BRT Stops 400m Buffer Area	BRT Stops 400m Buffer %	No. of PT reliant groups experiencing accessibility shortfalls					No. of PT reliant underserved groups that lie along IRT route				
						50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
132	SA INFANTRY BATTALION BASE	0	1168	362034	8	1	1	1	1	1	1	1	1	1	1
133	SABATA DALINDYEBO SQUARE	0	6421	374415	89	1	1	1	1	1	1	1	1	1	1
134	SEAWINDS	117	4816	0	0	0	0	0	0	0	0	0	0	0	0
135	SILVERTOWN	220	2673	0	0	0	0	0	0	0	0	0	0	0	0
136	SILWERTOWN	231	3516	216964	65	1	1	1	1	1	1	1	1	1	1
137	SOUTHFIELD	38	817	0	0	0	0	0	0	0	0	0	0	0	0
138	SOUTHFIELD	792	2299	0	0	0	0	0	0	0	0	0	0	0	0
139	STEENBERG	1100	12070	0	0	0	0	0	0	0	0	0	0	0	0
140	STEENBERG	90	335	0	0	0	0	0	0	0	0	0	0	0	0
141	STRANDFONTEIN	1603	23389	3446231	34	0	0	0	0	0	0	0	0	0	0
142	SURREY ESTATE	938	2036	0	0	0	0	0	0	0	0	0	0	0	0
143	SYBRAND PARK	365	430	0	0	0	0	0	0	0	0	0	0	0	0
144	TAFELSIG	141	9503	235446	11	1	1	1	1	1	1	1	1	1	1
145	TAFELSIG	116	11468	1556596	68	1	1	1	1	1	1	1	1	1	1
146	THEMBOKWEZI	613	2687	645324	58	1	1	1	1	1	1	1	1	1	1
147	TOKAI	301	670	0	0	0	0	0	0	0	0	0	0	0	0
148	TOKAI	163	1514	0	0	0	0	0	0	0	0	0	0	0	0
150	UMRHABULO TRIANGLE	610	17011	1355393	77	1	1	1	1	1	1	1	1	1	1
149	UMRHABULO TRIANGLE	271	18523	1450754	81	1	1	1	1	1	1	1	1	1	1
151	VANGUARD	169	1055	0	0	0	0	0	0	0	0	0	0	0	0
152	VICTORIA MXENGE	149	12955	853126	71	1	1	1	1	1	1	1	1	1	1
153	VRYGOND	39	6462	0	0	0	0	0	0	0	0	0	0	0	0
154	WELCOME	30	353	0	0	0	0	0	0	0	0	0	0	0	0
155	WELTEVREDEN VALLEY	1334	6285	475801	20	0	0	0	0	0	0	0	0	0	0
156	WESTGATE	1477	1451	327027	37	1	1	1	1	1	1	1	1	1	1
157	WESTLAKE	7253	2018	0	0	0	0	0	0	0	0	0	0	0	0
158	WESTLAKE	13	333	0	0	0	0	0	0	0	0	0	0	0	0
160	WESTRIDGE	442	3780	558344	64	1	1	1	1	1	1	1	1	1	1
159	WESTRIDGE	356	4343	1373176	98	1	1	1	1	1	1	1	1	1	1
161	WETTON	3341	2464	512460	35	0	0	0	0	0	0	0	0	0	0
162	WILDWOOD	55	628	313535	84	1	1	1	1	1	1	1	1	1	1
163	WOLFGAT NATURE RESERVE	0	20	883432	21	1	1	1	1	1	1	1	1	1	1
164	WOODLANDS	303	3387	746155	58	1	1	1	1	1	1	1	1	1	1
165	WYNBERG	9516	3035	1161438	35	0	0	0	0	0	0	0	0	0	0
166	WYNBERG	80	140	300882	52	0	0	0	0	0	0	0	0	0	0
168	WYNBERG	338	1769	651598	96	0	0	0	0	0	0	0	0	0	0
167	WYNBERG	358	1159	460772	100	0	0	0	0	0	0	0	0	0	0
169	ZEEKOEVLEI	46	1488	0	0	0	0	0	0	0	0	0	0	0	0
Total						59	59	59	59	59	52	52	52	52	52
% of Total											88%	88%	88%	88%	88%

IRT Phase 2A Route Assessment based on MBT Services

