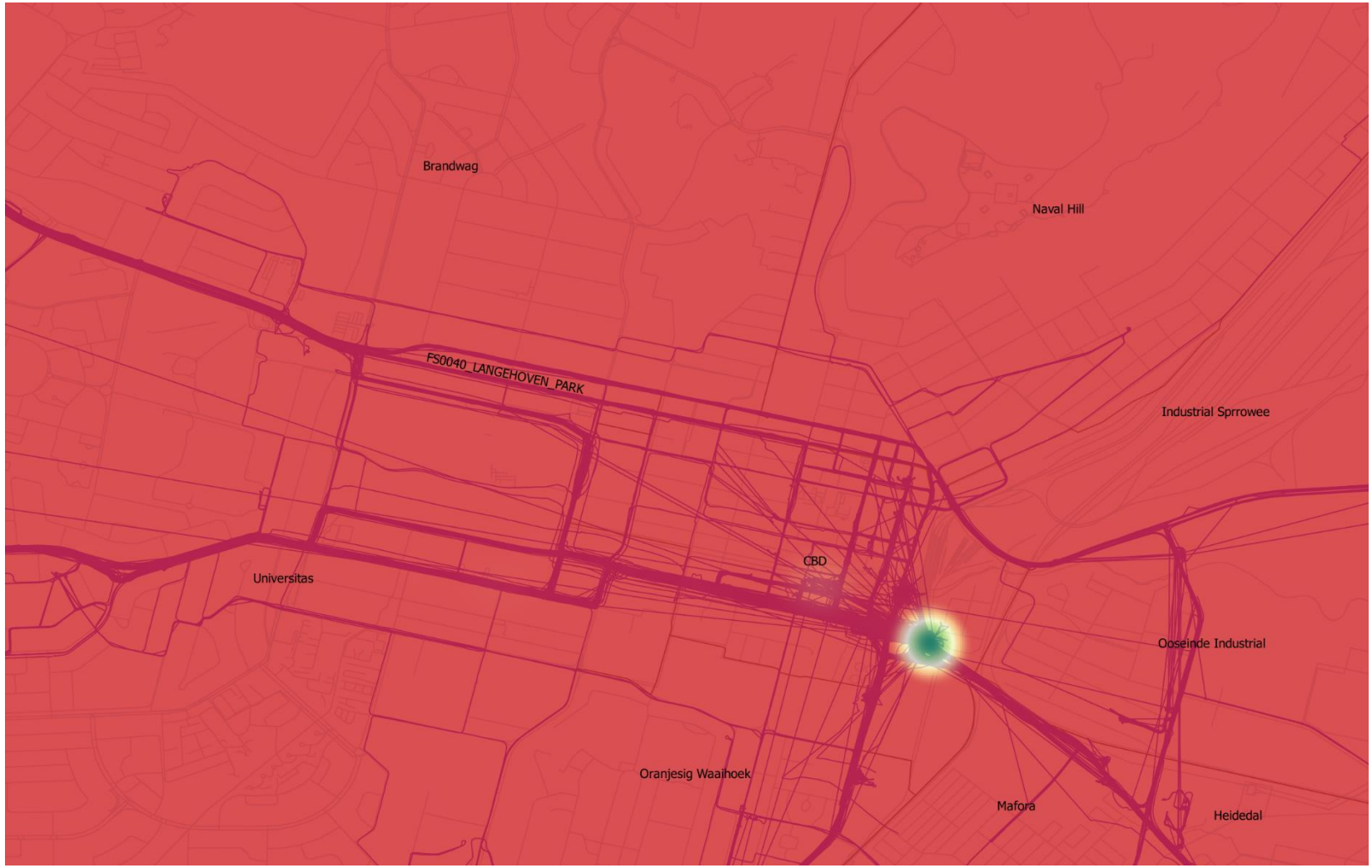
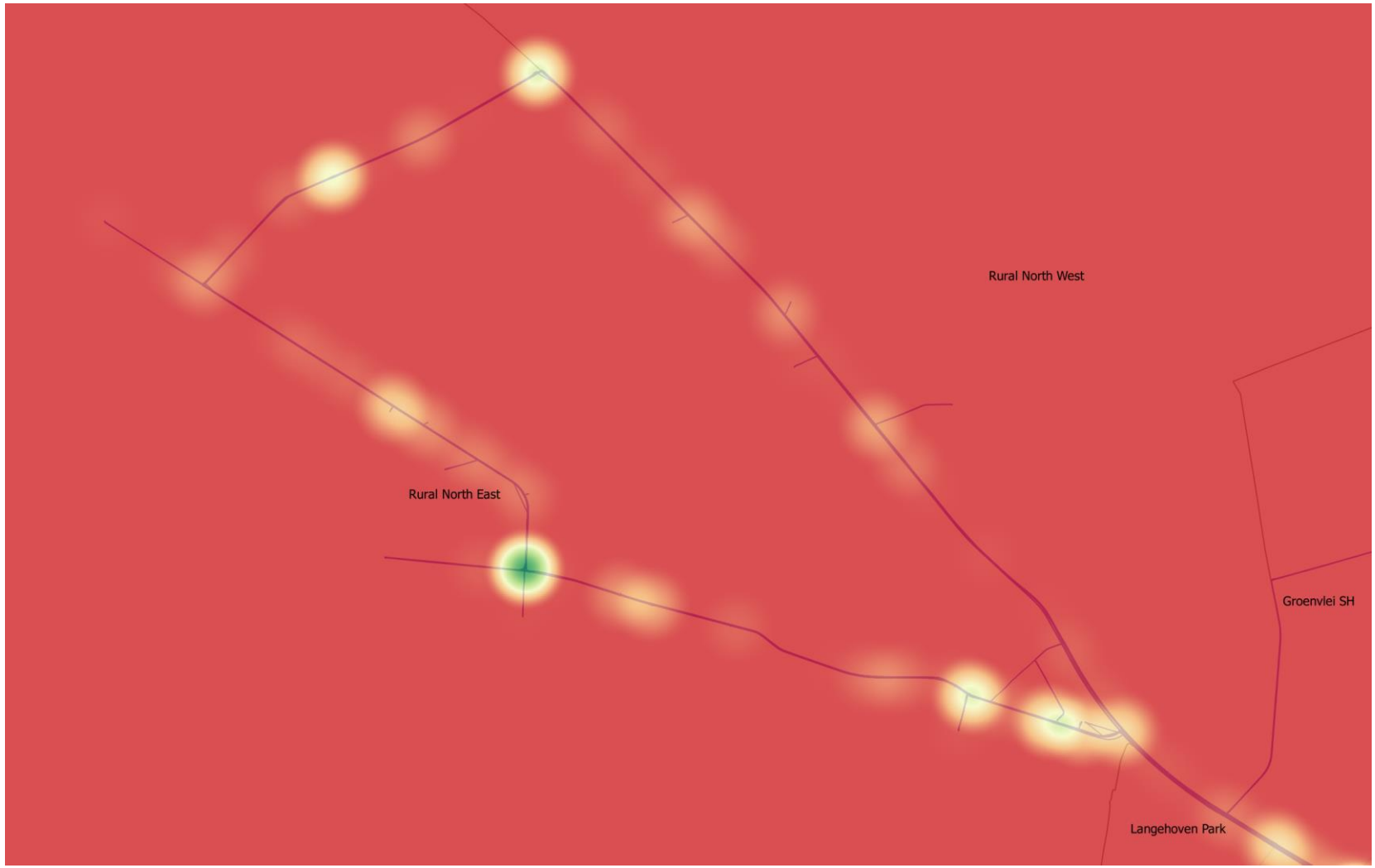
Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on LANGENHOVEN PARK

Heatmap of total surveyed area – Focused on Rural North East



ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – MAFORA CENTRAL

iSAHA

Table of Contents

ROUTE: **MAFORA CENTRAL**
REPORT DATE: **18 October 2017**

1. INTRODUCTION

The electronic on-board survey results for Mafora Central Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Mafora Central Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle. Please note that only option A is shown as only 14 and 15 seaters were provided of survey.

		Option A		
Average operating income per month	**R**	**26 678.27**		
Average operating income per day			R	880.18
Cost of operations per month	**R**	**18 846.96**		
Cost of operations per day			R	618.95
Operational cost - Fuel & Oil	*R*	*7 725.43*	*R*	*253.71*
Operational cost - Maintenance	*R*	*3 942.20*	*R*	*129.46*
Fixed cost	*R*	*6 721.00*	*R*	*220.72*
Overhead cost	*R*	*458.33*	*R*	*15.05*
Average monthly operating profit*	**R**	**7 831.30**		
Average daily operating profit *			R	261.23
** Excluding driver salary*				
Excluding payments to owner				

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1		
Driver Salary	**R**	**5 000.00**
Average monthly operating profit	**R**	**7 831.30**
Driver Salary	**R**	**5 000.00**
Monthly profit to Owner	**R**	**2 831.30**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:		
Total usage fee paid to owner per month	**R**	**17 617.50**
Average operating income per month	**R**	**26 678.27**
Monthly usage fee to Owner	**R**	**17 617.50**
Usage cost per month (fuel, oil)	**R**	**7 725.43**
Monthly profit to Driver	**R**	**1 335.34**
Monthly usage fee to Owner	**R**	**17 617.50**
Maintenance cost per month	R	3 942.20
Fixed cost per month	R	6 721.00
Overhead cost per month	R	458.33
Monthly profit to Owner (scenario 2)	**R**	**6 495.96**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income		
	Option A	
	Average income per day	
Monday	R	1 102.63
Tuesday	R	938.33
Wednesday	R	1 042.08
Thursday	R	1 077.20
Friday	R	1 133.91
Saturday	R	686.67
Sunday	R	180.43
Total weekly income	**R**	**6 161.26**
Average daily income	**R**	**880.18**

4. COST CALCULATIONS

4.1. General information

General information			
Vehicle type	Quantum 15 Seater		
Average km driven per day		156	km
Cost of fuel	R	14.00	per litre
Cost of oil	R	60.00	per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil
Operational cost

Usage cost assumptions			
Scenario 2			
Fuel consumption		10	km / litre
Oil consumption: one 500ml can of oil every		2	days
Fuel and Oil usage per day	**R**	**253.71**	
Fuel and Oil usage per month	**R**	**7 725.43**	

Maintenance cost assumptions			
These expenses are always for the owner's account			
Main service cost	R	3 500.00	
Number of main services		2	per year
Minor service cost	R	1 400.00	
Number of minor services		6	per year
Wheel maintenance cost	R	2 000.00	
(brake pads, wheel cylinder, etc)			
Number of wheel maintenances		4	per year
Wheel alignment cost	R	360.00	
Number of wheel alignments		12	per year
Price of tyres	R	1 350.00	per tyre
Tyre lifespan		30 000.00	km
Upholstery, cost of replacement	R	2 200.00	
Number of times upholstery is replaced		2	per year
Unforeseen cost (average per event)	R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)			
Number of times of unforeseen expenses		1	per year
Cost of cleaning, per event	R	50.00	
Number of times cleaning is done		52	per year
Maintenance: average cost per day	**R**	**129.46**	
Maintenance: average cost per month	**R**	**3 942.20**	

4.3. Fixed cost

Fixed cost	*operations of the vehicle*		
Insurance installment	R	18 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year
Vehicle licence fees cost	R	1 500.00	per year
Roadworthy test cost	R	480.00	per year
Operating licence cost, once every 5 years	R	12.00	
Monthly association fee	R	100.00	per year
Fixed cost: average cost per day	**R**	**220.72**	
Fixed cost: average cost per month	**R**	**6 721.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*			
Number of taxis in fleet			3	
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year
Security	*(security, parking fees)*	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**	

ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Long term survey results for

Taxi Route – MAFORA CENTRAL

iSAHA

Table of Contents

ROUTE: **MAFORA CENTRAL (Long Term)**
REPORT DATE: **19 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Mafora Central Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Mafora Central Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

		Option A		
Average operating income per month	**R**	**24 508.92**		
Average operating income per day			R	808.61
Cost of operations per month	**R**	**17 452.70**		
Cost of operations per day			R	573.16
Operational cost - Fuel & Oil	*R*	*6 470.42*	*R*	*212.49*
Operational cost - Maintenance	*R*	*3 802.95*	*R*	*124.89*
Fixed cost	*R*	*6 721.00*	*R*	*220.72*
Overhead cost	*R*	*458.33*	*R*	*15.05*
Average monthly operating profit*	**R**	**7 056.22**		
Average daily operating profit *			R	235.45
** Excluding driver salary*				
Excluding payments to owner				

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1		
Driver Salary	**R**	**5 000.00**
Average monthly operating profit	**R**	**7 056.22**
Driver Salary	**R**	**5 000.00**
Monthly profit to Owner	**R**	**2 056.22**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:		
Total usage fee paid to owner per month	**R**	**17 617.50**
Average operating income per month	**R**	**24 508.92**
Monthly usage fee to Owner	**R**	**17 617.50**
Usage cost per month (fuel, oil)	**R**	**6 470.42**
Monthly profit to Driver	**R**	**421.00**
Monthly usage fee to Owner	**R**	**17 617.50**
Maintenance cost per month	R	3 802.95
Fixed cost per month	R	6 721.00
Overhead cost per month	R	458.33
Monthly profit to Owner (scenario 2)	**R**	**6 635.22**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income			
	Option A	*Option B*	*Option C*
	Average income per day	Average income per day	Average income per day
Monday	R 987.22	R -	R -
Tuesday	R 895.56	R -	R -
Wednesday	R 937.06	R -	R -
Thursday	R 1 042.67	R -	R -
Friday	R 903.89	R -	R -
Saturday	R 595.29	R -	R -
Sunday	R 298.57	R -	R -
Total weekly income	**R 5 660.26**	**R -**	**R -**
Average daily income	**R 808.61**	**R -**	**R -**

4. COST CALCULATIONS

4.1. General information

	Option A
General information	
Vehicle type	Quantum 15 Seater
Average km driven per day	131 km
Cost of fuel	R 14.00 per litre
Cost of oil	R 60.00 per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil
Operational cost

Usage cost assumptions			
Scenario 2			
Fuel consumption		10	km / litre
Oil consumption: one 500ml can of oil every		2	days
Fuel and Oil usage per day	**R**	**212.49**	
Fuel and Oil usage per month	**R**	**6 470.42**	

Maintenance cost assumptions			
These expenses are always for the owner's account			
Main service cost	R	3 500.00	
Number of main services		2	per year
Minor service cost	R	1 400.00	
Number of minor services		6	per year
Wheel maintenance cost	R	2 000.00	
(brake pads, wheel cylinder, etc)			
Number of wheel maintenances		4	per year
Wheel alignment cost	R	360.00	
Number of wheel alignments		12	per year
Price of tyres	R	1 350.00	per tyre
Tyre lifespan		30 000.00	km
Upholstery, cost of replacement	R	2 200.00	
Number of times upholstery is replaced		2	per year
Unforeseen cost (average per event)	R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)			
Number of times of unforeseen expenses		1	per year
Cost of cleaning, per event	R	50.00	
Number of times cleaning is done		52	per year
Maintenance: average cost per day	**R**	**124.89**	
Maintenance: average cost per month	**R**	**3 802.95**	

4.3. Fixed cost

Fixed cost			
	operations of the vehicle		
Insurance installment	R	18 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year
Vehicle licence fees cost	R	1 500.00	per year
Roadworthy test cost	R	480.00	per year
Operating licence cost, once every 5 years	R	12.00	
Monthly association fee	R	100.00	per year
Fixed cost: average cost per day	**R**	**220.72**	
Fixed cost: average cost per month	**R**	**6 721.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*			
Number of taxis in fleet			3	
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year
Security	*(security, parking fees)*	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**	

ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Long term survey results for

Taxi Route – MAFORA CENTRAL

iSAHA

Table of Contents

ROUTE: MAFORA CENTRAL (Long Term)
REPORT DATE: 19 December 2017

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

2 taxis and 110 days were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 10: 15 August 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

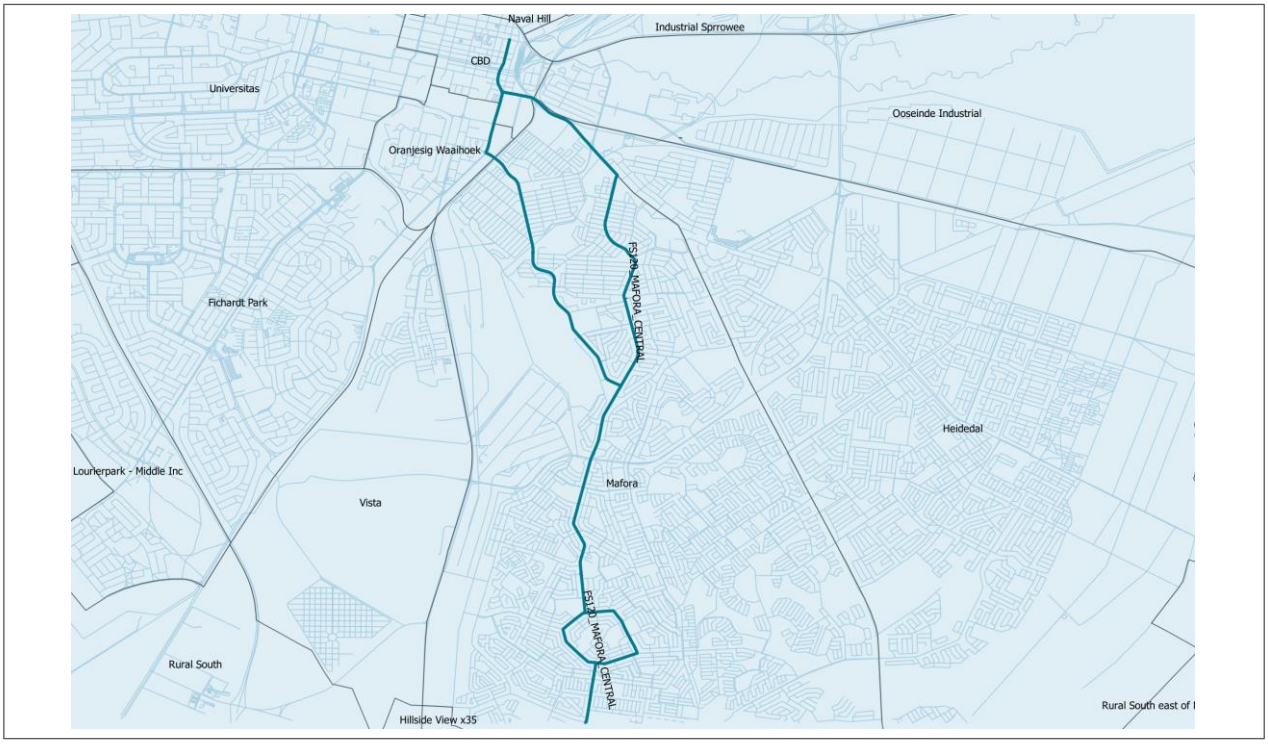
2 long term vehicles were surveyed for 110 days between cycle 1 and cycle 11. FTX204FS had 25% private trips outside of Mangaung. This skewed the average kilometres and average income. For this reason the operational kilometres were used for the financial calculations.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 808.61	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 5 660.26	Per week As determined from survey
Average monthly income	R 24 508.92	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R274 522.50	Calculated from weekly result Formula: 48.5 x weekly average

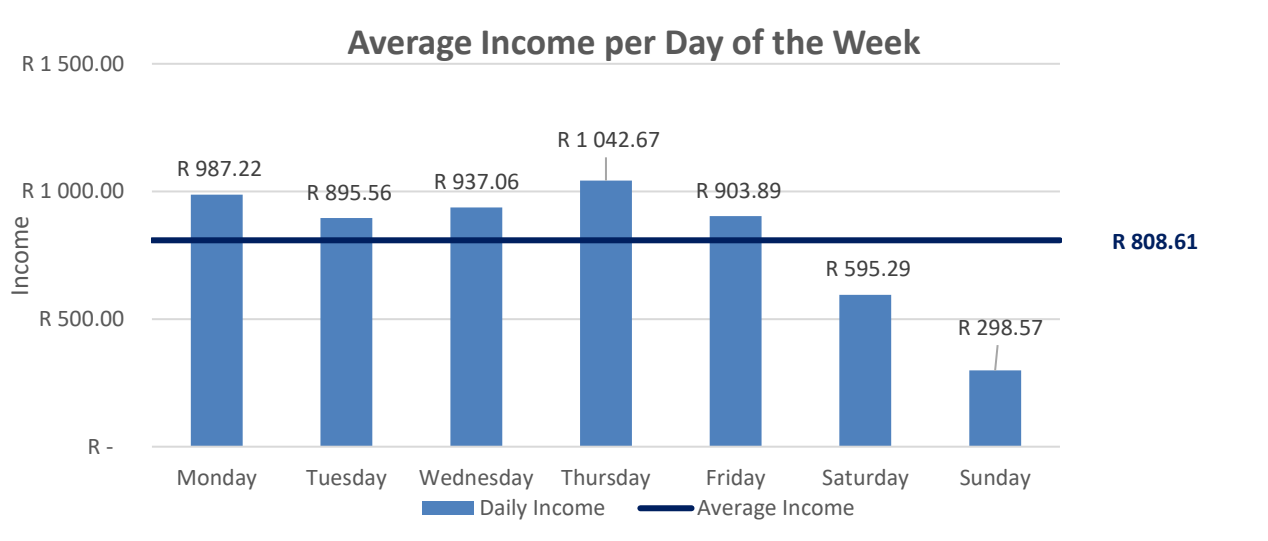


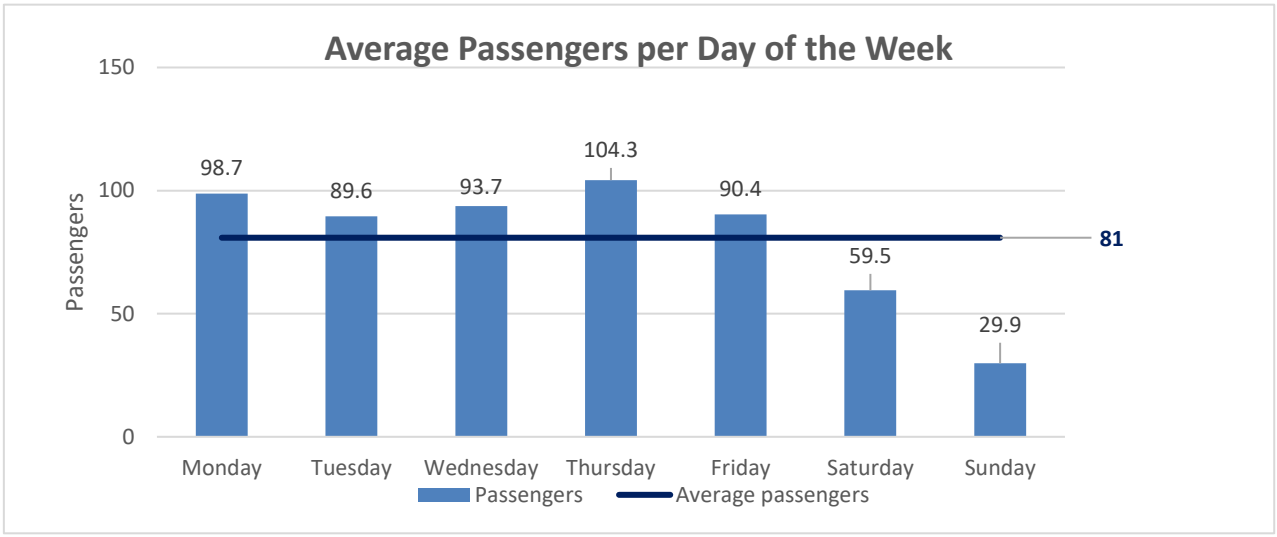
Corridor served by MAFORA CENTRAL Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	99	R 10.00	R 987.22
Tuesday	90	R 10.00	R 895.56
Wednesday	94	R 10.00	R 937.06
Thursday	104	R 10.00	R 1 042.67
Friday	90	R 10.00	R 903.89
Saturday	60	R 10.00	R 595.29
Sunday	30	R 10.00	R 298.57
Weekly total	566		R 5 660.26
Average	81	R 10.00	R 808.61
Weekday Avg	95	R 10.00	R 953.28

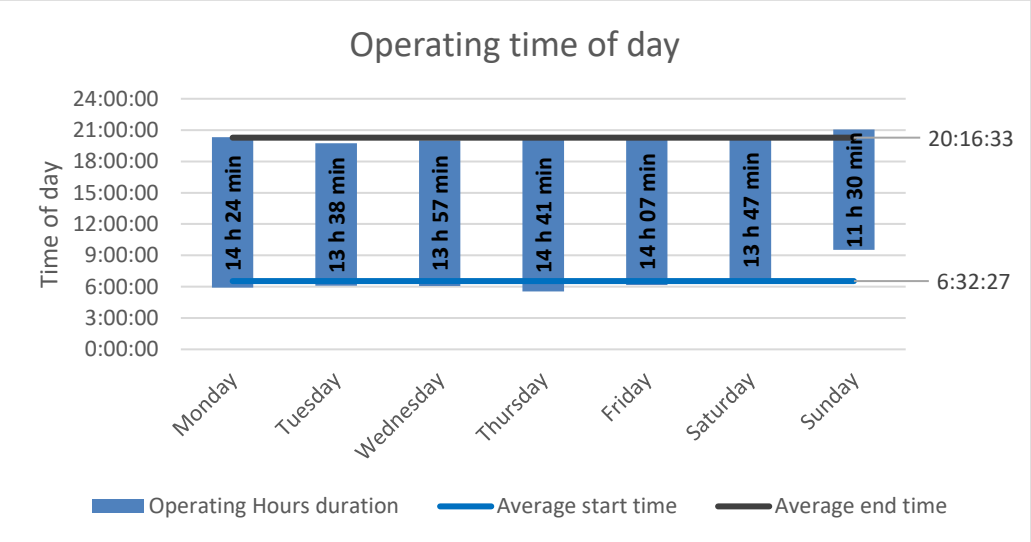



Average Passengers per Day of the Week
150
100
50
0
Passengers
98.7
89.6
93.7
104.3
90.4
59.5
29.9
81
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.4. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	6:32:27	20:16:33	13:44:06
Weekday (Mon-Fri) avg	5:57:24	20:07:30	14:10:05
Monday	5:54:29	20:18:52	14:24:23
Tuesday	6:05:36	19:44:13	13:38:37
Wednesday	6:04:03	20:01:47	13:57:44
Thursday	5:32:46	20:14:37	14:41:51
Friday	6:10:09	20:18:01	14:07:52
Saturday	6:27:35	20:15:20	13:47:45
Sunday	9:32:33	21:03:01	11:30:28