Zone	Suburb	Jobs Available	Households	BRT Stops 400m Buffer Area	BRT Stops 400m Buffer %	No. of PT reliant groups experiencing accessibility shortfalls					No. of PT reliant underserved groups that lie along BRT route				
						50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
1	ATHLONE	164	489	0	0	0	0	0	0	0	0	0	0	0	0
2	ATHLONE	3887	2601	0	0	0	0	0	0	0	0	0	0	0	0
3	BARNET MOLOKWANA CORNER	49	6338	513123	83	0	0	0	0	0	0	0	0	0	0
4	BEACON VALLEY	531	6230	609118	32	0	0	0	0	0	0	0	0	0	0
5	BELGRAVIA	3099	2951	0	0	0	0	0	0	0	0	0	0	0	0
6	BELTHORN ESTATE	169	1288	0	0	0	0	0	0	0	0	0	0	0	0
7	BERGVLIT	723	1383	0	0	0	0	0	0	0	0	0	0	0	0
8	BERGVLIT/TOKAI	5355	1673	0	0	0	0	0	0	0	0	0	0	0	0
9	BISHOPSCOURT	28	817	0	0	0	0	0	0	0	0	0	0	0	0
10	BONGANI	491	5243	656893	12	0	0	0	0	0	0	0	0	0	0
11	BRIDGETOWN	3499	5375	0	0	0	0	0	0	0	0	0	0	0	0
13	CLAREMONT	476	936	5394	1	0	0	0	0	0	0	0	0	0	0
12	CLAREMONT	27894	4189	311156	15	0	0	0	0	0	0	0	0	0	0
14	CLAREMONT	1693	1773	306863	25	0	0	0	0	0	0	0	0	0	0
15	CLAREMONT	1014	1618	232388	33	0	0	0	0	0	0	0	0	0	0
16	CLAREMONT	3568	855	428396	71	0	0	0	0	0	0	0	0	0	0
17	COLORADO PARK	289	2901	595926	43	0	0	0	0	0	0	0	0	0	0
20	CONSTANTIA	6	201	0	0	0	0	0	0	0	0	0	0	0	0
21	CONSTANTIA	241	977	0	0	0	0	0	0	0	0	0	0	0	0
24	CONSTANTIA	108	1178	66638	4	0	0	0	0	0	0	0	0	0	0
18	CONSTANTIA	193	565	358965	5	0	0	0	0	0	0	0	0	0	0
22	CONSTANTIA	223	1375	318457	5	0	0	0	0	0	0	0	0	0	0
19	CONSTANTIA	22	245	1096929	42	0	0	0	0	0	0	0	0	0	0
23	CONSTANTIA	659	1693	1626173	46	0	0	0	0	0	0	0	0	0	0
25	CRAWFORD	490	2022	0	0	0	0	0	0	0	0	0	0	0	0
26	CROSSROADS	304	16062	482306	17	0	0	0	0	0	0	0	0	0	0
27	DIEPRIVER	74	1117	0	0	0	0	0	0	0	0	0	0	0	0
28	DIEPRIVER	2708	1828	0	0	0	0	0	0	0	0	0	0	0	0
29	EAGLE PARK	65	3434	304475	35	0	0	0	0	0	0	0	0	0	0
31	EASTRIDGE	119	2643	78751	12	0	0	0	0	0	0	0	0	0	0
30	EASTRIDGE	151	4630	682235	70	0	0	0	0	0	0	0	0	0	0
32	EKUPHUMULENI/GRACE LAND	1336	3216	726300	88	1	0	0	0	0	1	0	0	0	0
33	ELFINDALE	7394	1242	0	0	0	0	0	0	0	0	0	0	0	0
34	ENDLOVINI INFORMAL SETTLEMENT	6	13493	768352	34	1	0	0	0	0	1	0	0	0	0
35	ENKANINI INFORMAL SETTLEMENT	0	14891	1359651	92	1	1	0	0	0	1	1	0	0	0
36	EYETHU	745	4661	1055823	83	1	0	0	0	0	1	0	0	0	0
37	GATESVILLE	1343	1554	0	0	0	0	0	0	0	0	0	0	0	0
38	GOOD HOPE	0	1768	542092	33	0	0	0	0	0	0	0	0	0	0
39	GRASSY PARK	2070	9424	0	0	0	0	0	0	0	0	0	0	0	0
40	GUGULETHU	339	13923	0	0	0	0	0	0	0	0	0	0	0	0
41	GUGULETHU	1237	7922	0	0	0	0	0	0	0	0	0	0	0	0