3.5. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	224	131	R	6.17	40%
Weekday (Mon-Fri) avg	207	150	R	6.35	41%
Monday	219	155	R	6.39	42%
Tuesday	210	145	R	6.17	41%
Wednesday	148	148	R	6.32	40%
Thursday	162	162	R	6.45	41%
Friday	297	141	R	6.42	42%
Saturday	236	99	R	6.00	39%
Sunday	300	67	R	4.44	25%

3.6. Operational analysis

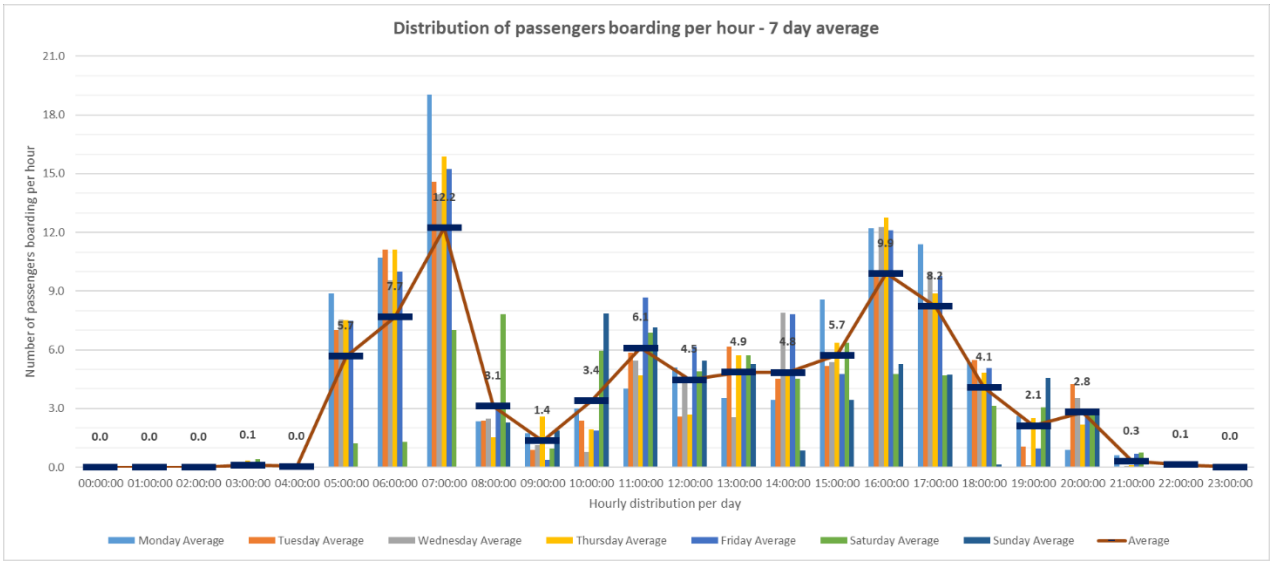
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	131.0	81	1.47	00:10:52	9.7	897.8	2208.7	40%
Weekday (Mon-Fri) avg	150.1	95	1.50	00:09:03	10.9	960.2	2300.5	41%
Monday	154.6	99	1.49	00:08:40	10.8	1019.9	2401.2	42%
Tuesday	145.2	90	1.52	00:09:06	11.1	914.6	2205.6	41%
Wednesday	148.4	94	1.58	00:09:27	10.7	870.2	2157.9	40%
Thursday	161.6	104	1.55	00:09:02	11.1	964.6	2331.0	41%
Friday	140.8	90	1.38	00:09:00	10.6	1031.6	2403.1	42%
Saturday	99.2	60	1.36	00:15:06	7.4	775.4	1954.8	39%
Sunday	67.2	30	1.29	00:15:42	5.8	381.2	1558.6	25%

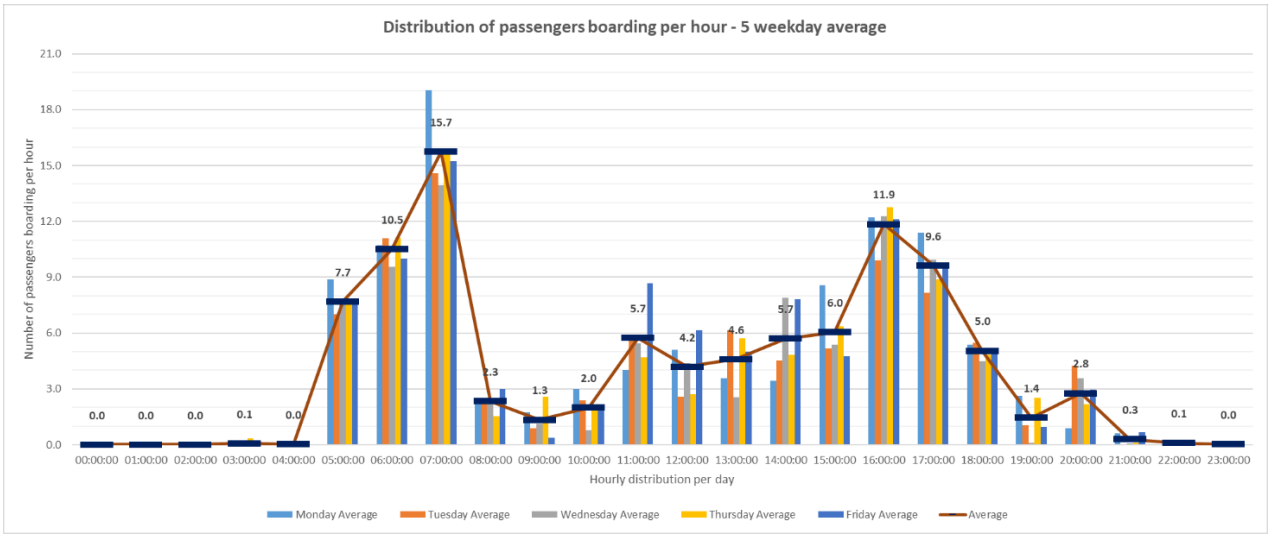
3.7. Fluctuations

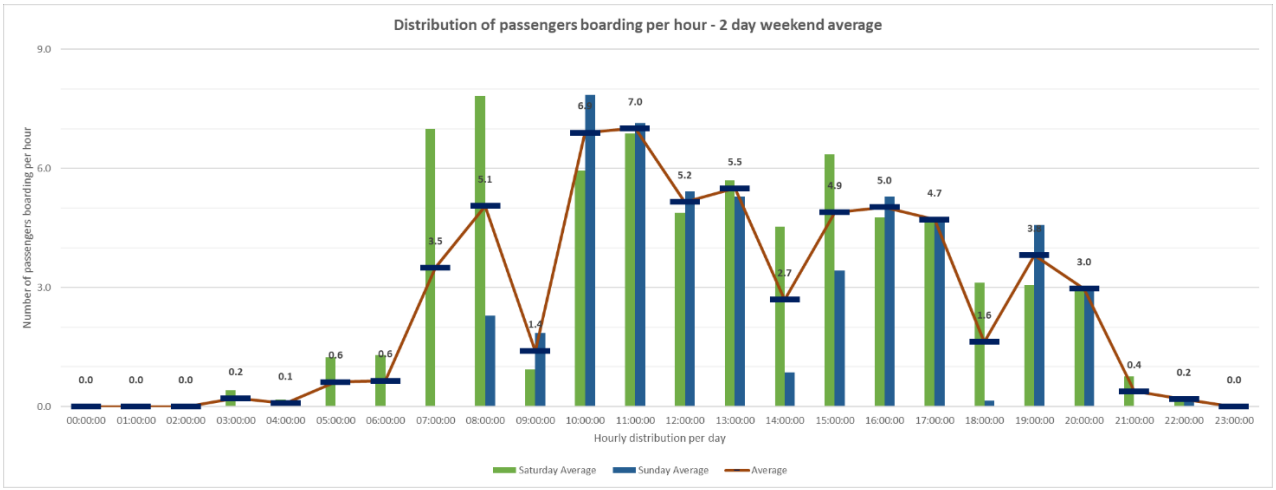
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.0	R -	0%
01:00	01:59	0.0	R -	0%
02:00	02:59	0.0	R -	0%
03:00	03:59	0.1	R 1.09	0%
04:00	04:59	0.0	R 0.42	0%
05:00	05:59	5.7	R 56.73	13%
06:00	06:59	7.7	R 76.85	20%
07:00	07:59	12.2	R 122.41	38%
08:00	08:59	3.1	R 31.20	14%
09:00	09:59	1.4	R 13.58	7%
10:00	10:59	3.4	R 33.96	14%
11:00	11:59	6.1	R 60.98	28%
12:00	12:59	4.5	R 44.66	24%
13:00	13:59	4.9	R 48.52	19%
14:00	14:59	4.8	R 48.43	28%
15:00	15:59	5.7	R 57.16	33%
16:00	16:59	9.9	R 99.03	40%
17:00	17:59	8.2	R 82.25	33%
18:00	18:59	4.1	R 40.72	21%
19:00	19:59	2.1	R 21.26	15%
20:00	20:59	2.8	R 28.24	14%
21:00	21:59	0.3	R 3.17	6%
22:00	22:59	0.1	R 1.25	1%
23:00	23:59	0.0	R 0.16	0%

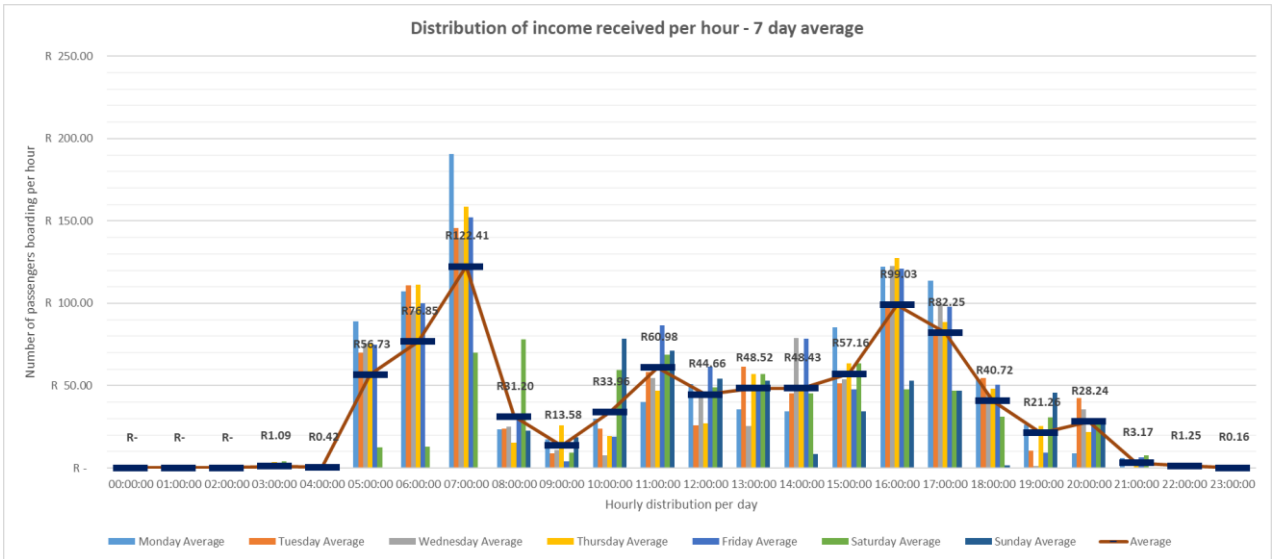
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

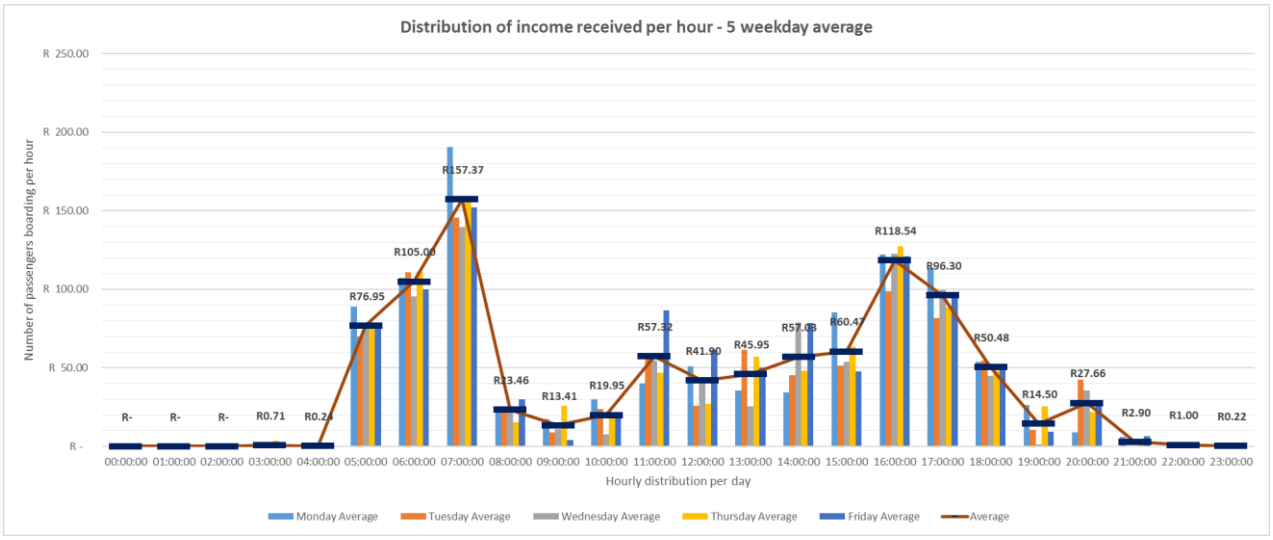


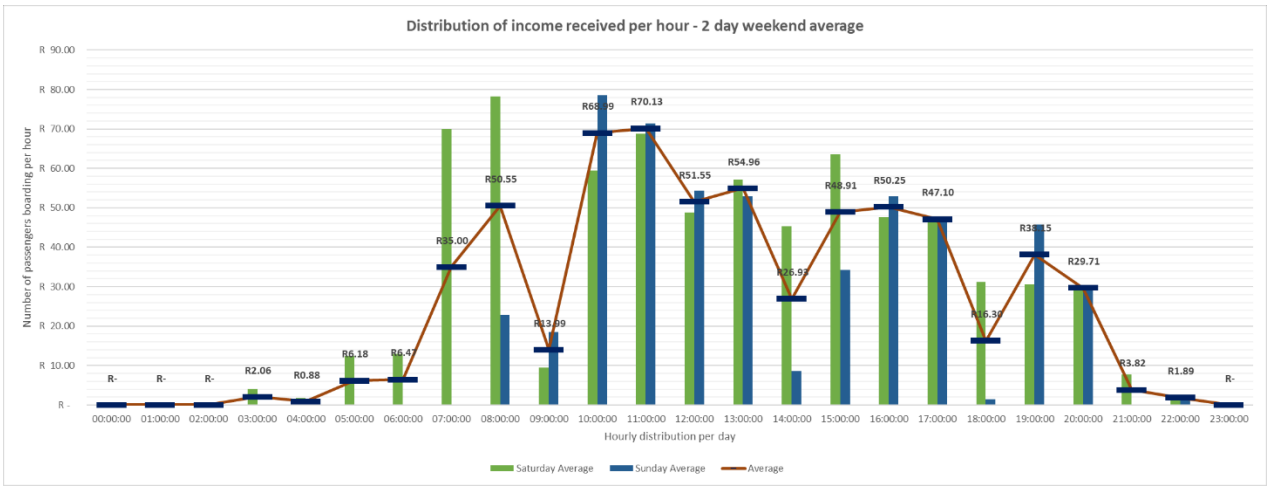




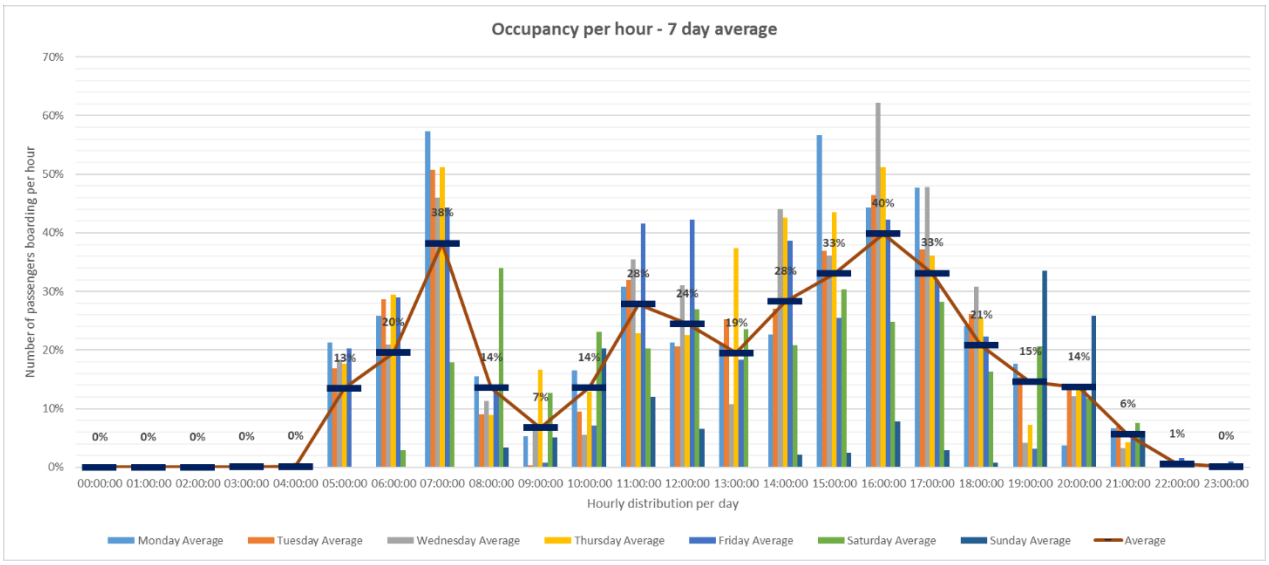
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

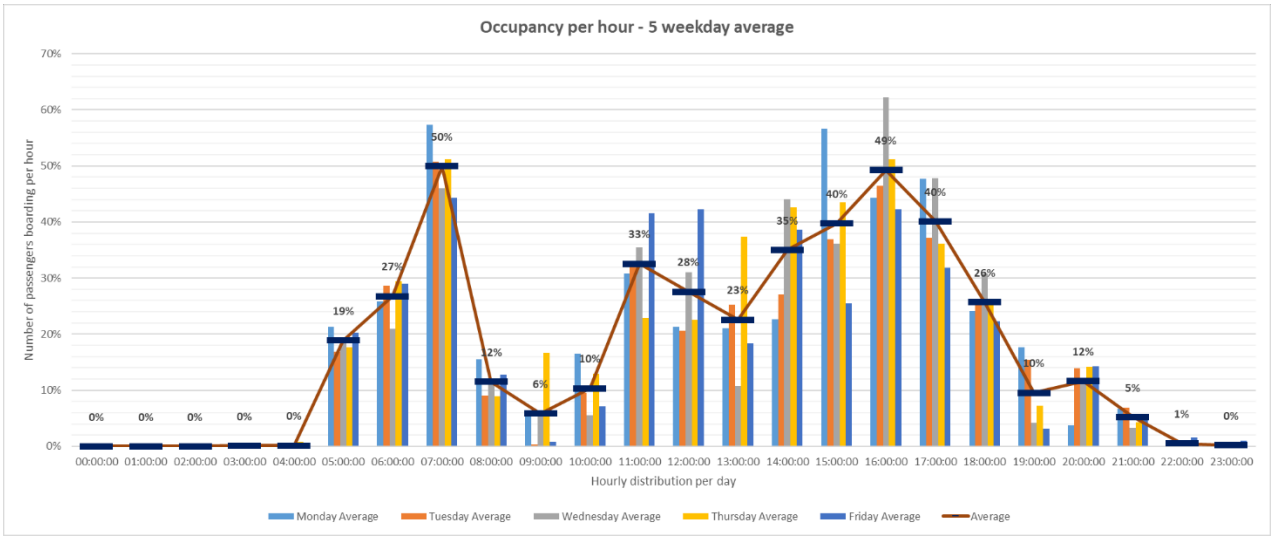


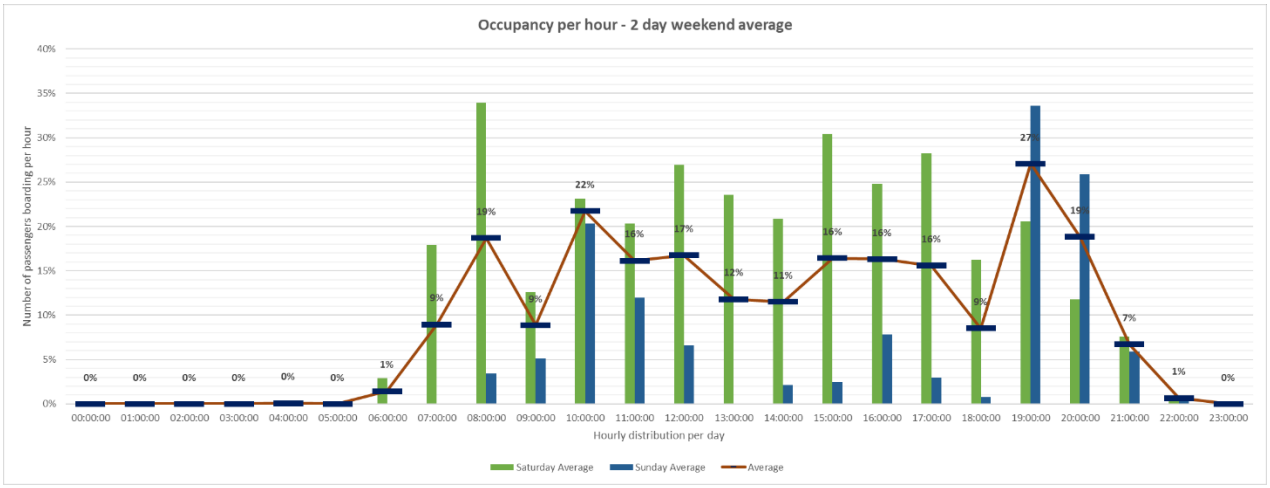

Distribution of income received per hour - 5 weekday average
Number of passengers boarding per hour
R 250.00
R 200.00
R 150.00
R 100.00
R 50.00
R -
R- R- R- R0.71 R0.24 R76.95 R105.00 R157.37 R23.46 R13.41 R19.95 R57.32 R41.90 R45.95 R57.08 R60.47 R118.54 R96.30 R50.48 R14.50 R27.66 R2.90 R1.00 R0.22
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 90.00
R 80.00
R 70.00
R 60.00
R 50.00
R 40.00
R 30.00
R 20.00
R 10.00
R -
R- R- R- R2.06 R0.88 R6.18 R6.47 R35.00 R50.55 R13.09 R68.99 R70.13 R51.55 R54.96 R26.93 R48.91 R50.25 R47.10 R16.30 R38.15 R29.71 R3.82 R1.89 R-
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

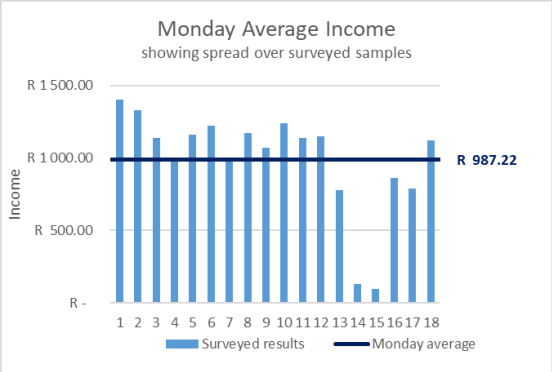


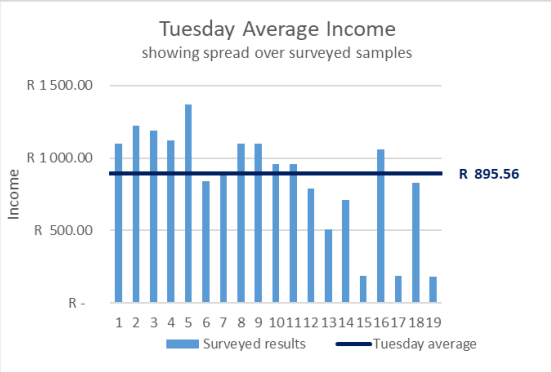


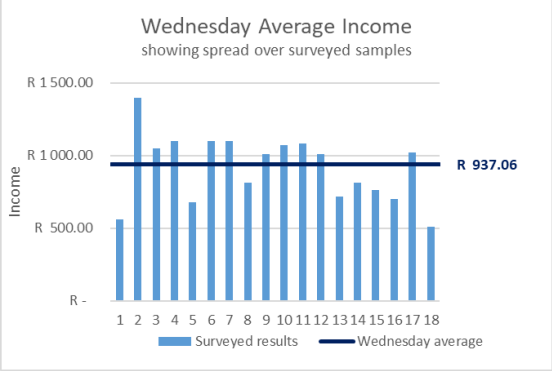

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
40%
35%
30%
25%
20%
15%
10%
5%
0%
0% 0% 0% 0% 0% 0% 1% 9% 19% 9% 22% 16% 17% 12% 11% 16% 16% 16% 9% 27% 19% 7% 1% 0%
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

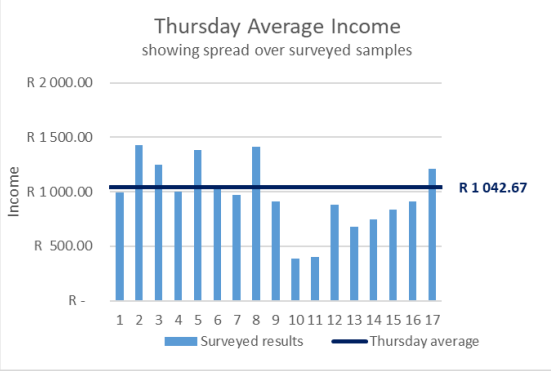
4. DETAILED SURVEY RESULTS

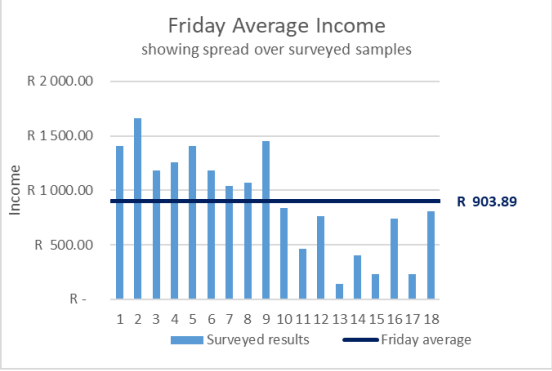
4.1. Income distribution

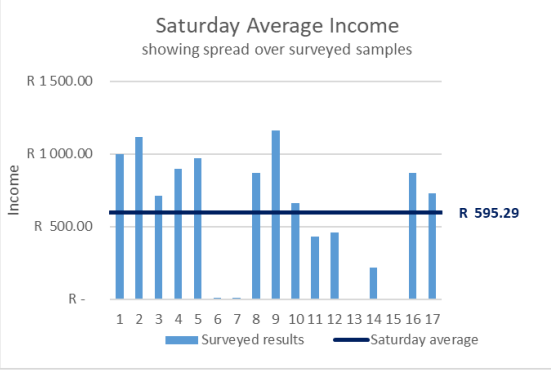


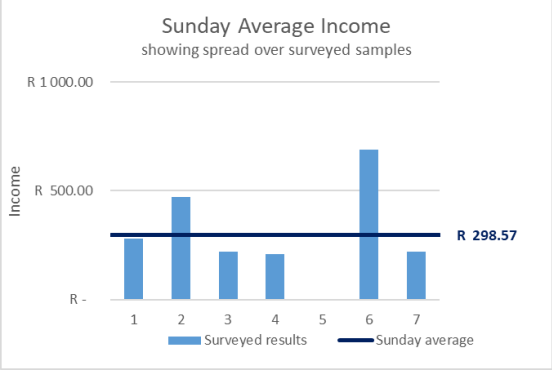




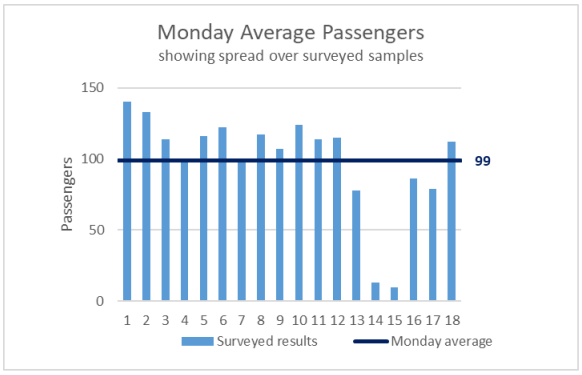


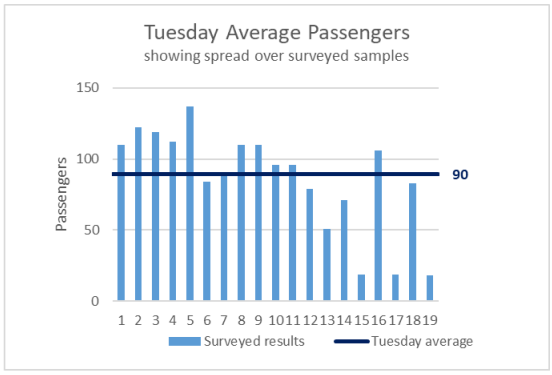


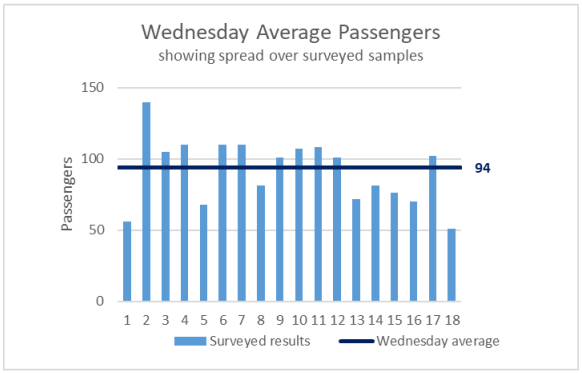


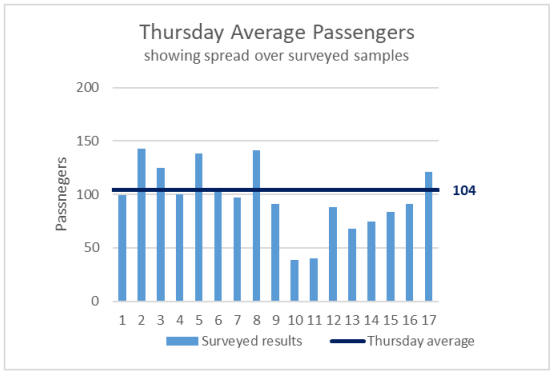


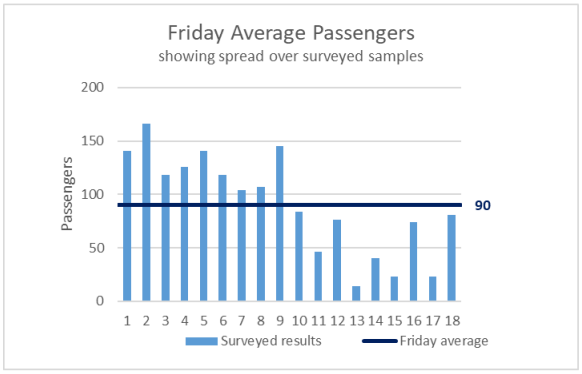
4.2. Passenger number distribution

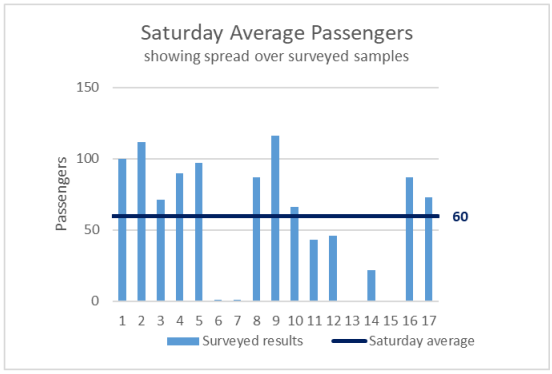


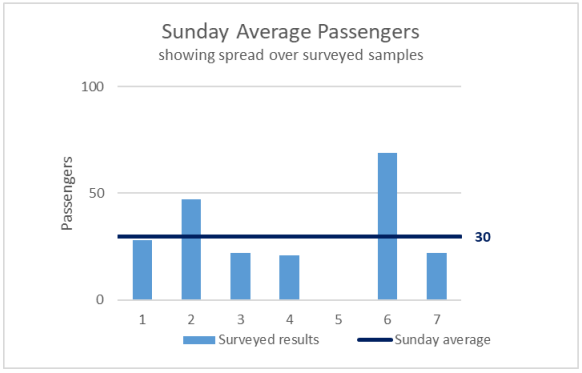










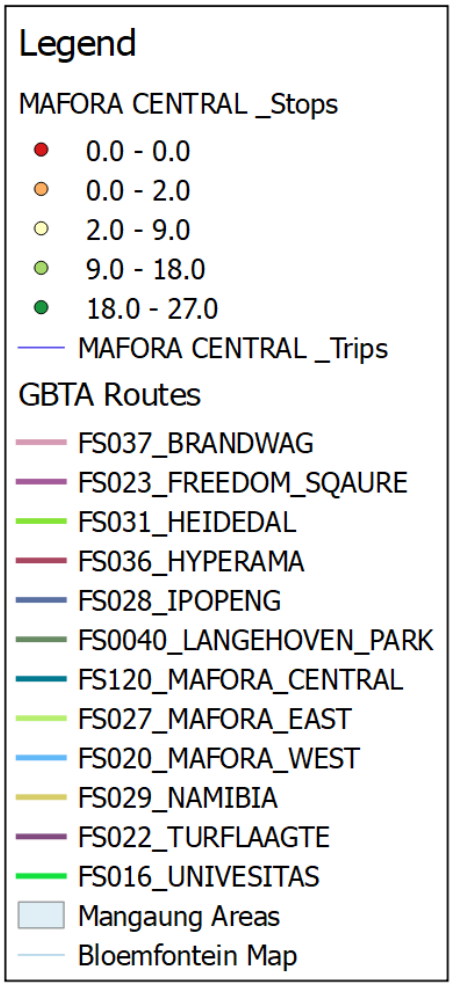


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps

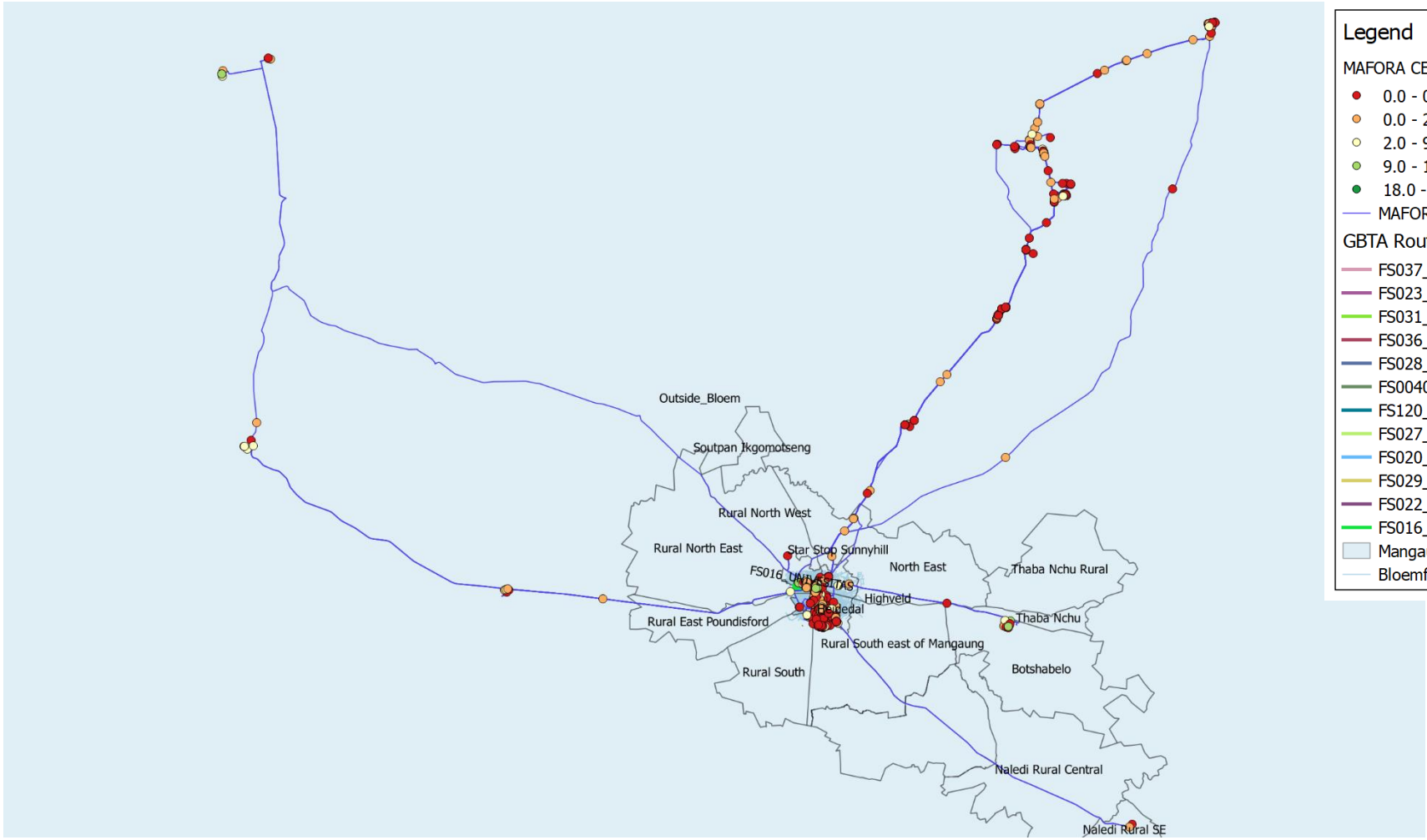


5.1. All surveyed operations

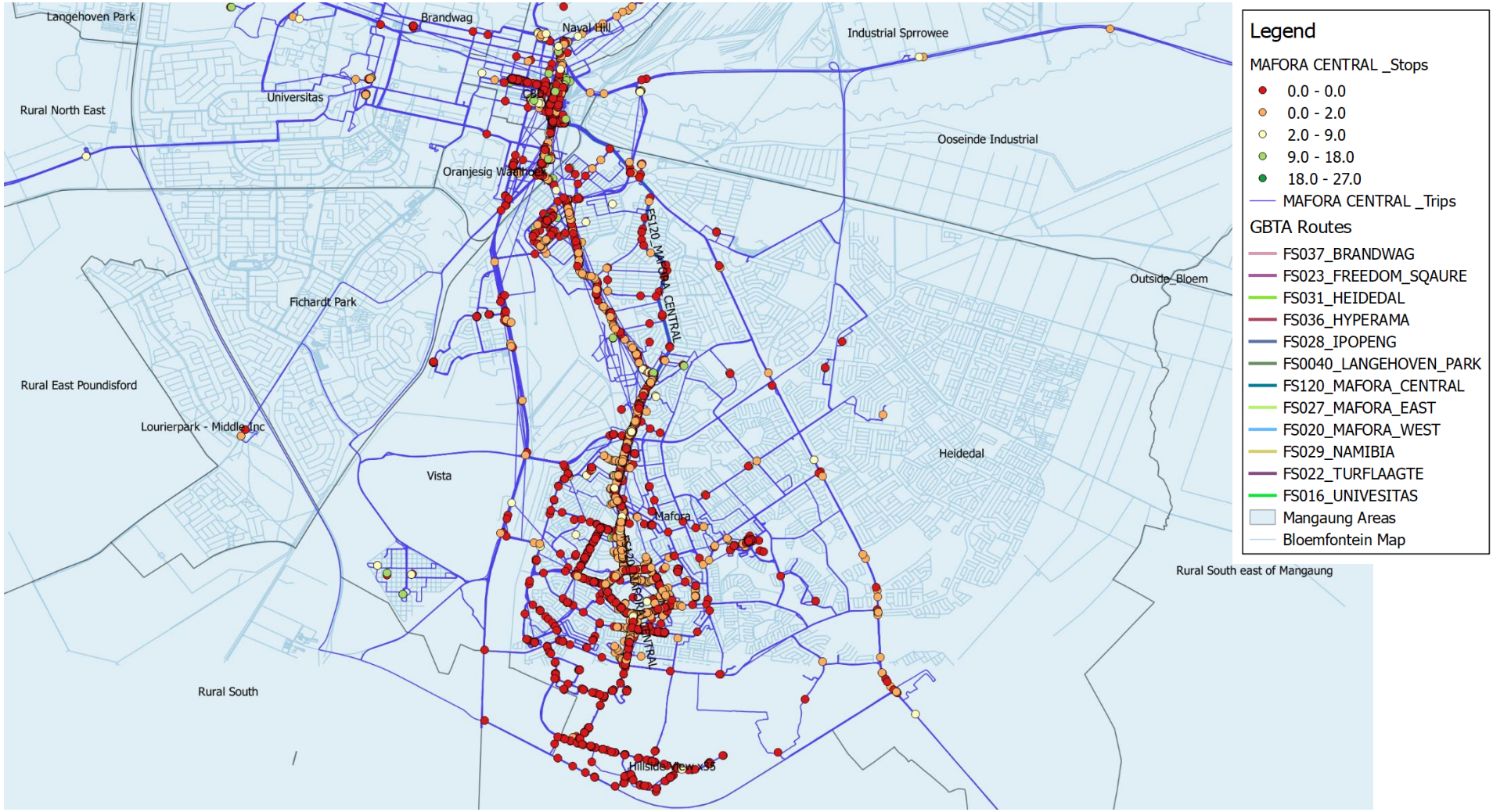
The tracks in blue illustrates the operations of all the surveyed taxis.

All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

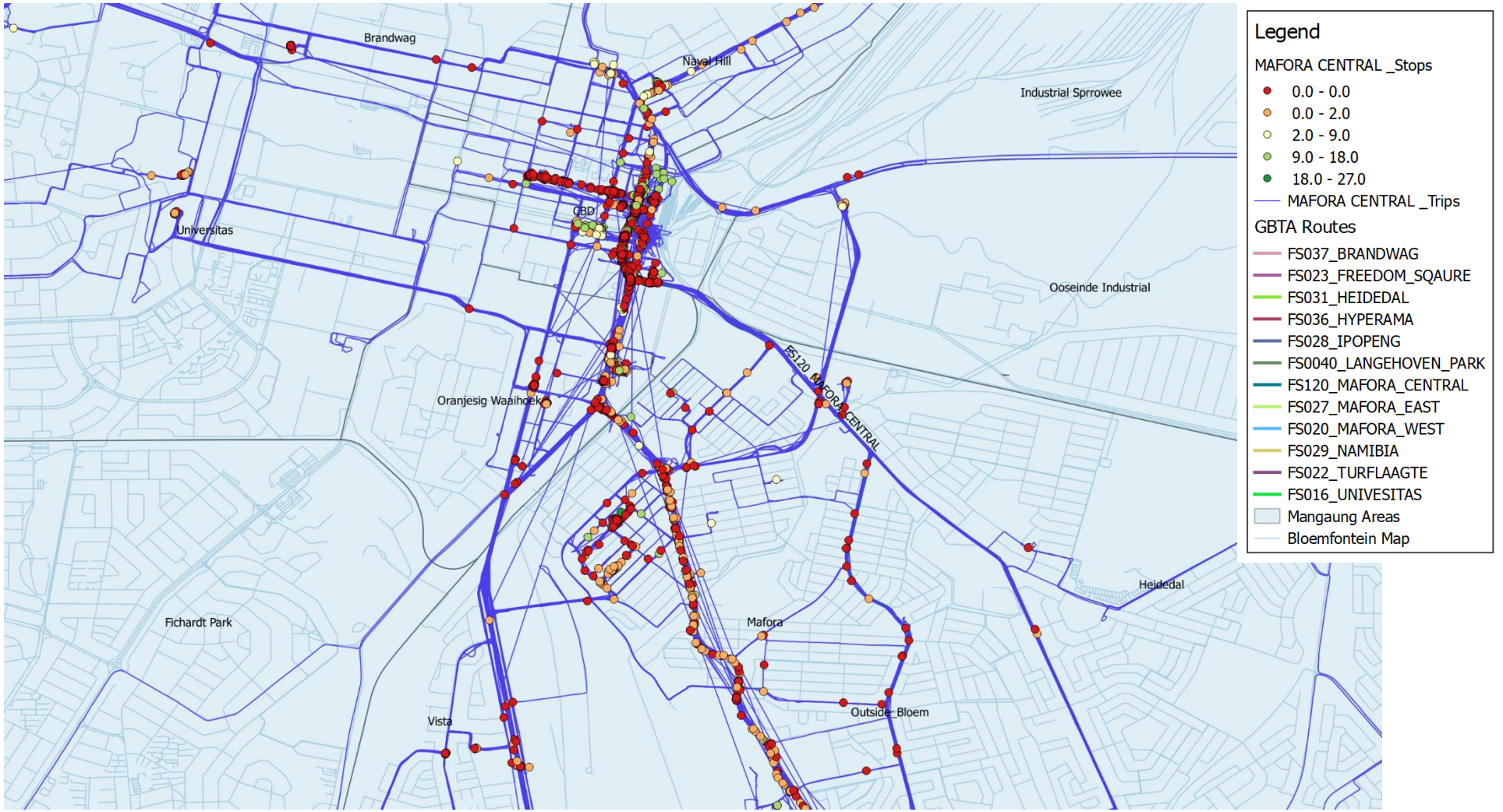
Operations of all surveyed taxis including stops



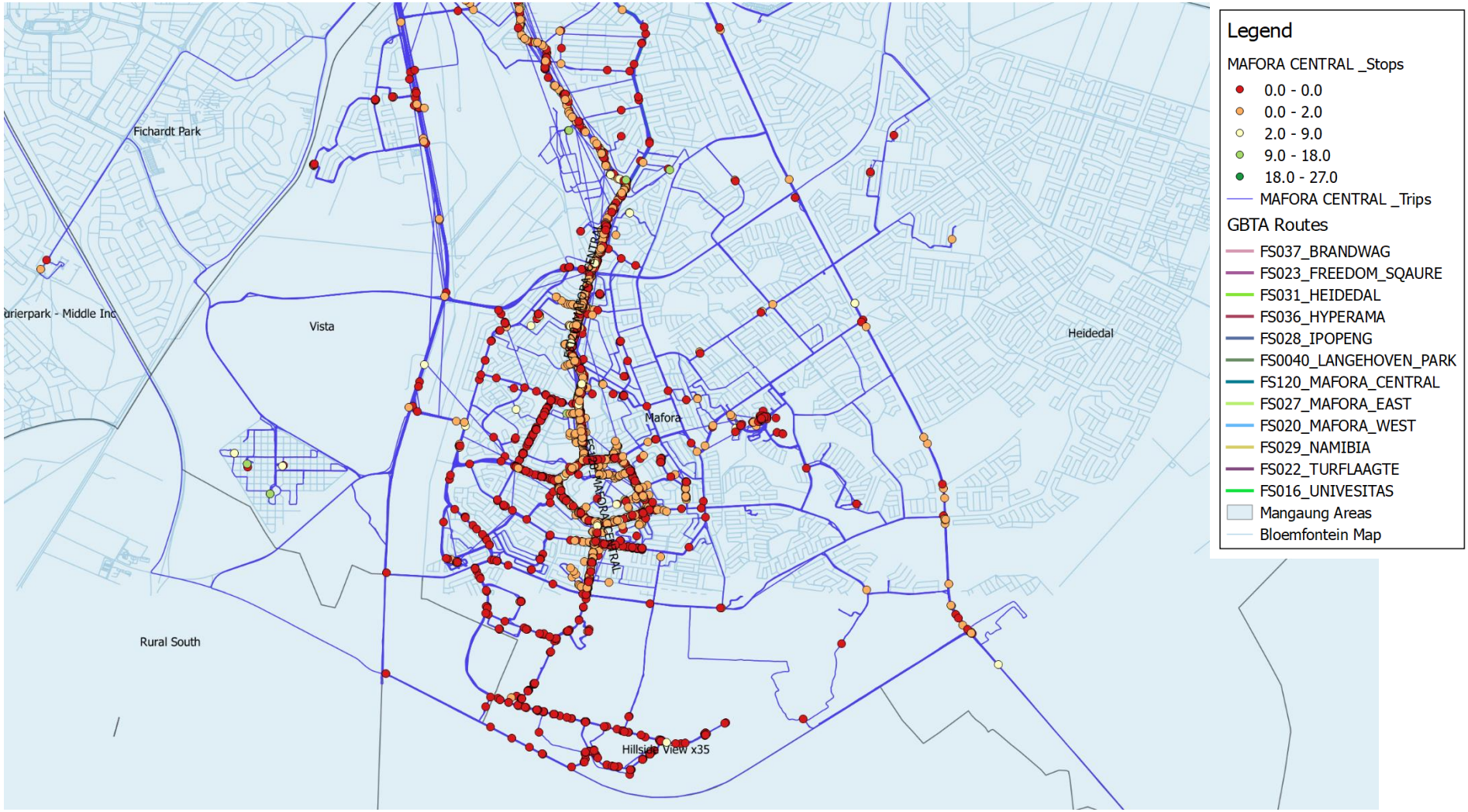
Operations of all surveyed taxis including stops – Focused on the MAFORA CENTRAL route



Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on the MAFORA CENTRAL area

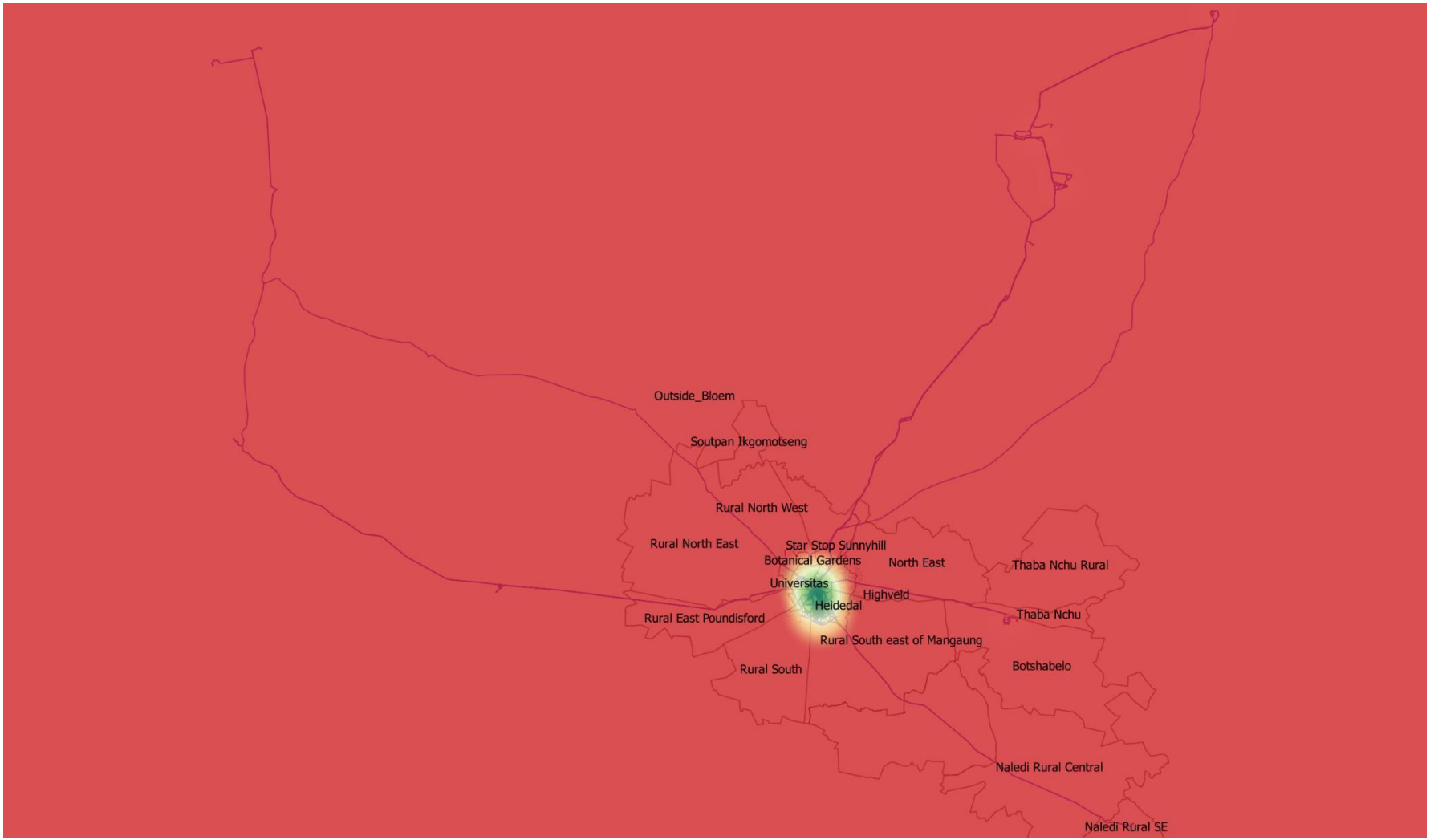


5.2. Heatmaps of taxi operations

The following maps demonstrate the volume of passengers in each area.