42	GUGULETHU	739	10856	226220	11	0	0	0	0	0	0	0	0	0	0
44	HANOVER PARK	1929	5735	492801	33	0	0	0	0	0	0	0	0	0	0
43	HANOVER PARK	710	2143	433789	80	0	0	0	0	0	0	0	0	0	0
45	HARARE	465	20759	777501	45	1	0	0	0	0	1	0	0	0	0
46	HATTON	3366	0	0	0	0	0	0	0	0	0	0	0	0	0
47	HAZENDAL	284	1613	0	0	0	0	0	0	0	0	0	0	0	0
48	HEATHFIELD	942	2365	0	0	0	0	0	0	0	0	0	0	0	0
49	HEIDEVELD	112	1772	0	0	0	0	0	0	0	0	0	0	0	0
50	HEIDEVELD	792	2832	0	0	0	0	0	0	0	0	0	0	0	0
51	IKWEZI PARK	188	2211	33225	2	0	0	0	0	0	0	0	0	0	0
52	ILITHA PARK	598	7457	729539	41	1	0	0	0	0	1	0	0	0	0
53	KENILWORTH	1367	2157	98006	8	0	0	0	0	0	0	0	0	0	0
55	KENILWORTH	406	989	31273	13	0	0	0	0	0	0	0	0	0	0
54	KENILWORTH	1759	112	133737	13	0	0	0	0	0	0	0	0	0	0
56	KENILWORTH	730	1238	133342	22	0	0	0	0	0	0	0	0	0	0
57	KENILWORTH	1759	658	92650	23	0	0	0	0	0	0	0	0	0	0
58	KEWTOWN	204	2907	0	0	0	0	0	0	0	0	0	0	0	0
59	KHAYA	713	6361	1238536	70	0	0	0	0	0	0	0	0	0	0
60	KIRSTENHOF	1574	1786	0	0	0	0	0	0	0	0	0	0	0	0
61	KUYASA	88	5585	523053	39	1	1	0	0	0	1	1	0	0	0
62	LAKESIDE	595	1598	0	0	0	0	0	0	0	0	0	0	0	0
63	LANSDOWNE	2300	1692	291113	27	0	0	0	0	0	0	0	0	0	0
66	LANSDOWNE	145	1699	535972	35	0	0	0	0	0	0	0	0	0	0

Zone	Suburb	Jobs Available	Households	BRT Stops 400m Buffer Area	BRT Stops 400m Buffer %	No. of PT reliant groups experiencing accessibility shortfalls					No. of PT reliant underserved groups that lie along BRT route				
						50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
64	LANSDOWNE	56	417	189261	59	0	0	0	0	0	0	0	0	0	0
65	LANSDOWNE	3873	2205	1050014	65	0	0	0	0	0	0	0	0	0	0
67	LAVENDER HILL	247	8766	0	0	0	0	0	0	0	0	0	0	0	0
68	LENTEGEUR	1715	2988	507618	22	0	0	0	0	0	0	0	0	0	0
69	LENTEGEUR	365	7110	552132	26	0	0	0	0	0	0	0	0	0	0
70	LENTEGEUR	524	3541	1050864	87	0	0	0	0	0	0	0	0	0	0
71	LOTUS RIVER	1626	17488	843316	17	0	0	0	0	0	0	0	0	0	0
72	MANDELA PARK	1107	11726	1868147	83	1	0	0	0	0	1	0	0	0	0
74	MANENBERG	102	2461	0	0	0	0	0	0	0	0	0	0	0	0
75	MANENBERG	161	2211	0	0	0	0	0	0	0	0	0	0	0	0
73	MANENBERG	516	5734	239498	14	0	0	0	0	0	0	0	0	0	0
76	MEADOWRIDGE	520	1444	0	0	0	0	0	0	0	0	0	0	0	0
77	MITCHELLS PLAIN CBD	8730	0	631058	81	0	0	0	0	0	0	0	0	0	0
78	MORGANS VILLAGE	5	1157	251107	53	0	0	0	0	0	0	0	0	0	0
79	MOUNTVIEW	133	618	0	0	0	0	0	0	0	0	0	0	0	0
80	MOWBRAY	2060	509	0	0	0	0	0	0	0	0	0	0	0	0
81	MOWBRAY	1613	1367	0	0	0	0	0	0	0	0	0	0	0	0
82	MUIZENBERG	881	3392	0	0	0	0	0	0	0	0	0	0	0	0
83	MUIZENBERG	5781	3787	0	0	0	0	0	0	0	0	0	0	0	0