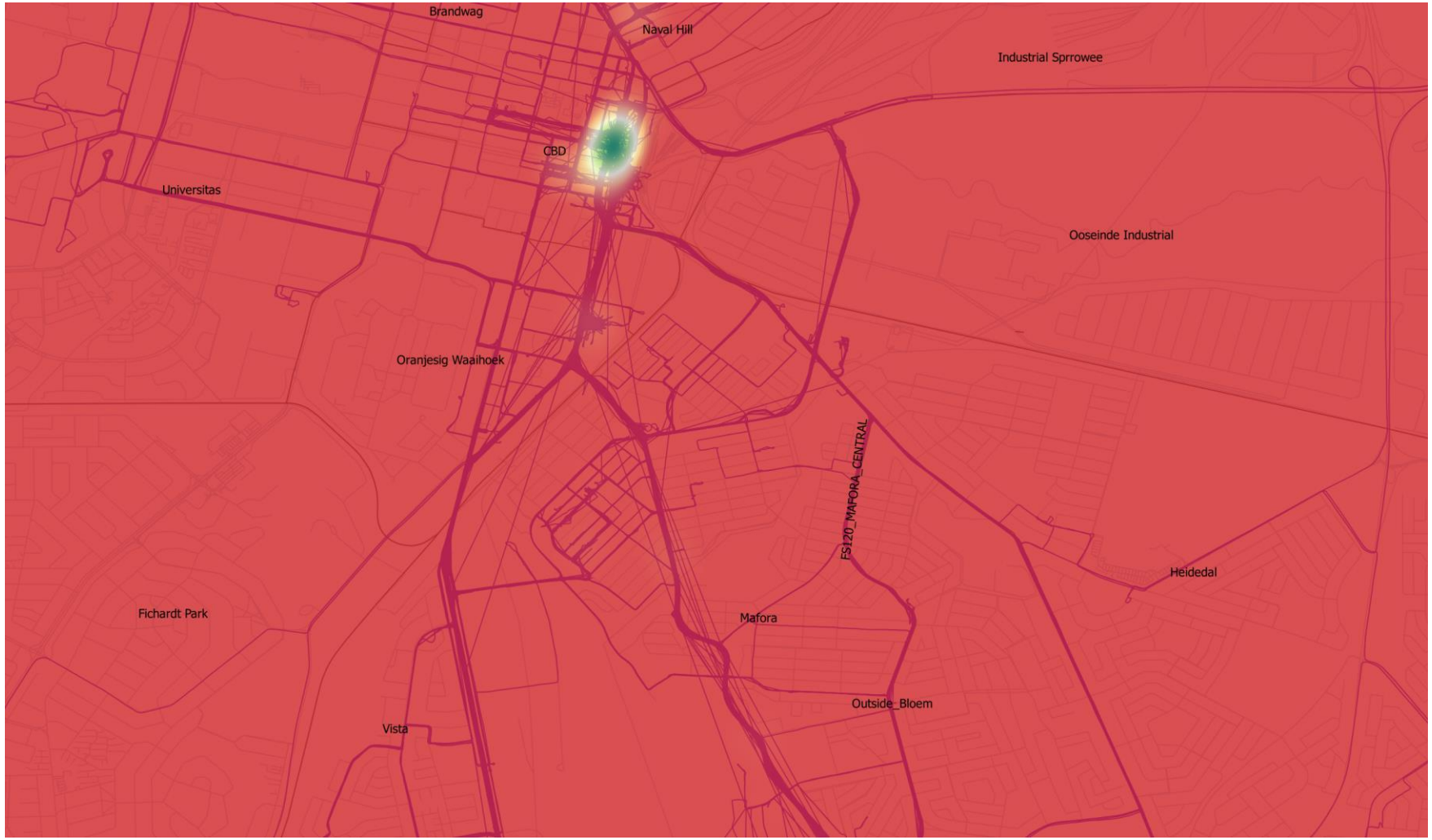
- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

Heatmap of total surveyed area.

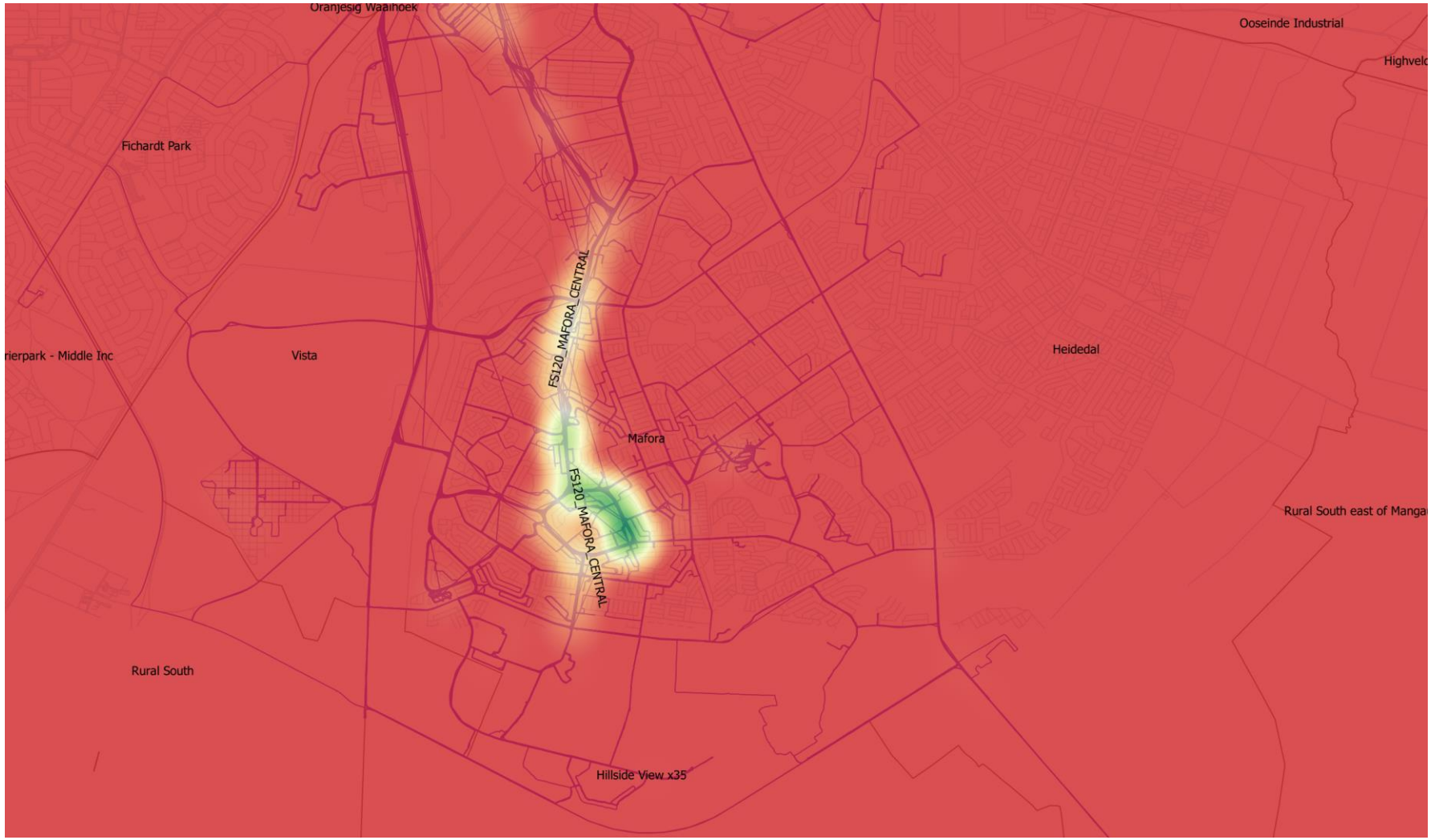


Heatmap of total surveyed area – Focused on the MAFORA CENTRAL route

Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on MAFORA CENTRAL



ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – MAFORA CENTRAL

iSAHA

Table of Contents

ROUTE: MAFORA CENTRAL
REPORT DATE: 18 October 2017

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

21 taxis were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 10: 20 July 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

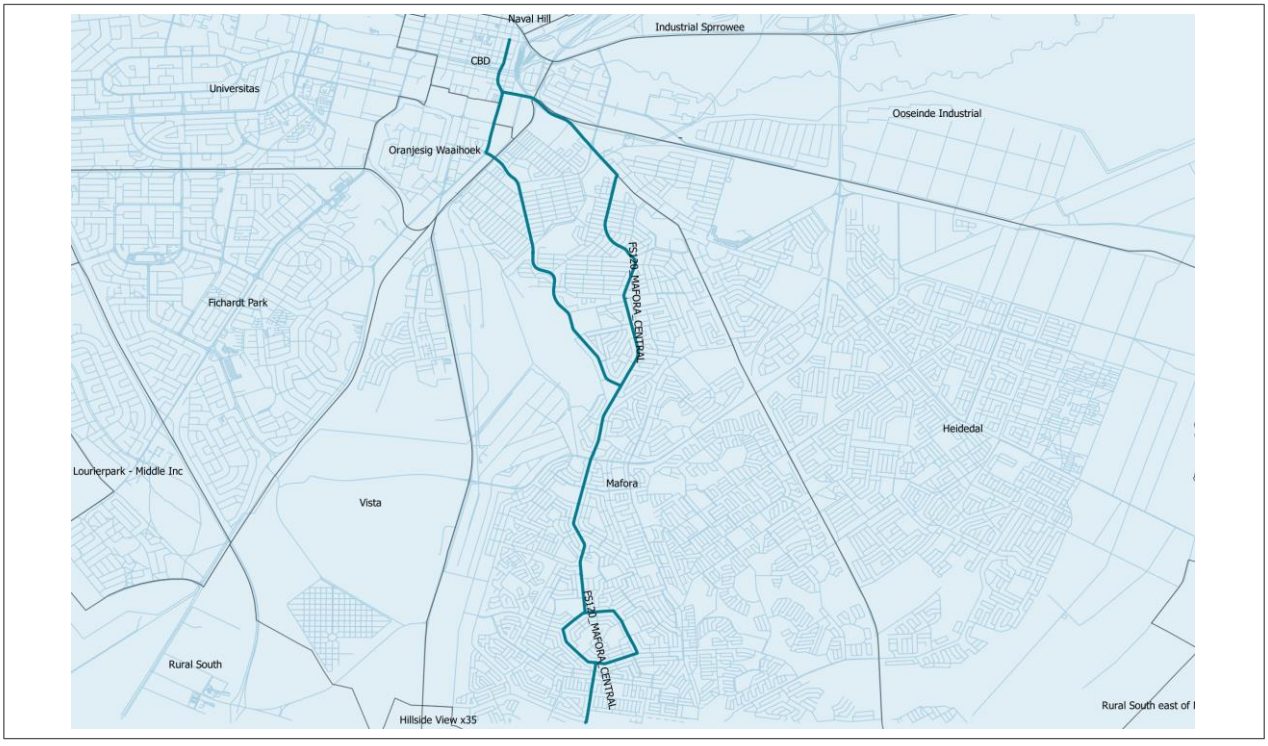
A total of 21 vehicles were surveyed between cycle 1 and cycle 10. 18 vehicles had 6 or more consecutive days of data and 3 vehicles did not have sufficient data.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 880.18	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 6 161.26	Per week As determined from survey
Average monthly income	R 26 678.27	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R298 821.24	Calculated from weekly result Formula: 48.5 x weekly average

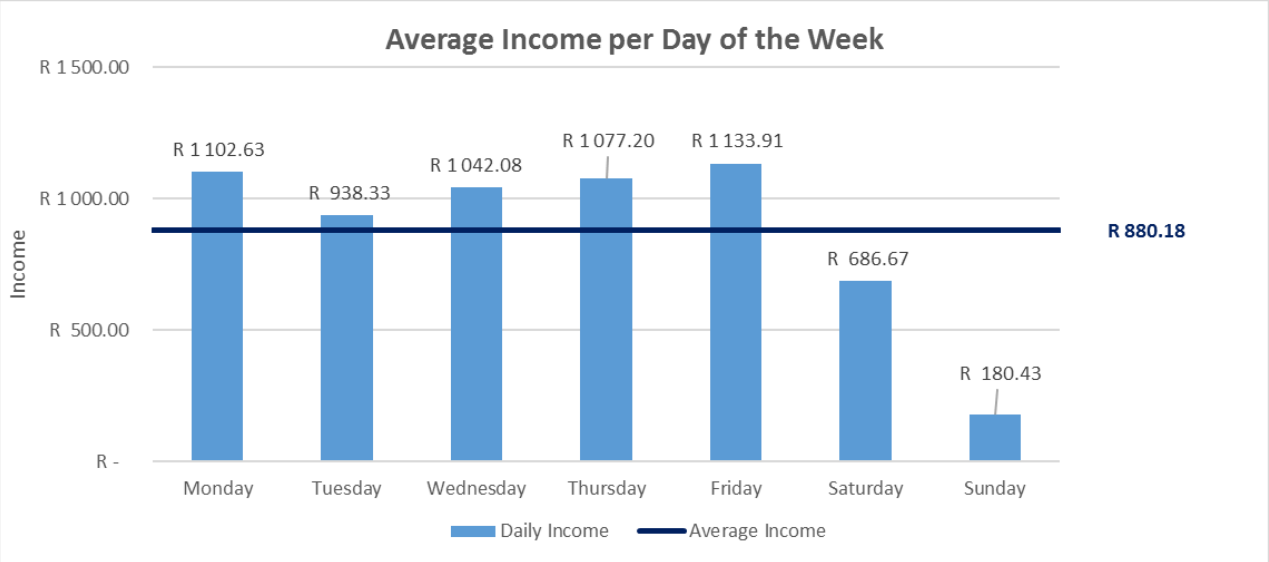


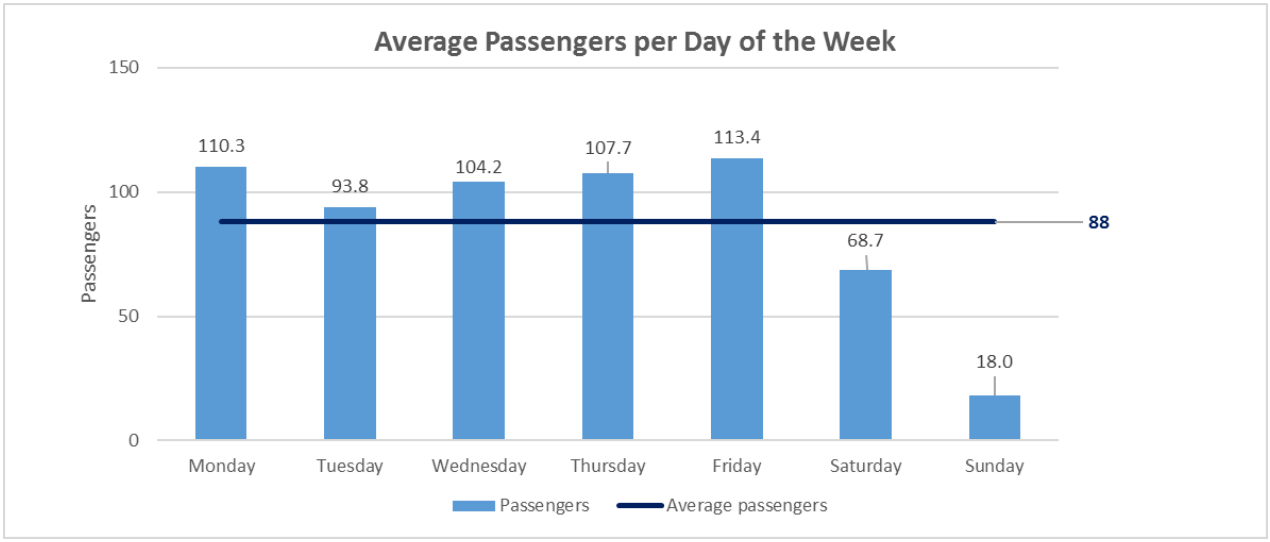
Corridor served by MAFORA CENTRAL Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	110	R 10.00	R 1 102.63
Tuesday	94	R 10.00	R 938.33
Wednesday	104	R 10.00	R 1 042.08
Thursday	108	R 10.00	R 1 077.20
Friday	113	R 10.00	R 1 133.91
Saturday	69	R 10.00	R 686.67
Sunday	18	R 10.00	R 180.43
Weekly total	616		R 6 161.26
Average	88	R 10.00	R 880.18
Weekday Avg	106	R 10.00	R 1 058.83

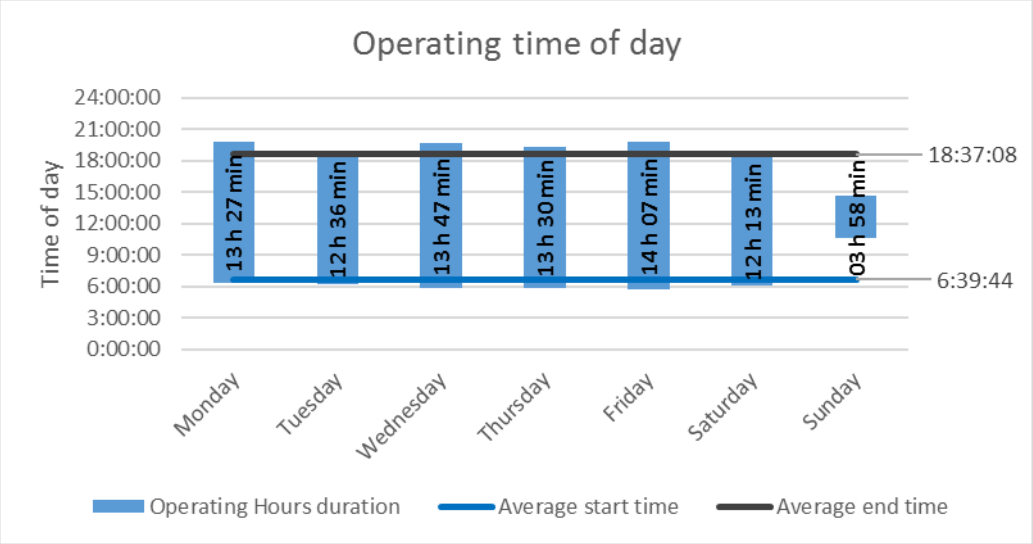



Average Passengers per Day of the Week
150
100
50
0
Passengers
110.3
93.8
104.2
107.7
113.4
68.7
18.0
88
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.3. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	6:39:44	18:37:08	11:57:24
Weekday (Mon-Fri) avg	5:58:15	19:28:13	13:29:58
Monday	6:18:44	19:46:42	13:27:58
Tuesday	6:09:17	18:45:46	12:36:29
Wednesday	5:50:49	19:38:02	13:47:13
Thursday	5:51:23	19:22:08	13:30:44
Friday	5:40:59	19:48:26	14:07:27
Saturday	6:07:27	18:21:16	12:13:50
Sunday	10:39:31	14:37:37	3:58:06



3.4. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	156	135	R	6.51	39%
Weekday (Mon-Fri) avg	170	160	R	6.61	39%
Monday	165	165	R	6.70	38%
Tuesday	148	148	R	6.34	37%
Wednesday	153	153	R	6.81	40%
Thursday	182	164	R	6.56	40%
Friday	204	171	R	6.62	40%
Saturday	177	113	R	6.07	37%
Sunday	66	32	R	5.67	34%

3.5. Operational analysis

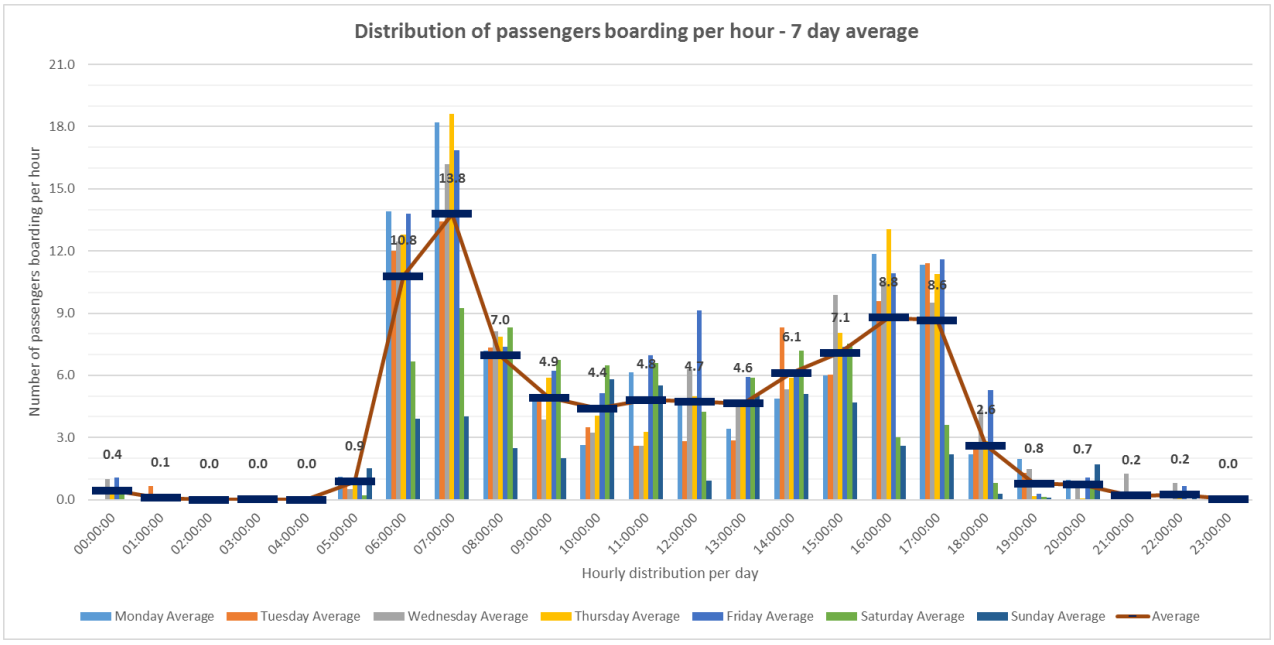
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	135.1	88	1.49	00:09:00	10.6	955.5	2461.2	39%
Weekday (Mon-Fri) avg	160.2	106	1.50	00:08:07	12.2	995.3	2549.5	39%
Monday	164.5	110	1.49	00:07:48	12.3	957.7	2533.7	38%
Tuesday	147.9	94	1.58	00:08:23	13.1	875.9	2359.2	37%
Wednesday	152.9	104	1.47	00:08:32	10.9	995.5	2524.3	40%
Thursday	164.2	108	1.51	00:07:55	12.3	1018.6	2549.9	40%
Friday	171.4	113	1.44	00:07:56	12.7	1111.7	2750.9	40%
Saturday	113.2	69	1.47	00:11:05	9.4	731.4	1938.5	37%
Sunday	31.8	18	1.52	00:11:25	3.5	750.5	2097.4	34%

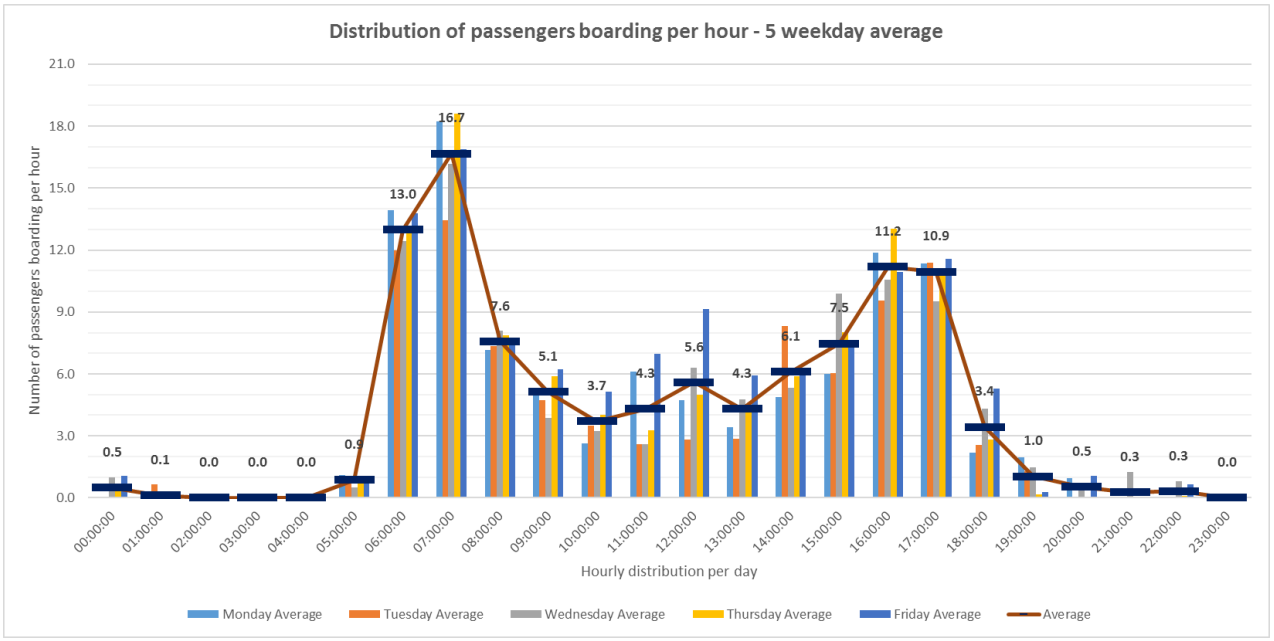
3.6. Fluctuations

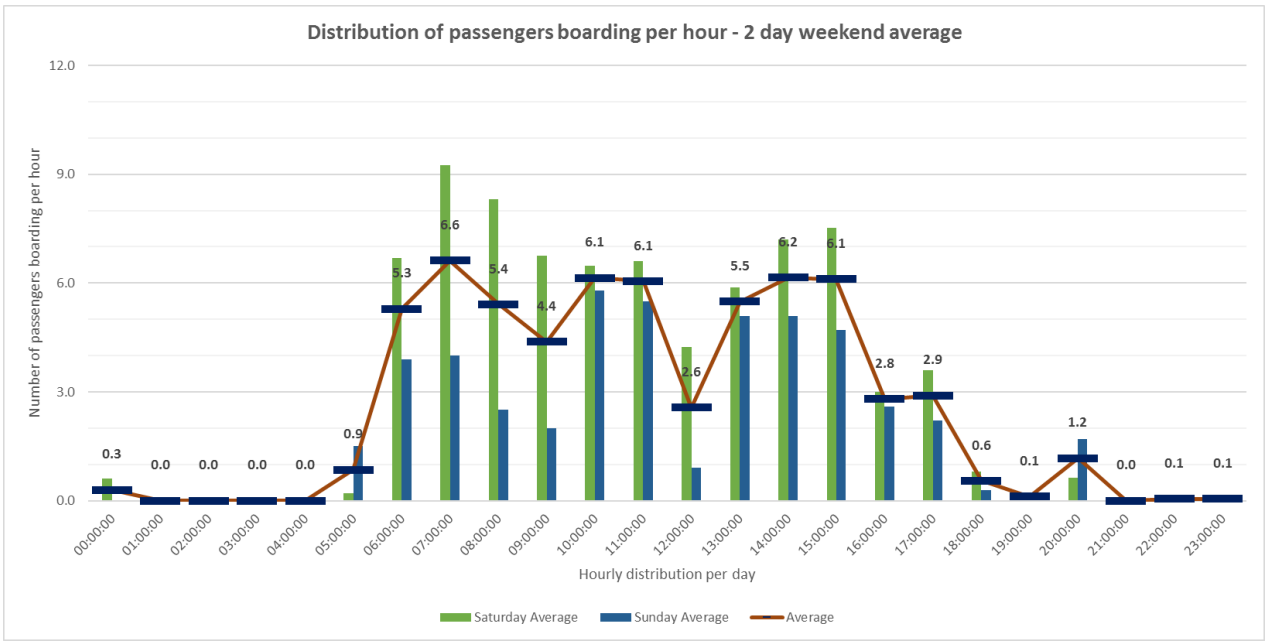
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.4	R 4.45	2%
01:00	01:59	0.1	R 0.93	1%
02:00	02:59	0.0	R -	0%
03:00	03:59	0.0	R 0.12	0%
04:00	04:59	0.0	R -	0%
05:00	05:59	0.9	R 8.63	3%
06:00	06:59	10.8	R 107.88	27%
07:00	07:59	13.8	R 137.94	28%
08:00	08:59	7.0	R 69.55	20%
09:00	09:59	4.9	R 49.22	15%
10:00	10:59	4.4	R 43.99	21%
11:00	11:59	4.8	R 48.11	24%
12:00	12:59	4.7	R 47.32	28%
13:00	13:59	4.6	R 46.40	27%
14:00	14:59	6.1	R 61.18	34%
15:00	15:59	7.1	R 70.80	41%
16:00	16:59	8.8	R 87.92	45%
17:00	17:59	8.6	R 86.48	35%
18:00	18:59	2.6	R 26.12	20%
19:00	19:59	0.8	R 7.76	4%
20:00	20:59	0.7	R 7.15	4%
21:00	21:59	0.2	R 1.97	1%
22:00	22:59	0.2	R 2.41	1%
23:00	23:59	0.0	R 0.26	1%

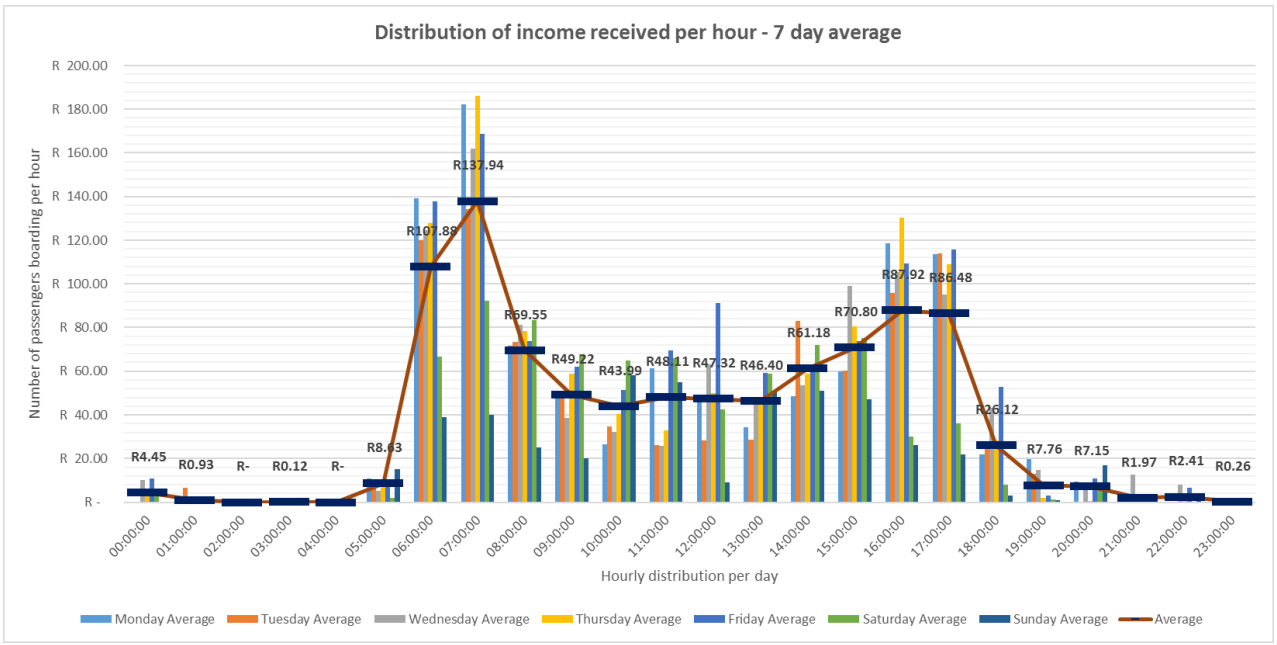
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

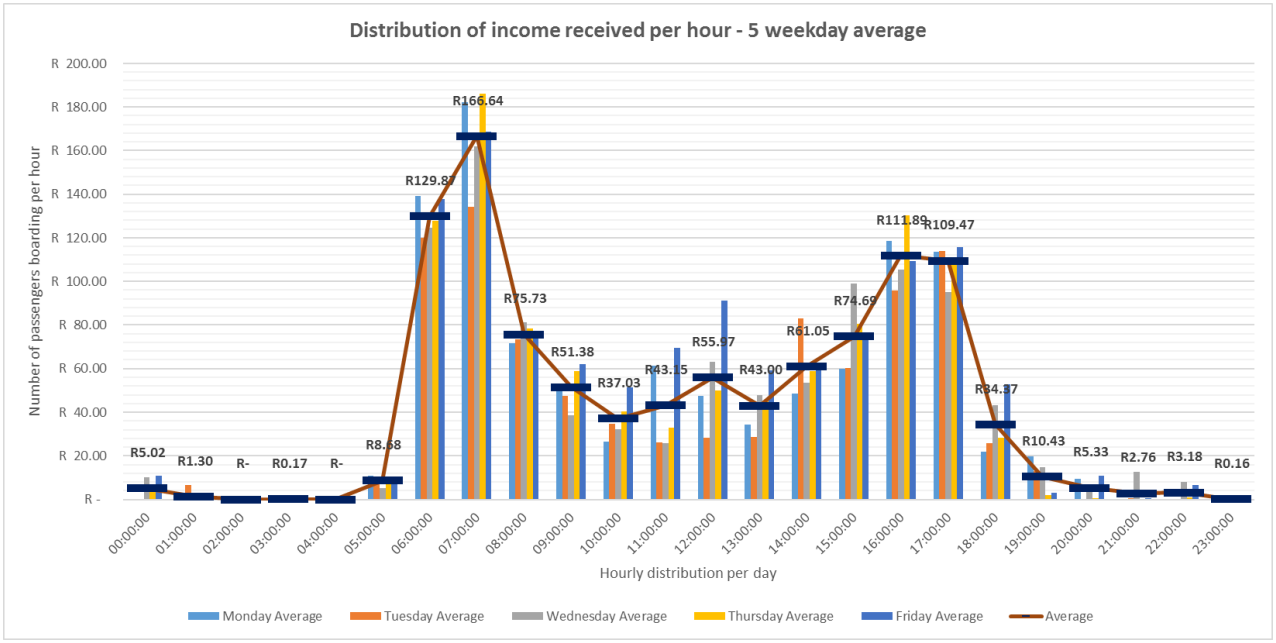


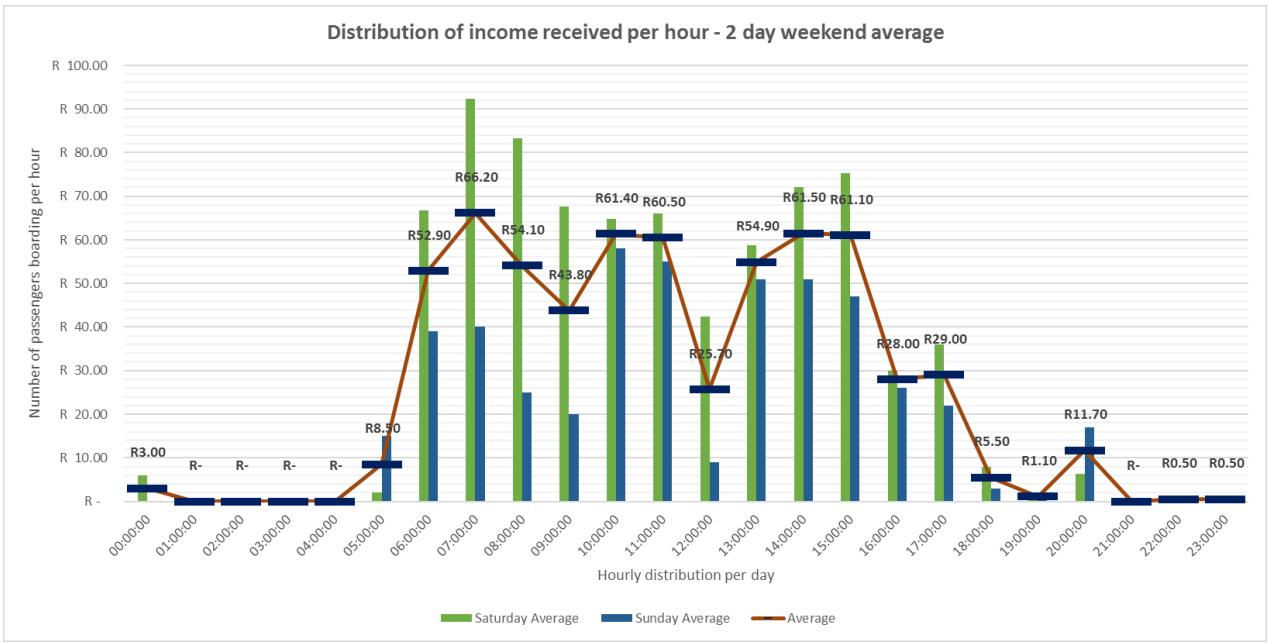




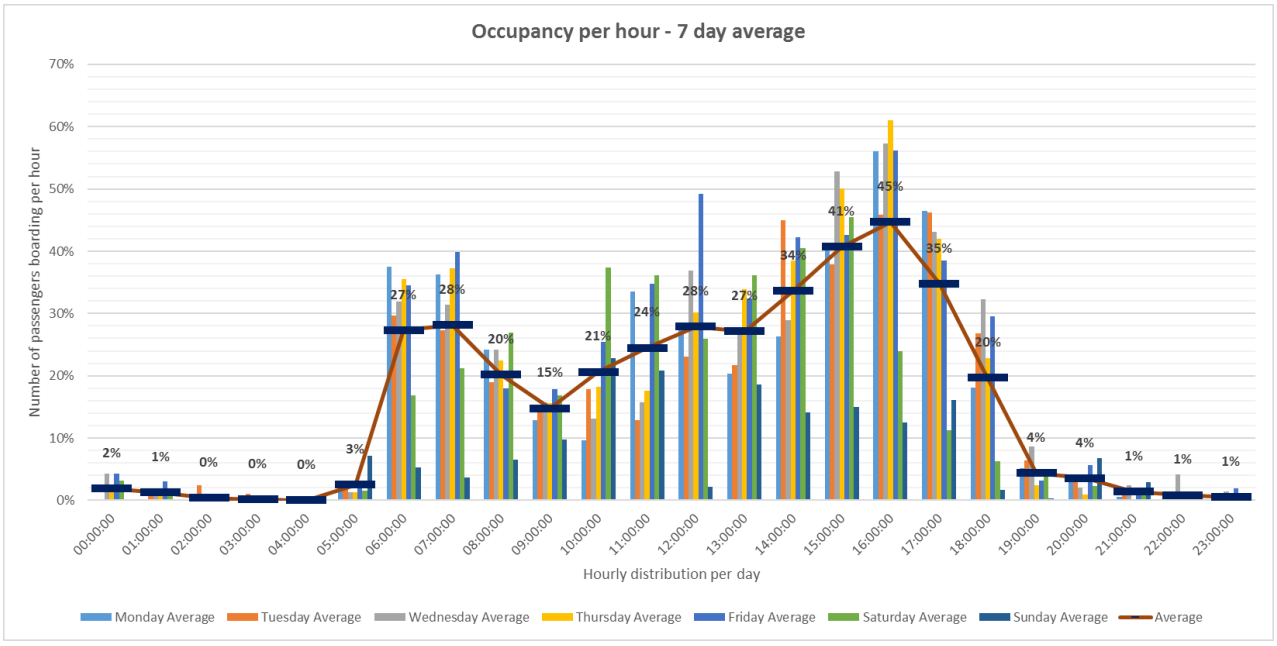
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

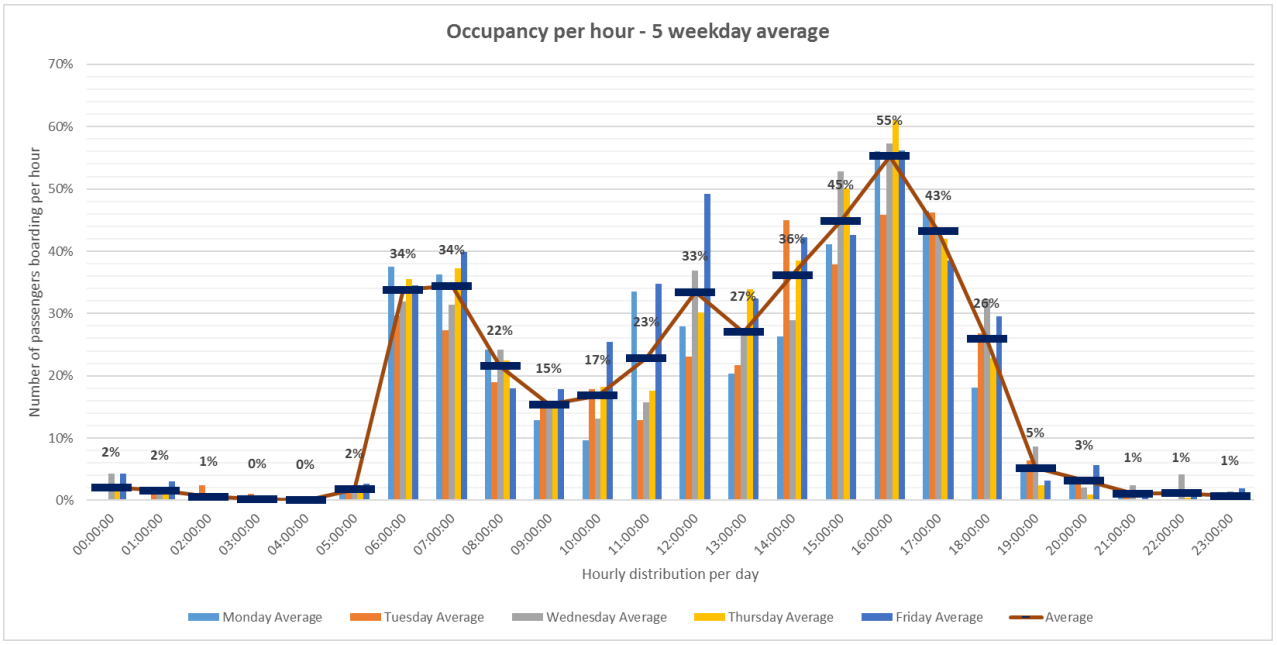


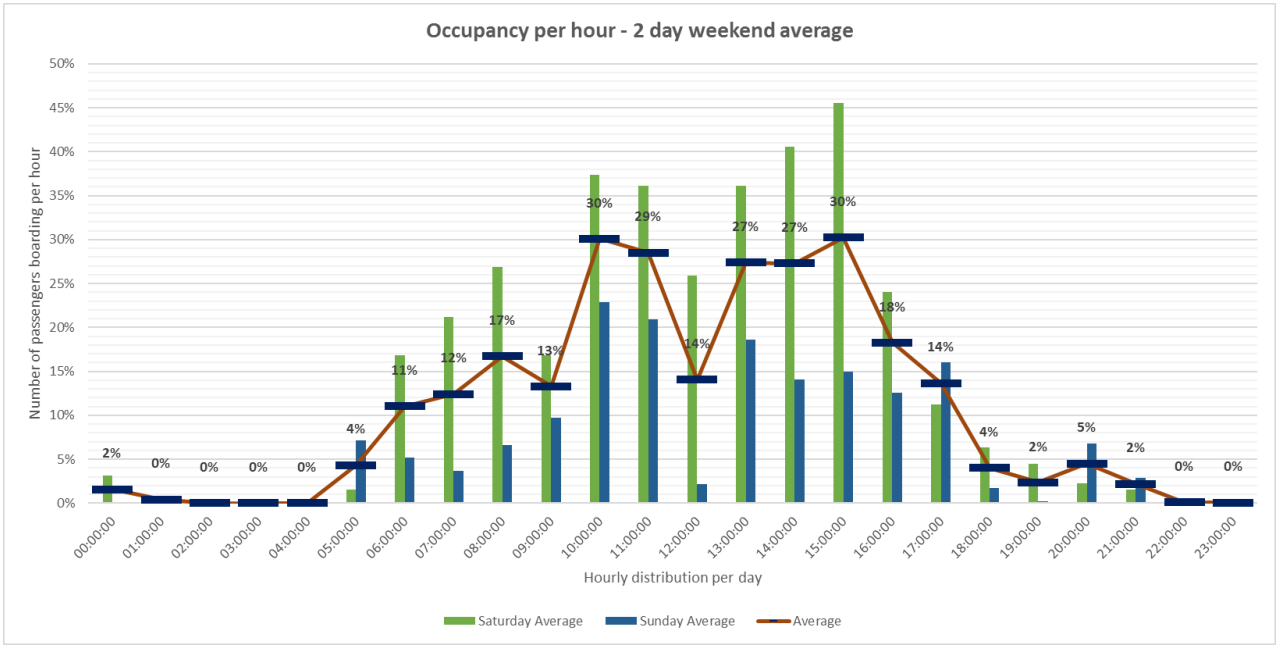

Distribution of income received per hour - 5 weekday average
Number of passengers boarding per hour
R 200.00
R 180.00
R 160.00
R 140.00
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R5.02
R1.30
R-
R0.17
R-
R8.68
R129.81
R166.64
R75.73
R51.38
R37.03
R43.15
R55.97
R43.00
R61.05
R74.69
R111.89
R109.47
R34.37
R10.43
R5.33
R2.76
R3.18
R0.16
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 100.00
R 90.00
R 80.00
R 70.00
R 60.00
R 50.00
R 40.00
R 30.00
R 20.00
R 10.00
R -
R3.00
R-
R-
R-
R-
R8.50
R52.90
R66.20
R54.10
R43.80
R61.40
R60.50
R25.70
R54.90
R61.50
R61.10
R28.00
R29.00
R5.50
R1.10
R11.70
R-
R0.50
R0.50
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

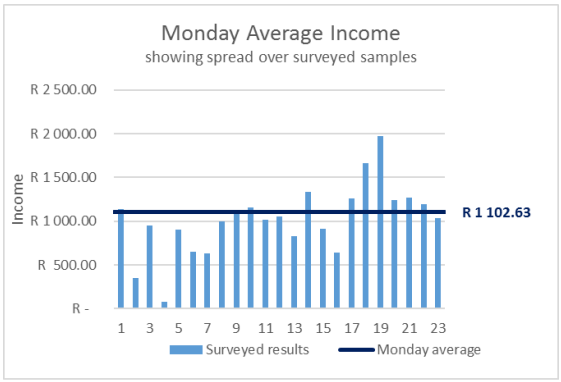


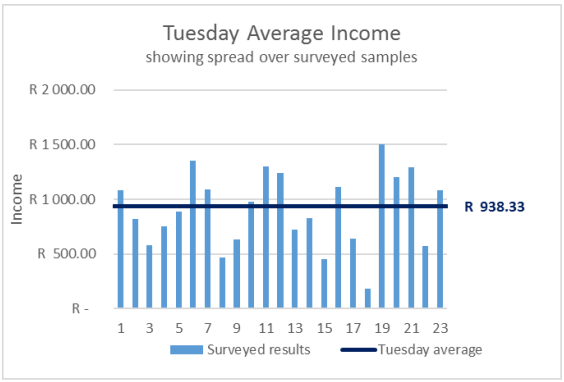


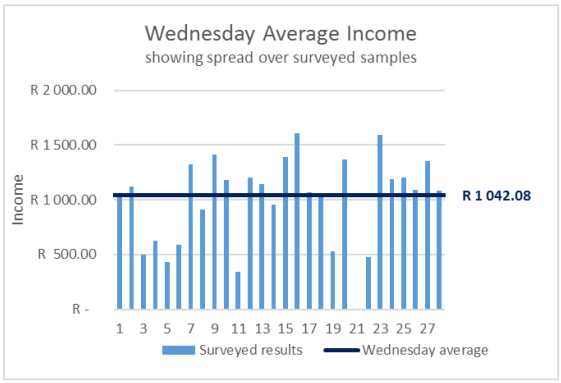

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
50%
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
2%
0%
0%
0%
0%
4%
11%
12%
17%
13%
30%
29%
14%
27%
27%
30%
18%
14%
4%
2%
5%
2%
0%
0%
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