84	MUIZENBERG	1334	619	0	0	0	0	0	0	0	0	0	0	0	0
85	MXOLISI PHETANI	311	16469	644541	34	0	0	0	0	0	0	0	0	0	0
86	NEW WOODLANDS	193	2871	113299	14	0	0	0	0	0	0	0	0	0	0
88	NEWFIELDS	65	1336	0	0	0	0	0	0	0	0	0	0	0	0
87	NEWFIELDS	3128	255	45303	2	0	0	0	0	0	0	0	0	0	0
89	NEULANDS	653	877	0	0	0	0	0	0	0	0	0	0	0	0
90	NEULANDS	12971	2485	73999	3	0	0	0	0	0	0	0	0	0	0
91	NONQUBELA	1046	13921	1317540	96	1	0	0	0	0	1	0	0	0	0
92	NYANGA	590	15935	854528	30	0	0	0	0	0	0	0	0	0	0
93	OTTERY	864	321	733679	30	0	0	0	0	0	0	0	0	0	0
95	OTTERY	7489	4431	1249662	39	0	0	0	0	0	0	0	0	0	0
94	OTTERY	1639	4072	867281	43	0	0	0	0	0	0	0	0	0	0
96	PARKWOOD	240	3695	0	0	0	0	0	0	0	0	0	0	0	0
97	PELIKAN HEIGHTS	40	651	176153	16	0	0	0	0	0	0	0	0	0	0
98	PELIKAN PARK	361	6001	788080	27	0	0	0	0	0	0	0	0	0	0
99	PENLYN ESTATE	92	867	0	0	0	0	0	0	0	0	0	0	0	0
100	PHILIPPI	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	PHILIPPI	346	10349	0	0	0	0	0	0	0	0	0	0	0	0
109	PHILIPPI	883	9164	0	0	0	0	0	0	0	0	0	0	0	0
107	PHILIPPI	741	11946	4783	0	0	0	0	0	0	0	0	0	0	0
111	PHILIPPI	126	477	175592	3	0	0	0	0	0	0	0	0	0	0
108	PHILIPPI	7812	754	766576	14	0	0	0	0	0	0	0	0	0	0
110	PHILIPPI	75	1066	905380	15	0	0	0	0	0	0	0	0	0	0
103	PHILIPPI	1569	19040	428607	19	0	0	0	0	0	0	0	0	0	0
104	PHILIPPI	1669	10712	302089	22	0	0	0	0	0	0	0	0	0	0
112	PHILIPPI	741	4811	956030	23	0	0	0	0	0	0	0	0	0	0
102	PHILIPPI	3737	24715	1125787	30	0	0	0	0	0	0	0	0	0	0
105	PHILIPPI	4150	4990	695631	39	0	0	0	0	0	0	0	0	0	0
101	PHILIPPI	318	4594	642484	71	0	0	0	0	0	0	0	0	0	0
113	PHILIPPI PARK	0	2814	0	0	0	0	0	0	0	0	0	0	0	0
114	PINATI ESTATE	1608	1425	337512	45	0	0	0	0	0	0	0	0	0	0
117	PLUMSTEAD	27	465	0	0	0	0	0	0	0	0	0	0	0	0
116	PLUMSTEAD	623	2659	289127	14	0	0	0	0	0	0	0	0	0	0
115	PLUMSTEAD	7992	3436	494042	30	0	0	0	0	0	0	0	0	0	0
118	PORTLAND	301	4530	1451107	99	0	0	0	0	0	0	0	0	0	0
119	PORTLAND	173	3670	902091	99	0	0	0	0	0	0	0	0	0	0
120	RETREAT	2760	10497	0	0	0	0	0	0	0	0	0	0	0	0
121	RETREAT	7670	718	0	0	0	0	0	0	0	0	0	0	0	0
122	ROCKLANDS	312	4643	632351	44	0	0	0	0	0	0	0	0	0	0
123	ROCKLANDS	585	4885	1177843	71	0	0	0	0	0	0	0	0	0	0
124	RONDEBOSCH	7137	2536	0	0	0	0	0	0	0	0	0	0	0	0
125	RONDEBOSCH	743	1106	0	0	0	0	0	0	0	0	0	0	0	0
126	RONDEBOSCH	2716	3778	0	0	0	0	0	0	0	0	0	0	0	0
127	RONDEBOSCH EAST	167	2156	0	0	0	0	0	0	0	0	0	0	0	0
128	RONDEVLEI PARK	129	1452	279662	47	0	0	0	0	0	0	0	0	0	0
129	ROSEBANK	1244	1066	0	0	0	0	0	0	0	0	0	0	0	0
130	ROSEBANK	1374	1014	0	0	0	0	0	0	0	0	0	0	0	0