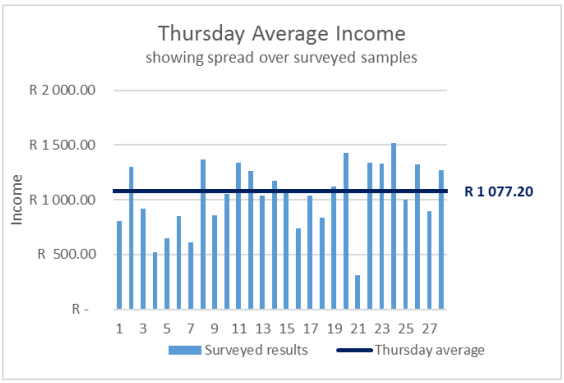
4. DETAILED SURVEY RESULTS

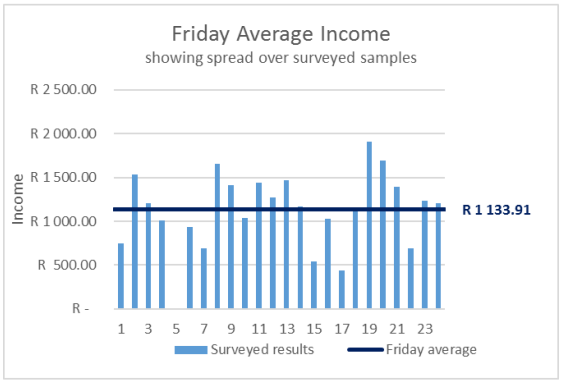
4.1. Income distribution

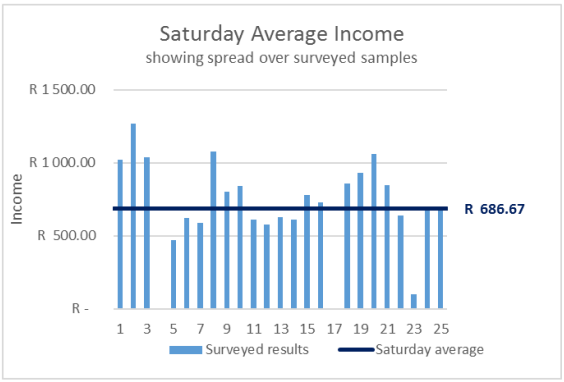


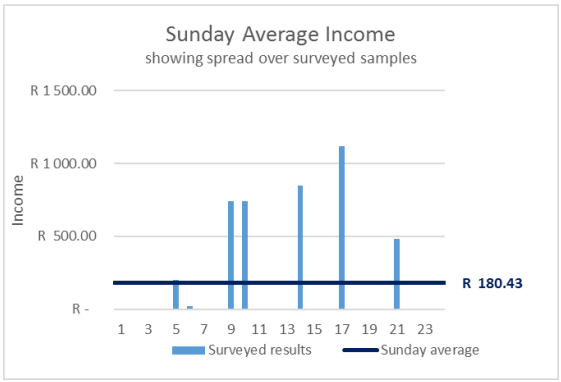




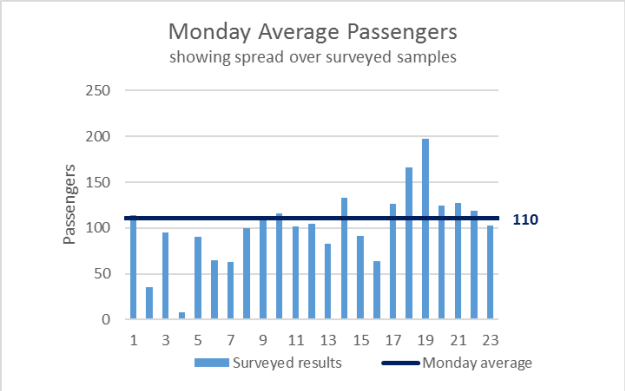


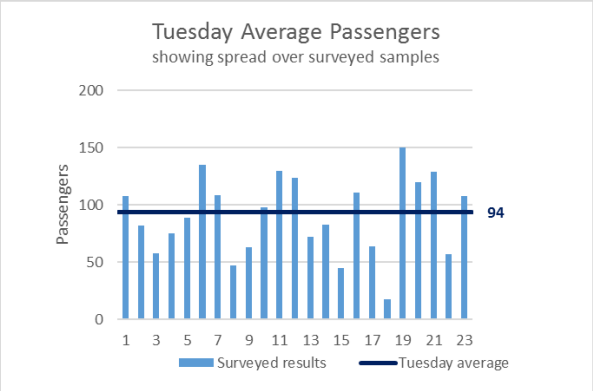


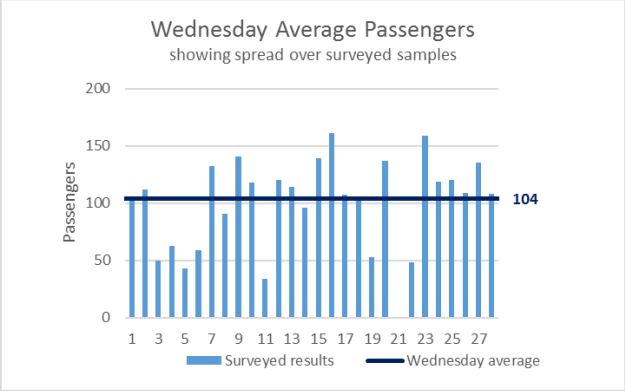


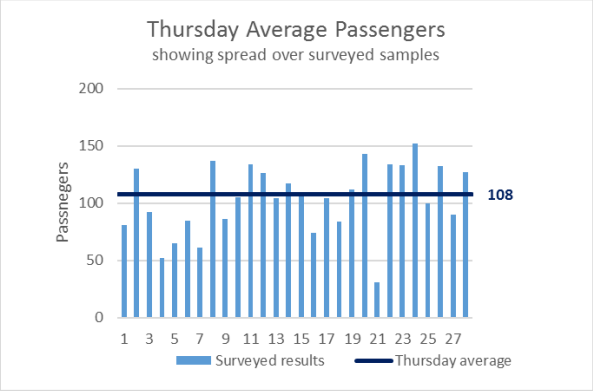


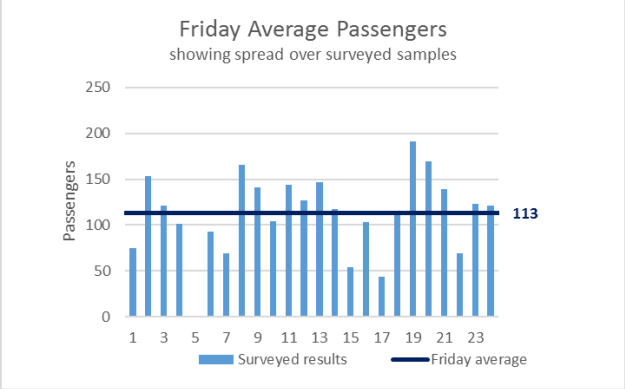
4.2. Passenger number distribution

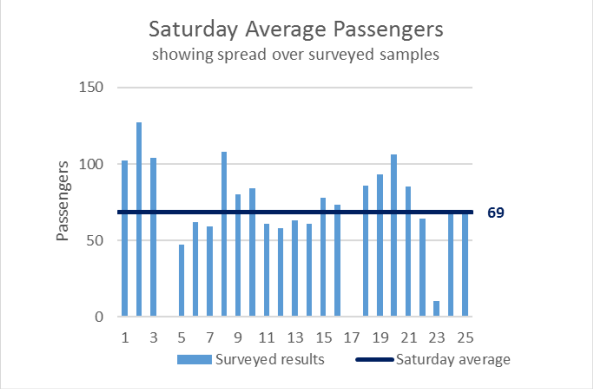


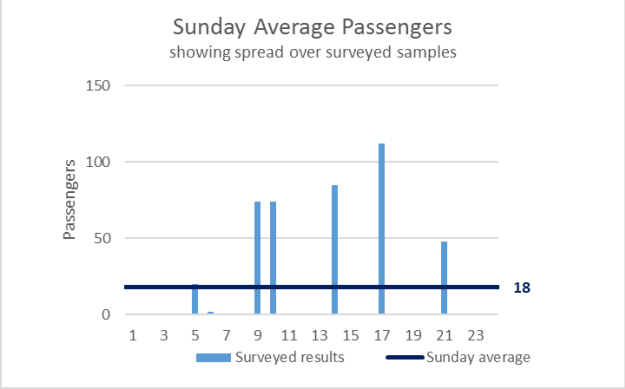










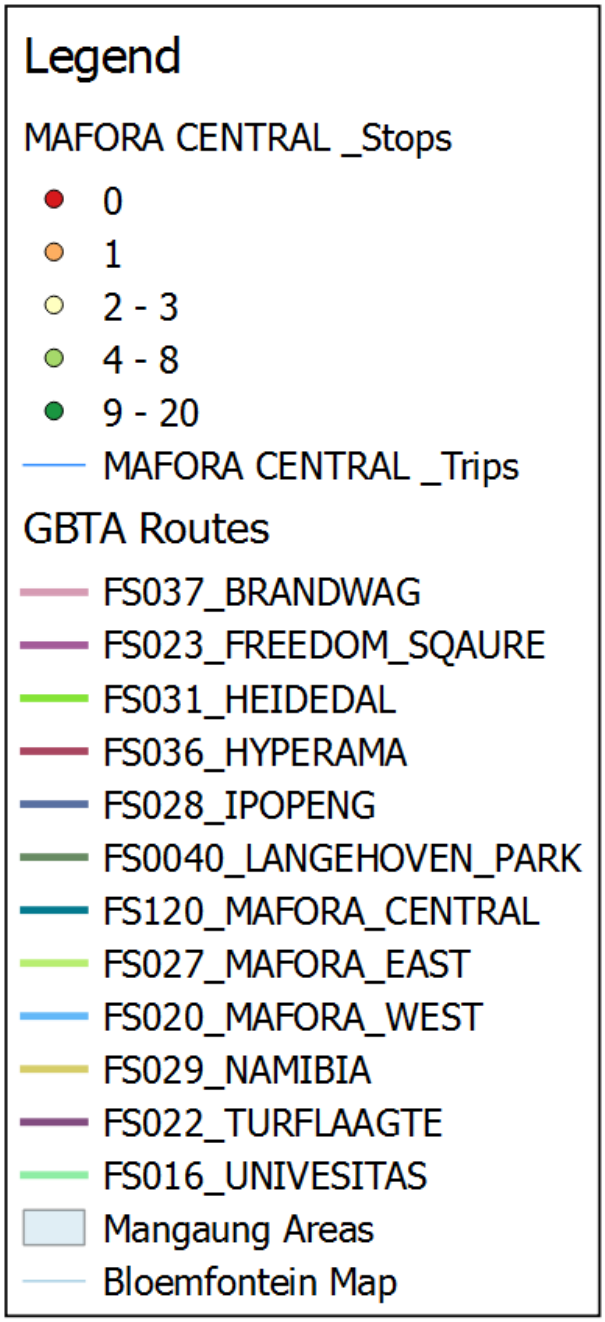


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps

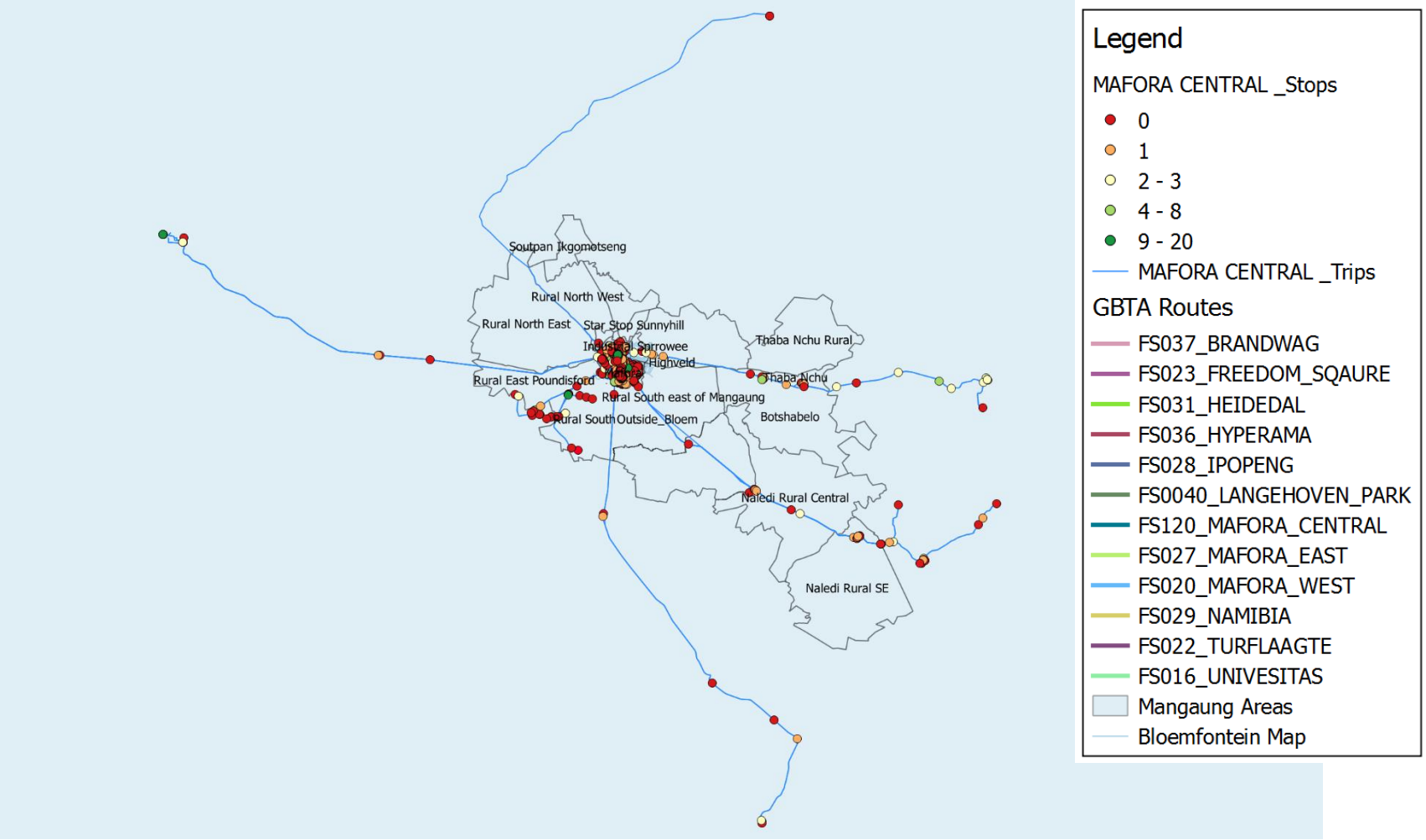


5.1. All surveyed operations

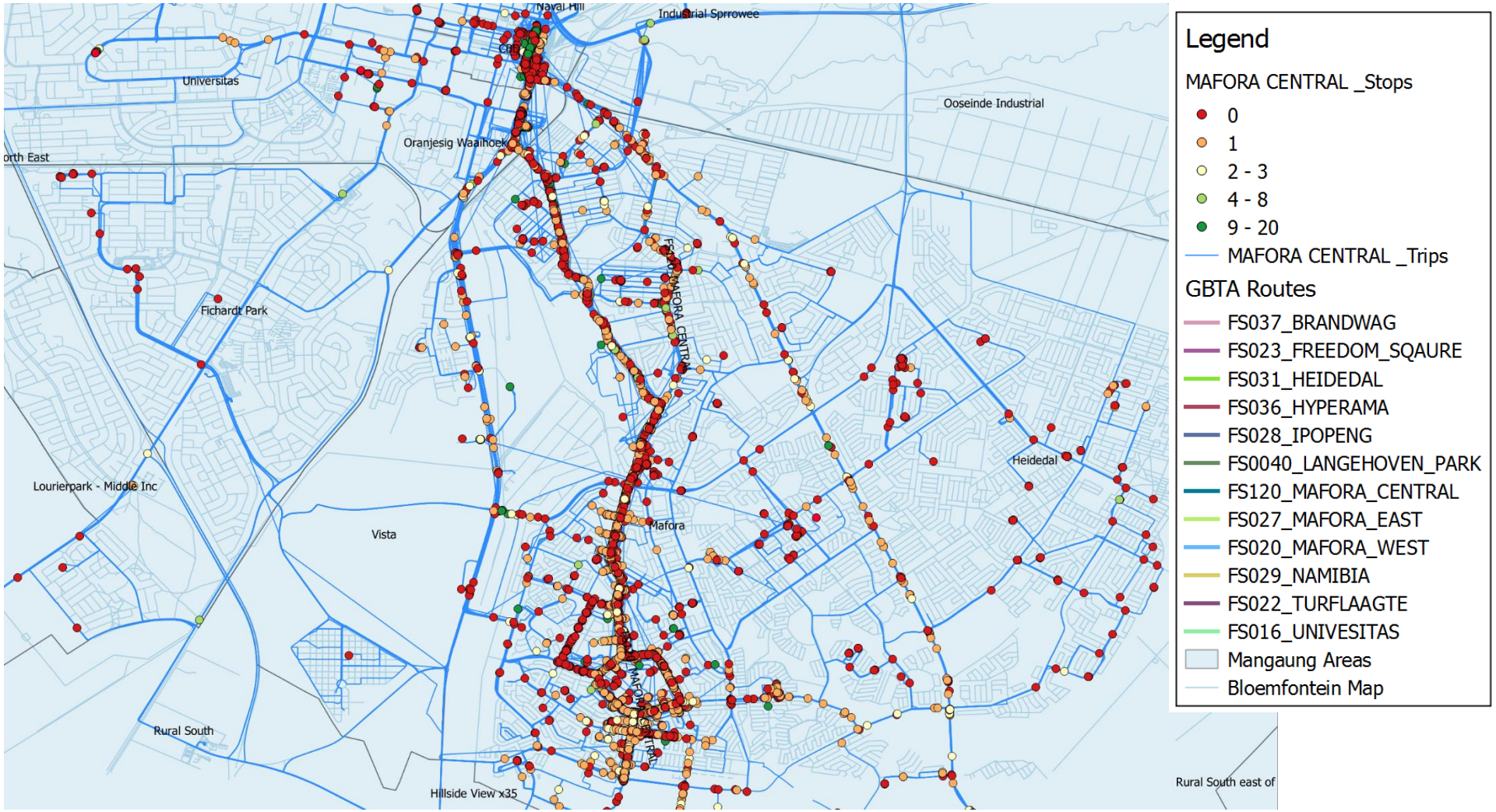
The tracks in blue illustrates the operations of all the surveyed taxis.

All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

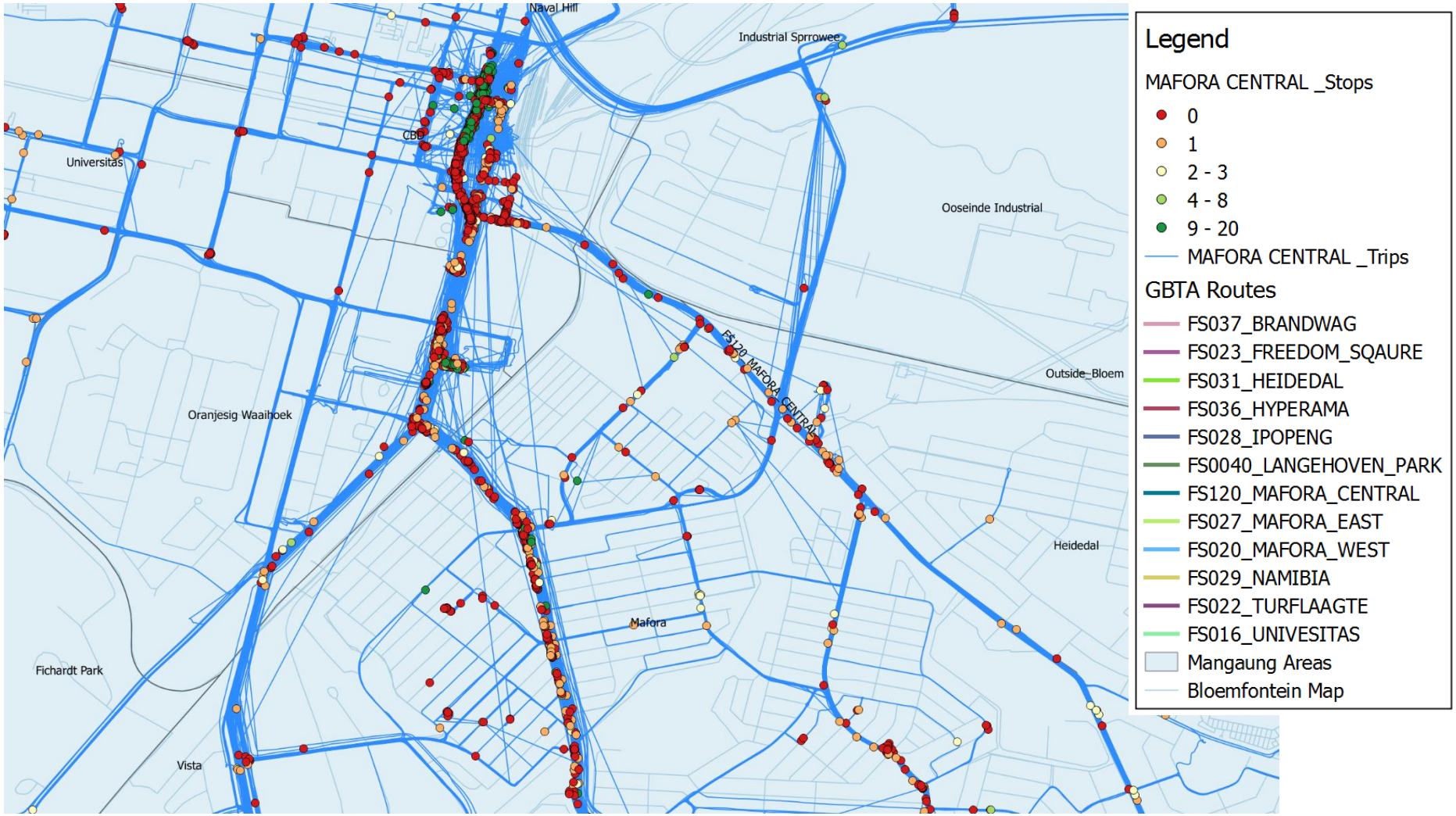
Operations of all surveyed taxis including stops



Operations of all surveyed taxis including stops – Focused on the MAFORA CENTRAL route

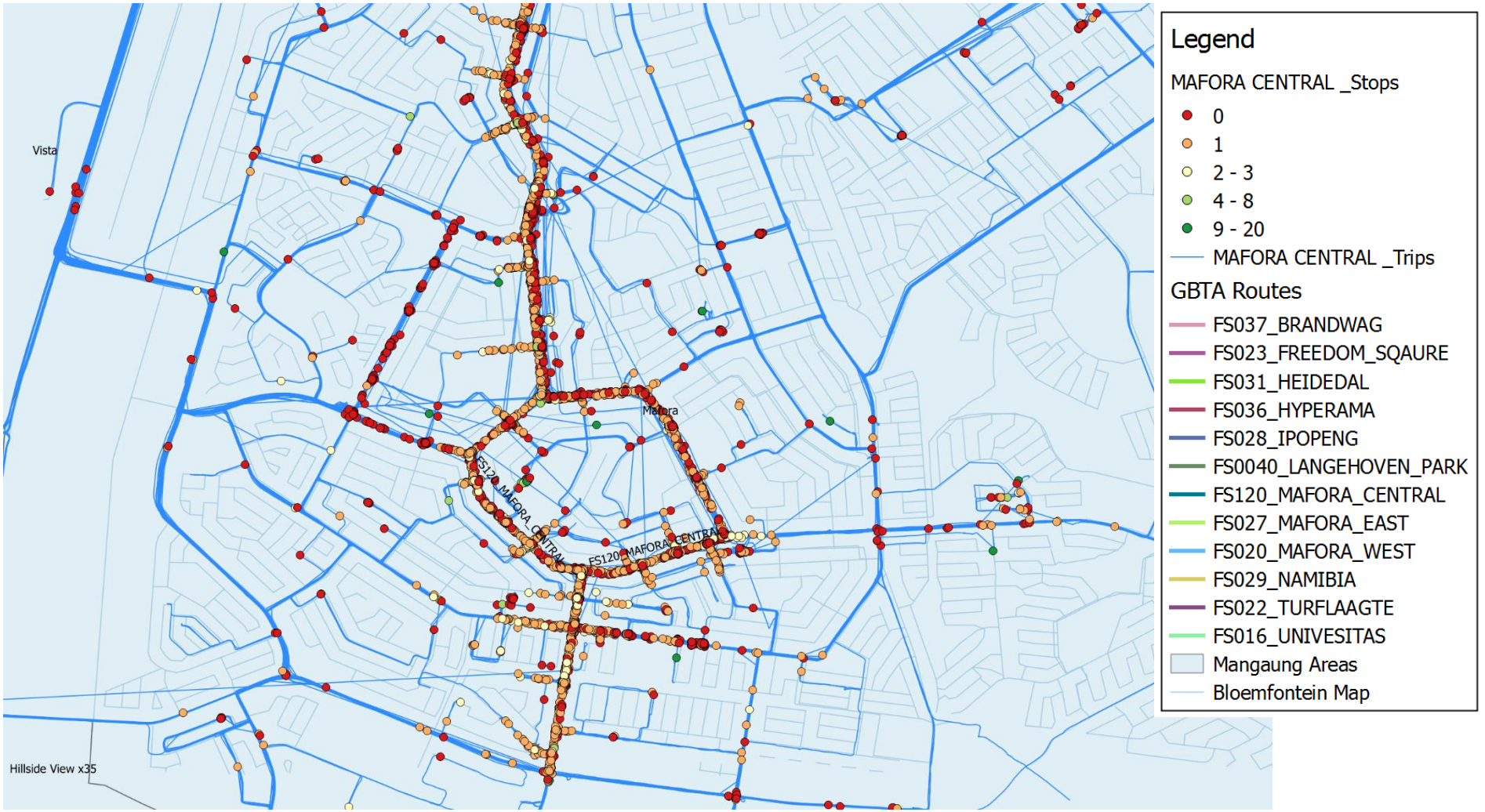


Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on the Corner of Maphisa Rd and Moshoeshoe St on the MAFORA CENTRAL route

Operations of all surveyed taxis including stops – Focused on the MAFORA CENTRAL area

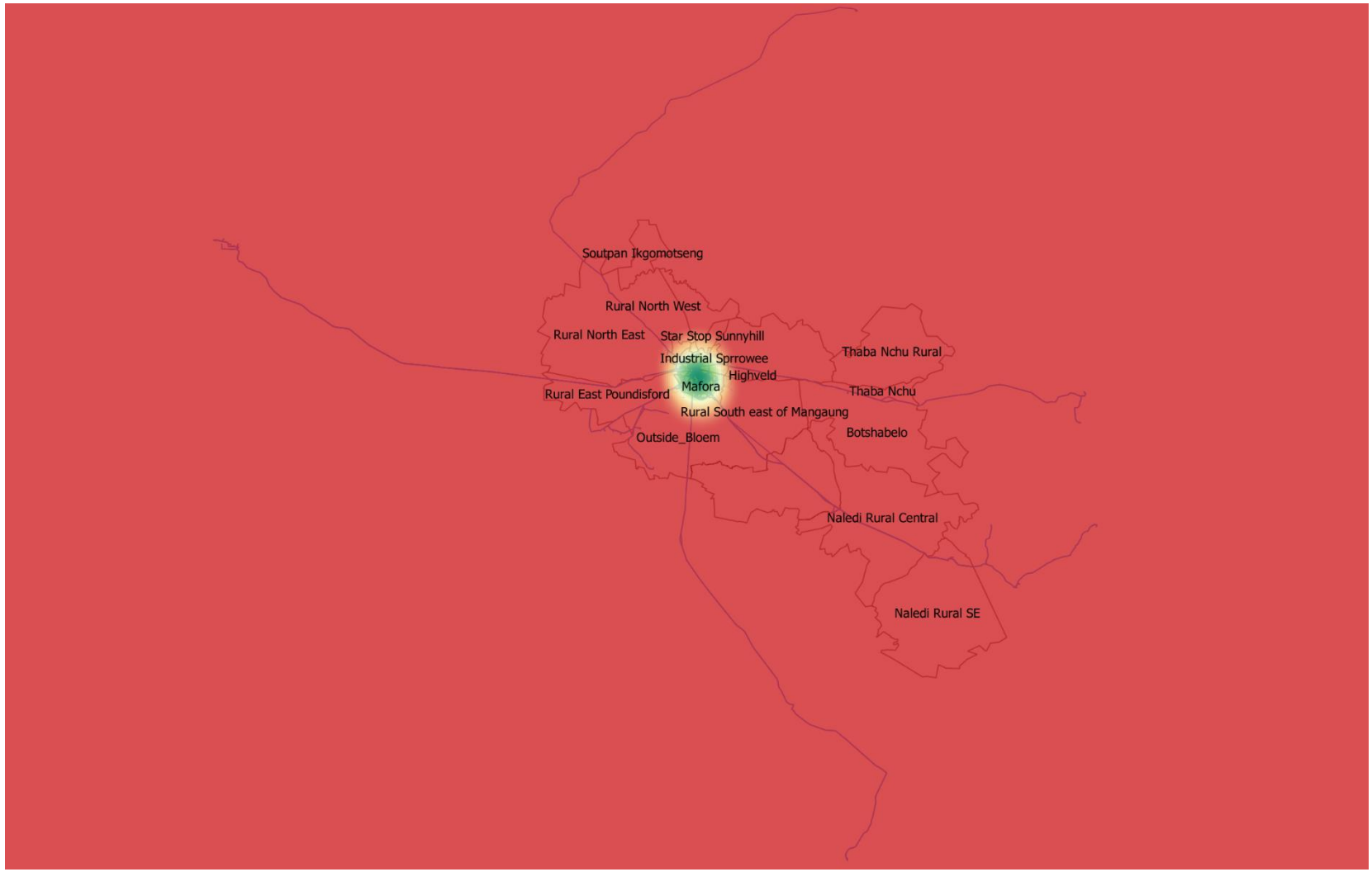


5.2. Heatmaps of taxi operations

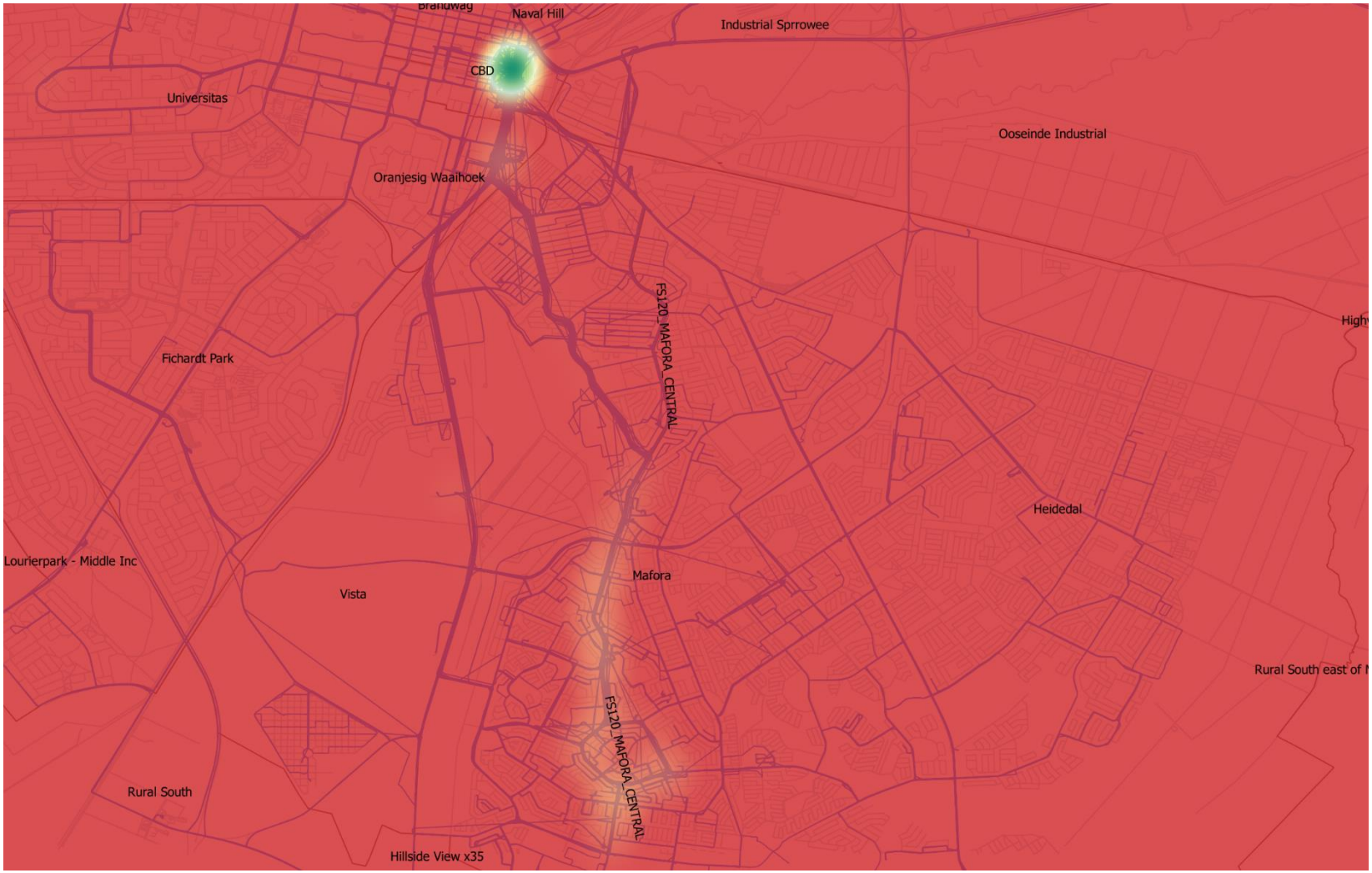
The following maps demonstrate the volume of passengers in each area.

- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

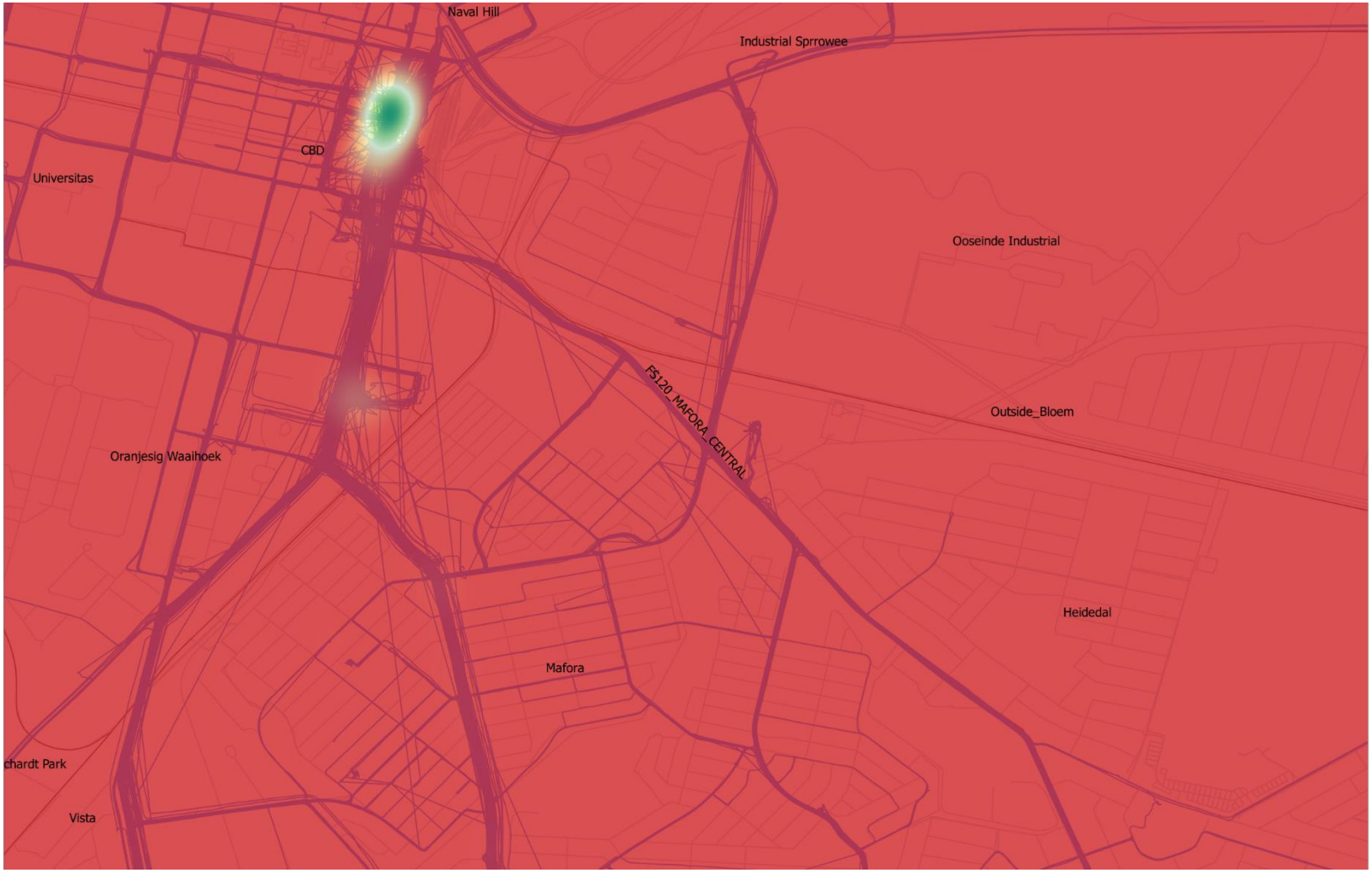
Heatmap of total surveyed area.



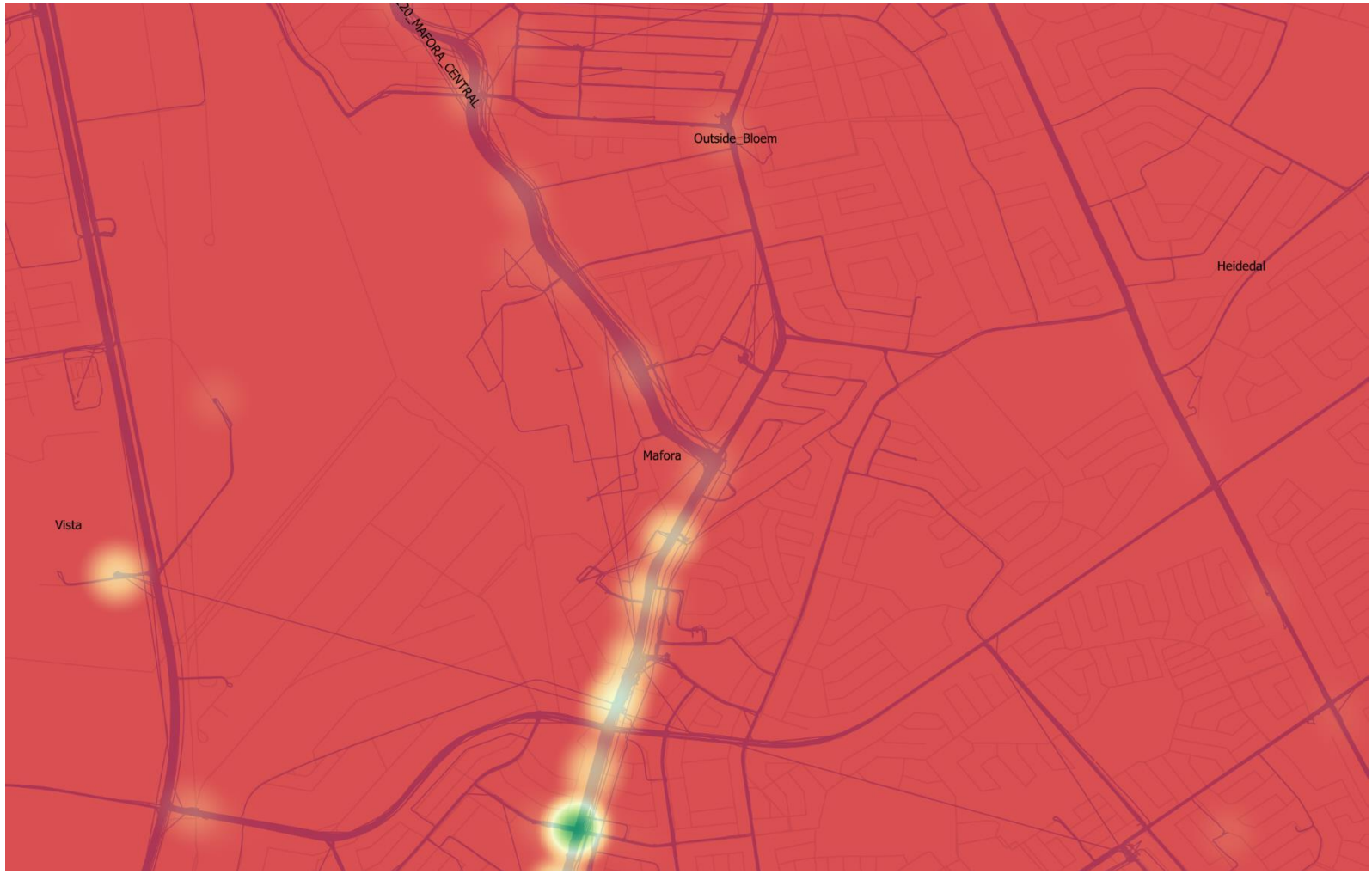
Heatmap of total surveyed area – Focused on the MAFORA CENTRAL route



Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on the corner of Maphisa Rd and Moshoeshoe St on the MAFORA CENTRAL route



Heatmap of total surveyed area – Focused on MAFORA CENTRAL

ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – MAFORA EAST

iSAHA

Table of Contents

ROUTE: **MAFORA EAST**
REPORT DATE: **5 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Mafora East Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Mafora East Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

	Option A		*Option B*		*Option C*	
Average operating income per month	**R 31 593.09**		**R 23 446.95**		**R 25 287.20**	
Average operating income per day		R 1 042.33		R 773.57		R 834.29
Cost of operations per month	**R 20 824.65**		**R 16 889.78**		**R 18 533.74**	
Cost of operations per day		R 683.90		R 554.67		R 608.66
Operational cost - Fuel & Oil	*R 9 505.58*	*R 312.17*	*R 9 755.60*	*R 320.38*	*R 4 413.56*	*R 144.94*
Operational cost - Maintenance	*R 4 139.73*	*R 135.95*	*R 3 015.84*	*R 99.04*	*R 4 231.84*	*R 138.98*
Fixed cost	*R 6 721.00*	*R 220.72*	*R 3 660.00*	*R 120.20*	*R 9 430.00*	*R 309.69*
Overhead cost	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*
Average monthly operating profit*	**R 10 768.44**		**R 6 557.17**		**R 6 753.46**	
Average daily operating profit *		R 358.44		R 218.90		R 225.62

** Excluding driver salary*
Excluding payments to owner

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1			
Driver Salary	**R 5 000.00**	**R 5 000.00**	**R 5 000.00**
Average monthly operating profit	**R 10 768.44**	**R 6 557.17**	**R 6 753.46**
Driver Salary	**R 5 000.00**	**R 5 000.00**	**R 5 000.00**
Monthly profit to Owner	**R 5 768.44**	**R 1 557.17**	**R 1 753.46**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:							
Total usage fee paid to owner per month	**R**	**17 617.50**		**R**	**11 745.00**		**R**	**21 097.50**
Average operating income per month	**R**	**31 593.09**		**R**	**23 446.95**		**R**	**25 287.20**
Monthly usage fee to Owner	**R**	**17 617.50**		**R**	**11 745.00**		**R**	**21 097.50**
Usage cost per month (fuel, oil)	**R**	**9 505.58**		**R**	**9 755.60**		**R**	**4 413.56**
Monthly profit to Driver	**R**	**4 470.01**		**R**	**1 946.35**		**R**	**-223.86**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income						
	Option A		*Option B*		*Option C*	
	Average income per day		Average income per day		Average income per day	
Monday	R	1 153.57	R	960.00	R	1 310.00
Tuesday	R	1 149.17	R	725.00	R	1 280.00
Wednesday	R	1 231.11	R	990.00	R	640.00
Thursday	R	1 117.14	R	1 130.00	R	610.00
Friday	R	1 164.00	R	985.00	R	1 560.00
Saturday	R	881.33	R	625.00	R	440.00
Sunday	R	600.00	R	-	R	-
Total weekly income	**R**	**7 296.33**	**R**	**5 415.00**	**R**	**5 840.00**
Average daily income	**R**	**1 042.33**	**R**	**773.57**	**R**	**834.29**

4. COST CALCULATIONS

4.1. General information

	Option A	*Option B*	*Option C*
General information			
Vehicle type	Quantum 15 Seater	Hi-Ace 14 Seater	Sprinter 22 Seater
Average km driven per day	192 km	144 km	89 km
Cost of fuel	R 14.00 per litre	R 14.00 per litre	R 14.00 per litre
Cost of oil	R 60.00 per 500 ml	R 60.00 per 500 ml	R 60.00 per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil								
Operational cost								
Usage cost assumptions								
These expenses are usually for the driver's account under Scenario 2								
Fuel consumption	10	km / litre		7	km / litre		10	km / litre
Oil consumption: one 500ml can of oil every	2	days		2	days		2	days
Fuel and Oil usage per day	**R**	**312.17**		**R**	**320.38**		**R**	**144.94**
Fuel and Oil usage per month	**R**	**9 505.58**		**R**	**9 755.60**		**R**	**4 413.56**
Maintenance cost assumptions								
These expenses are always for the owner's account								
Main service cost	R	3 500.00		R	1 200.00		R	6 000.00	
Number of main services	2	per year		2	per year		1	per year
Minor service cost	R	1 400.00		R	700.00		R	4 000.00	
Number of minor services	6	per year		6	per year		2	per year
Wheel maintenance cost	R	2 000.00		R	1 200.00		R	5 000.00	
(brake pads, wheel cylinder, etc)								
Number of wheel maintenances	4	per year		4	per year		3	per year
Wheel alignment cost	R	360.00		R	360.00		R	360.00	
Number of wheel alignments	12	per year		12	per year		12	per year
Price of tyres	R	1 350.00	per tyre	R	700.00	per tyre	R	2 500.00	per tyre
Tyre lifespan	30 000.00	km		11 200.00	km		60 000.00	km
Upholstery, cost of replacement	R	2 200.00		R	1 200.00		R	2 200.00	
Number of times upholstery is replaced	2	per year		2	per year		2	per year
Unforeseen cost (average per event)	R	2 300.00		R	2 300.00		R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)								
Number of times of unforeseen expenses	1	per year		1	per year		1	per year
Cost of cleaning, per event	R	50.00		R	50.00		R	50.00	
Number of times cleaning is done	52	per year		52	per year		52	per year
Maintenance: average cost per day	**R**	**135.95**		**R**	**99.04**		**R**	**138.98**	
Maintenance: average cost per month	**R**	**4 139.73**		**R**	**3 015.84**		**R**	**4 231.84**	

4.3. Fixed cost

Fixed cost *Fixed costs are related to a vehicle, independent of the operations of the vehicle*			
Insurance installment	R 18 000.00 per year	R 9 600.00 per year	R 22 000.00 per year
Insurance excess amount in case of a claim	R 5 000.00 per year	R 5 000.00 per year	R 5 000.00 per year
Monthly vehicle installments (financing)	R 55 560.00 per year	R 27 780.00 per year	R 83 340.00 per year
Vehicle licence fees cost	R 1 500.00 per year	R 900.00 per year	R 1 700.00 per year
Roadworthy test cost	R 480.00 per year	R 480.00 per year	R 960.00 per year
Operating licence cost, once every 5 years	R 12.00	R 60.00	R 60.00
Monthly association fee	R 100.00 per year	R 100.00 per year	R 100.00 per year
Fixed cost: average cost per day	**R 220.72**	**R 120.20**	**R 309.69**
Fixed cost: average cost per month	**R 6 721.00**	**R 3 660.00**	**R 9 430.00**

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*								
Number of taxis in fleet			3			3			3
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year	R	2 000.00	per year	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year	R	500.00	per year	R	500.00	per year
Security	*(security, parking fees)*	R	500.00	per year	R	500.00	per year	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year	R	1 000.00	per year	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**		**R**	**15.05**		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**		**R**	**458.33**		**R**	**458.33**	

ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – MAFORA EAST

iSAHA

Table of Contents

ROUTE: MAFORA EAST
REPORT DATE: 5 December 2017

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

17 taxis were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 11: 15 August 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