131	RYLANDS	1605	1451	0	0	0	0	0	0	0	0	0	0	0	0

Zone	Suburb	Jobs Available	Households	BRT Stops 400m Buffer Area	BRT Stops 400m Buffer %	No. of PT reliant groups experiencing accessibility shortfalls					No. of PT reliant underserved groups that lie along BRT route				
						50%	40%	30%	20%	10%	50%	40%	30%	20%	10%
132	SA INFANTRY BATTALION BASE	0	1168	362034	8	1	0	0	0	0	1	0	0	0	0
133	SABATA DALINDYEBO SQUARE	0	6421	374415	89	0	0	0	0	0	0	0	0	0	0
134	SEAWINDS	117	4816	0	0	0	0	0	0	0	0	0	0	0	0
135	SILVERTOWN	220	2673	0	0	0	0	0	0	0	0	0	0	0	0
136	SILWERTOWN	231	3516	216964	65	1	0	0	0	0	1	0	0	0	0
137	SOUTHFIELD	38	817	0	0	0	0	0	0	0	0	0	0	0	0
138	SOUTHFIELD	792	2299	0	0	0	0	0	0	0	0	0	0	0	0
139	STEENBERG	1100	12070	0	0	0	0	0	0	0	0	0	0	0	0
140	STEENBERG	90	335	0	0	0	0	0	0	0	0	0	0	0	0
141	STRANDFONTEIN	1603	23389	3446231	34	0	0	0	0	0	0	0	0	0	0
142	SURREY ESTATE	938	2036	0	0	0	0	0	0	0	0	0	0	0	0
143	SYBRAND PARK	365	430	0	0	0	0	0	0	0	0	0	0	0	0
144	TAFELSIG	141	9503	235446	11	0	0	0	0	0	0	0	0	0	0
145	TAFELSIG	116	11468	1556596	68	0	0	0	0	0	0	0	0	0	0
146	THEMBOKWEZI	613	2687	645324	58	0	0	0	0	0	0	0	0	0	0
147	TOKAI	301	670	0	0	0	0	0	0	0	0	0	0	0	0
148	TOKAI	163	1514	0	0	0	0	0	0	0	0	0	0	0	0
150	UMRHABULO TRIANGLE	610	17011	1355393	77	1	1	0	0	0	1	1	0	0	0
149	UMRHABULO TRIANGLE	271	18523	1450754	81	1	1	1	0	0	1	1	1	0	0
151	VANGUARD	169	1055	0	0	0	0	0	0	0	0	0	0	0	0
152	VICTORIA MXENGE	149	12955	853126	71	0	0	0	0	0	0	0	0	0	0
153	VRYGOND	39	6462	0	0	0	0	0	0	0	0	0	0	0	0
154	WELCOME	30	353	0	0	0	0	0	0	0	0	0	0	0	0
155	WELTEVREDEN VALLEY	1334	6285	475801	20	0	0	0	0	0	0	0	0	0	0
156	WESTGATE	1477	1451	327027	37	0	0	0	0	0	0	0	0	0	0
157	WESTLAKE	7253	2018	0	0	0	0	0	0	0	0	0	0	0	0
158	WESTLAKE	13	333	0	0	0	0	0	0	0	0	0	0	0	0
160	WESTRIDGE	442	3780	558344	64	0	0	0	0	0	0	0	0	0	0
159	WESTRIDGE	356	4343	1373176	98	0	0	0	0	0	0	0	0	0	0
161	WETTON	3341	2464	512460	35	0	0	0	0	0	0	0	0	0	0
162	WILDWOOD	55	628	313535	84	0	0	0	0	0	0	0	0	0	0
163	WOLFGAT NATURE RESERVE	0	20	883432	21	1	0	0	0	0	1	0	0	0	0
164	WOODLANDS	303	3387	746155	58	0	0	0	0	0	0	0	0	0	0
165	WYNBERG	9516	3035	1161438	35	0	0	0	0	0	0	0	0	0	0
166	WYNBERG	80	140	300882	52	0	0	0	0	0	0	0	0	0	0
168	WYNBERG	338	1769	651598	96	0	0	0	0	0	0	0	0	0	0
167	WYNBERG	358	1159	460772	100	0	0	0	0	0	0	0	0	0	0
169	ZEEKOEVLEI	46	1488	0	0	0	0	0	0	0	0	0	0	0	0
Total						14	4	1	0	0	14	4	1	0	0
% of Total											100%	100%	100%	n/a	n/a