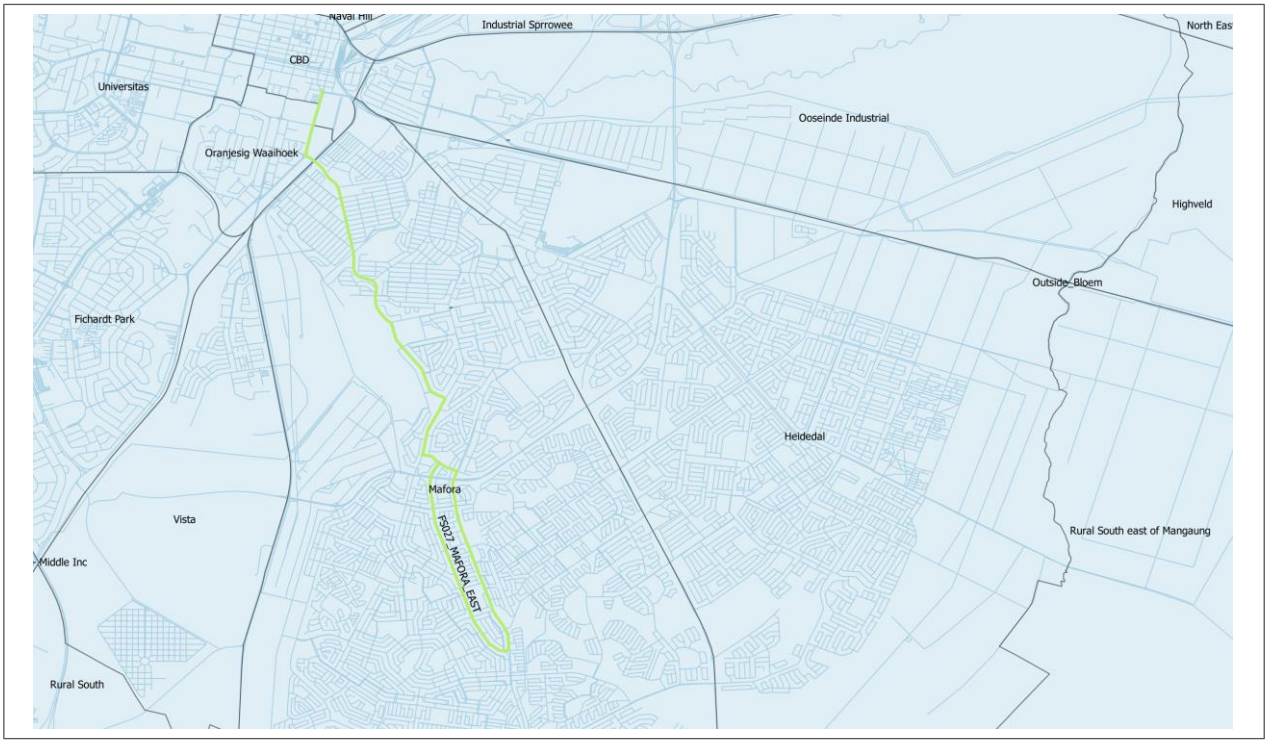
A total of 17 vehicles were surveyed between cycle 1 and cycle 11. 13 vehicles had 6 or more consecutive days of data and 4 vehicles did not have sufficient data.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 1 015.41	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 7 107.90	Per week As determined from survey
Average monthly income	R 30 777.23	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R344 733.36	Calculated from weekly result Formula: 48.5 x weekly average

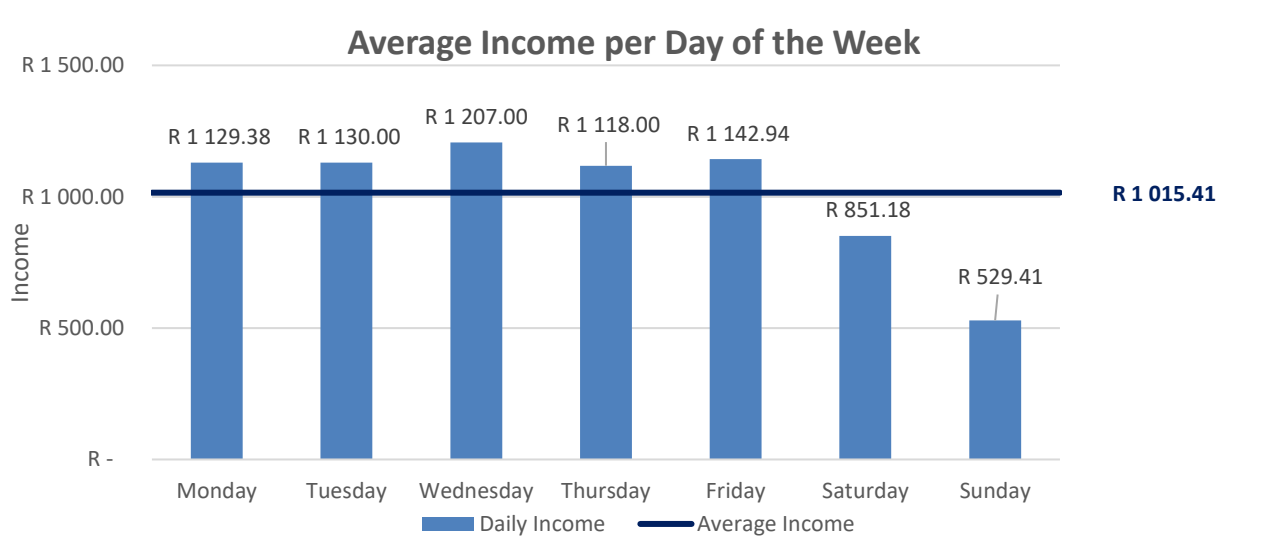


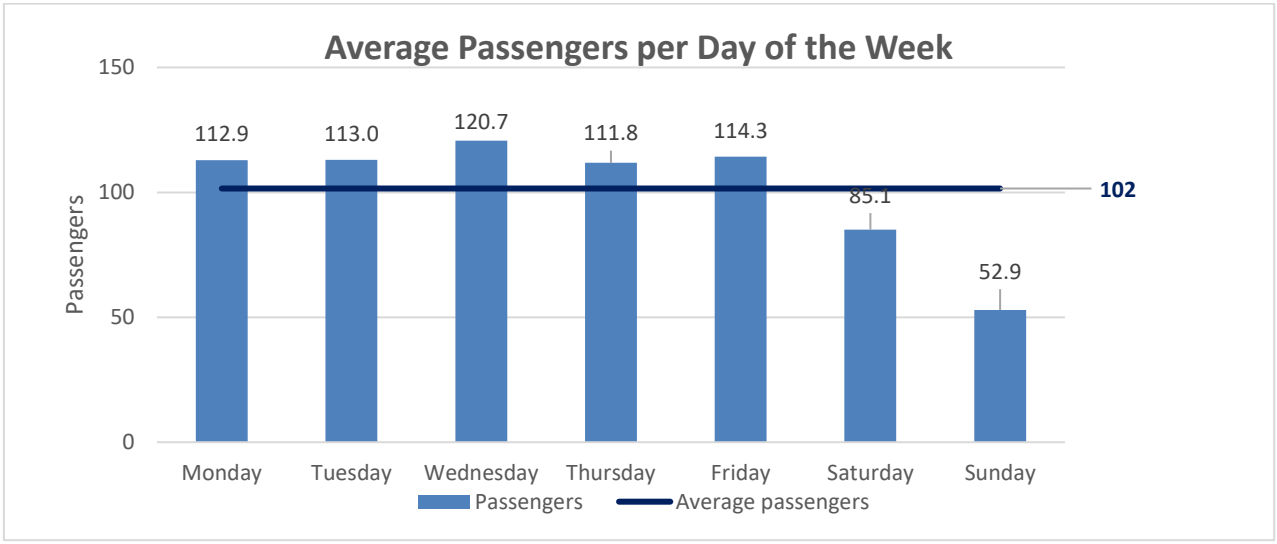
Corridor served by MAFORA EAST Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	113	R 10.00	R 1 129.38
Tuesday	113	R 10.00	R 1 130.00
Wednesday	121	R 10.00	R 1 207.00
Thursday	112	R 10.00	R 1 118.00
Friday	114	R 10.00	R 1 142.94
Saturday	85	R 10.00	R 851.18
Sunday	53	R 10.00	R 529.41
Weekly total	711		R 7 107.90
Average	102	R 10.00	R 1 015.41
Weekday Avg	115	R 10.00	R 1 145.46

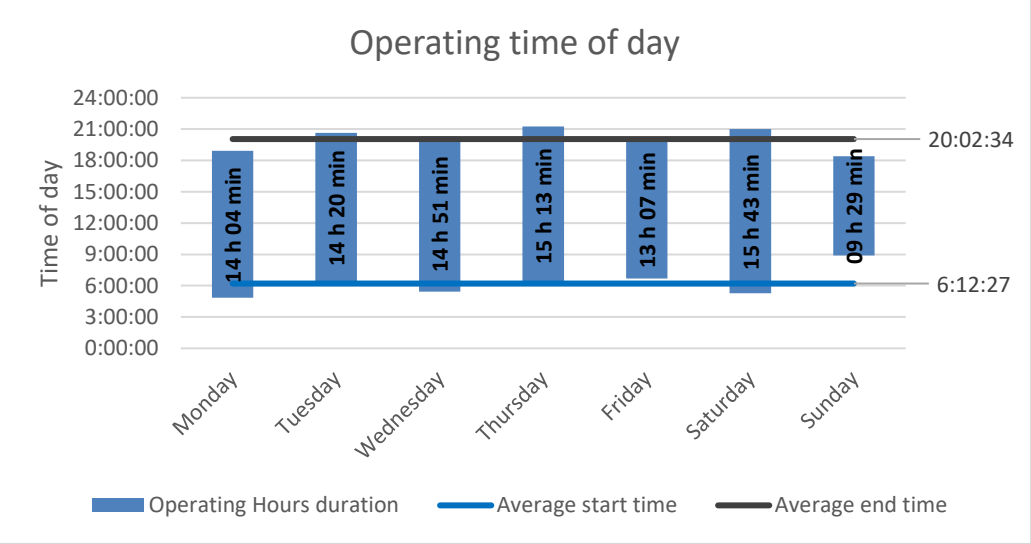



Average Passengers per Day of the Week
150
100
50
0
Passengers
112.9
113.0
120.7
111.8
114.3
85.1
52.9
102
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.3. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	6:12:27	20:02:34	13:50:06
Weekday (Mon-Fri) avg	5:51:23	20:10:54	14:19:31
Monday	4:50:40	18:55:29	14:04:49
Tuesday	6:17:11	20:38:00	14:20:49
Wednesday	5:26:21	20:17:31	14:51:10
Thursday	6:02:17	21:15:35	15:13:18
Friday	6:40:24	19:47:56	13:07:32
Saturday	5:15:55	20:59:51	15:43:56
Sunday	8:54:24	18:23:35	9:29:11



3.4. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	188	181	R	5.60	38%
Weekday (Mon-Fri) avg	194	194	R	5.89	40%
Monday	187	187	R	6.03	40%
Tuesday	192	192	R	5.88	41%
Wednesday	204	204	R	5.93	41%
Thursday	191	191	R	5.85	41%
Friday	198	198	R	5.77	39%
Saturday	222	181	R	4.71	34%
Sunday	120	115	R	4.58	32%

3.5. Operational analysis

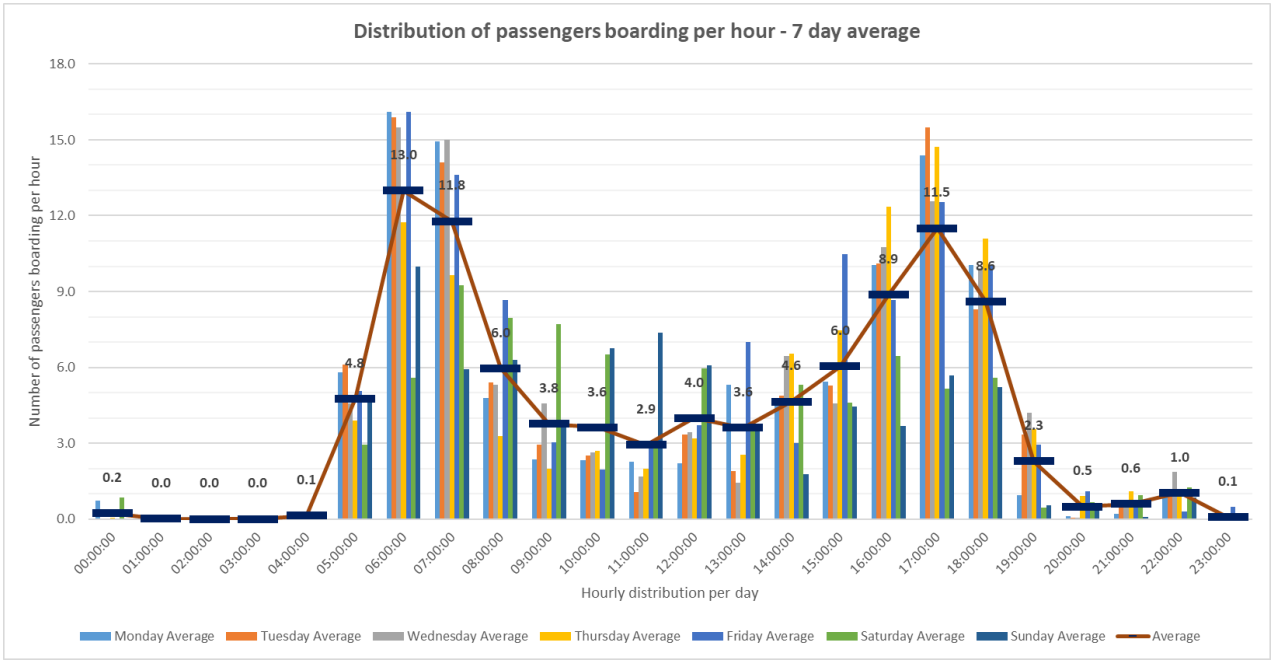
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	181.2	102	1.78	00:08:54	14.1	1151.9	3030.7	38%
Weekday (Mon-Fri) avg	194.5	115	1.70	00:08:08	15.6	1204.3	3039.6	40%
Monday	187.2	113	1.66	00:08:09	20.5	1216.9	3077.9	40%
Tuesday	192.3	113	1.70	00:08:16	13.2	1192.6	3004.9	41%
Wednesday	203.7	121	1.69	00:08:02	13.4	1262.1	3114.2	41%
Thursday	191.0	112	1.71	00:08:33	12.8	1171.6	2918.7	41%
Friday	198.2	114	1.73	00:07:40	18.1	1175.7	3077.1	39%
Saturday	180.6	85	2.08	00:11:33	11.9	971.4	2882.1	34%
Sunday	115.5	53	2.15	00:10:07	8.7	992.9	3187.9	32%

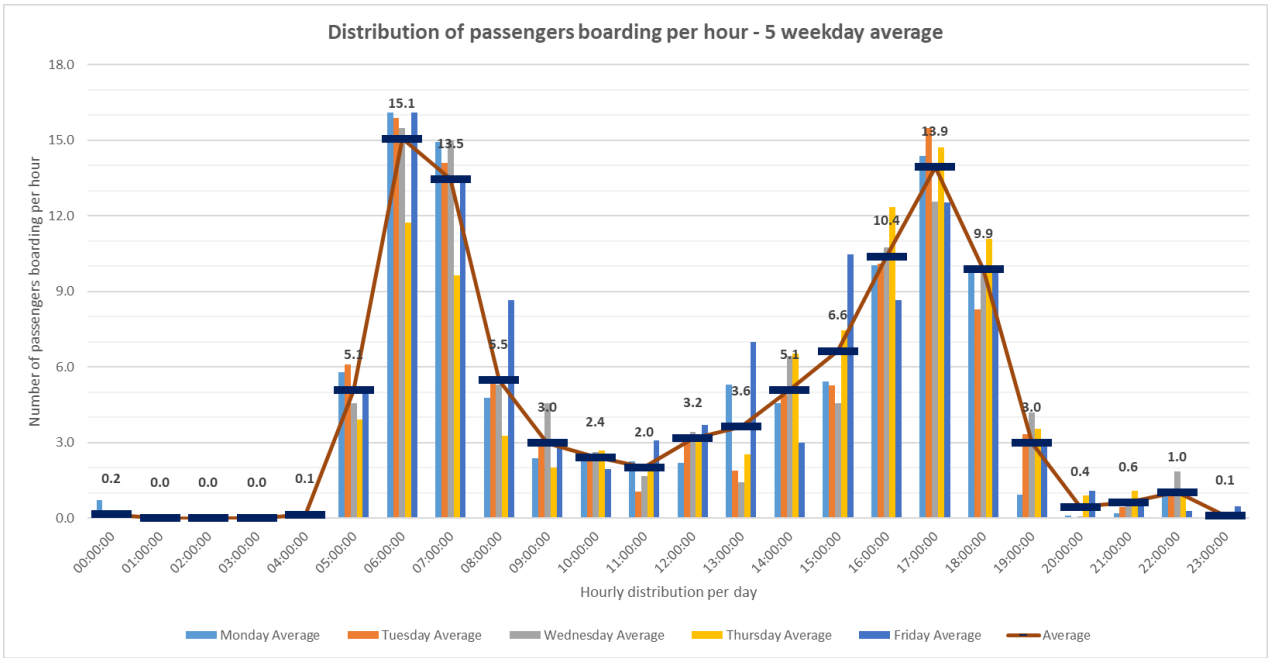
3.6. Fluctuations

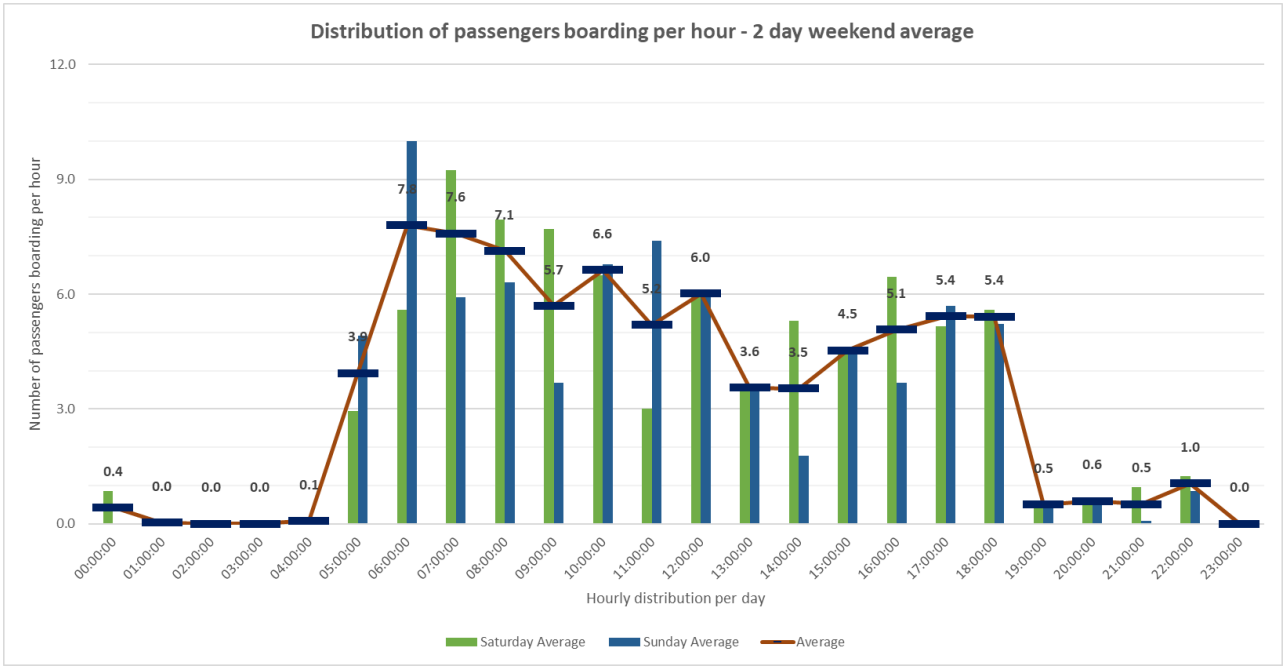
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.2	R 2.33	1%
01:00	01:59	0.0	R 0.07	0%
02:00	02:59	0.0	R -	0%
03:00	03:59	0.0	R -	0%
04:00	04:59	0.1	R 1.27	0%
05:00	05:59	4.8	R 47.56	11%
06:00	06:59	13.0	R 129.88	30%
07:00	07:59	11.8	R 117.84	29%
08:00	08:59	6.0	R 59.55	21%
09:00	09:59	3.8	R 37.59	12%
10:00	10:59	3.6	R 36.21	15%
11:00	11:59	2.9	R 29.27	16%
12:00	12:59	4.0	R 39.86	22%
13:00	13:59	3.6	R 36.15	21%
14:00	14:59	4.6	R 46.46	27%
15:00	15:59	6.0	R 60.36	33%
16:00	16:59	8.9	R 88.69	45%
17:00	17:59	11.5	R 115.03	39%
18:00	18:59	8.6	R 86.05	34%
19:00	19:59	2.3	R 22.79	16%
20:00	20:59	0.5	R 4.88	5%
21:00	21:59	0.6	R 5.98	3%
22:00	22:59	1.0	R 10.36	6%
23:00	23:59	0.1	R 0.68	2%

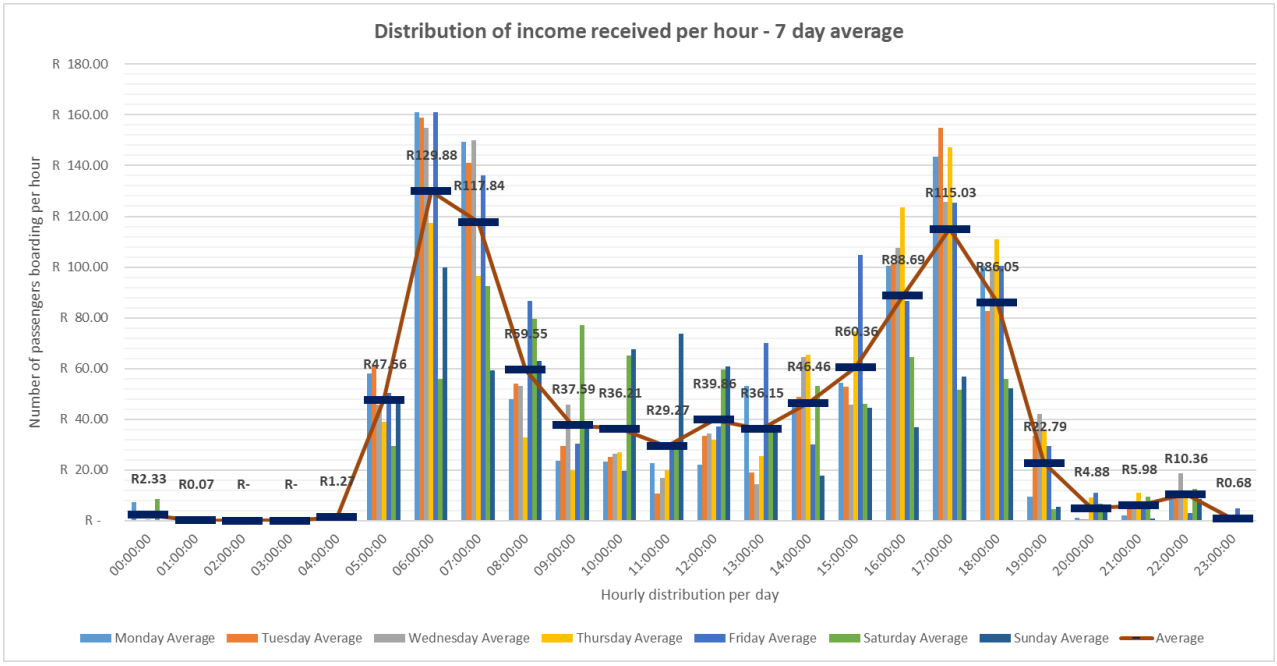
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

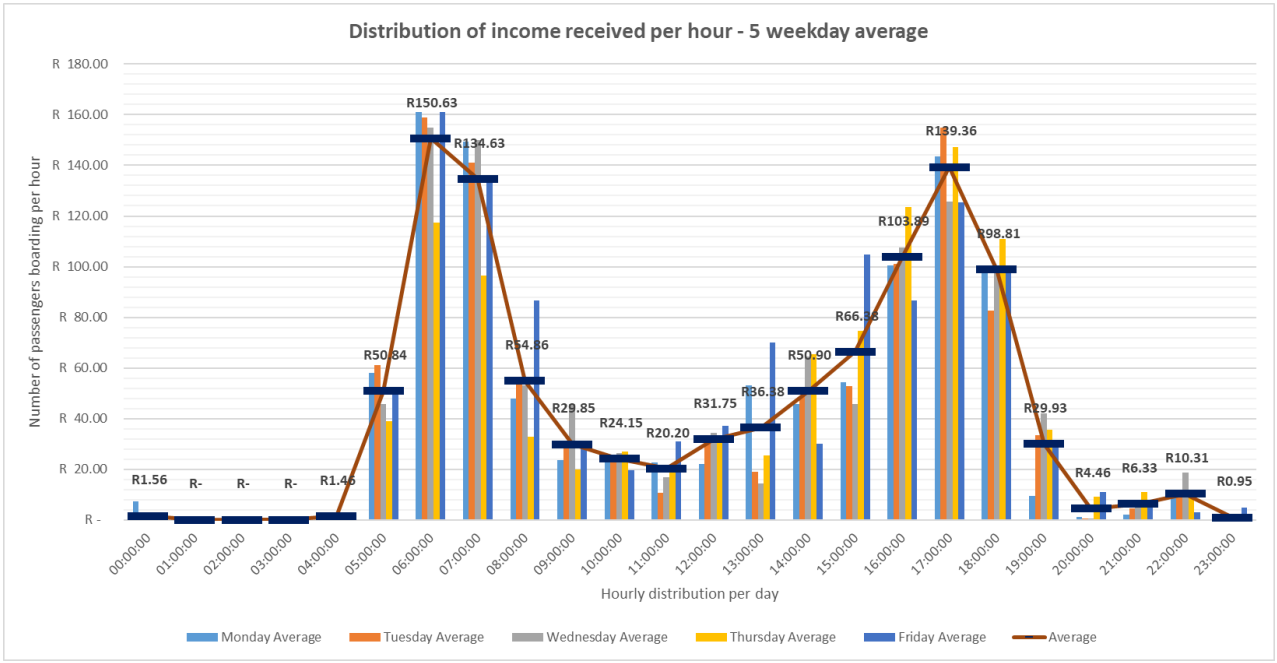


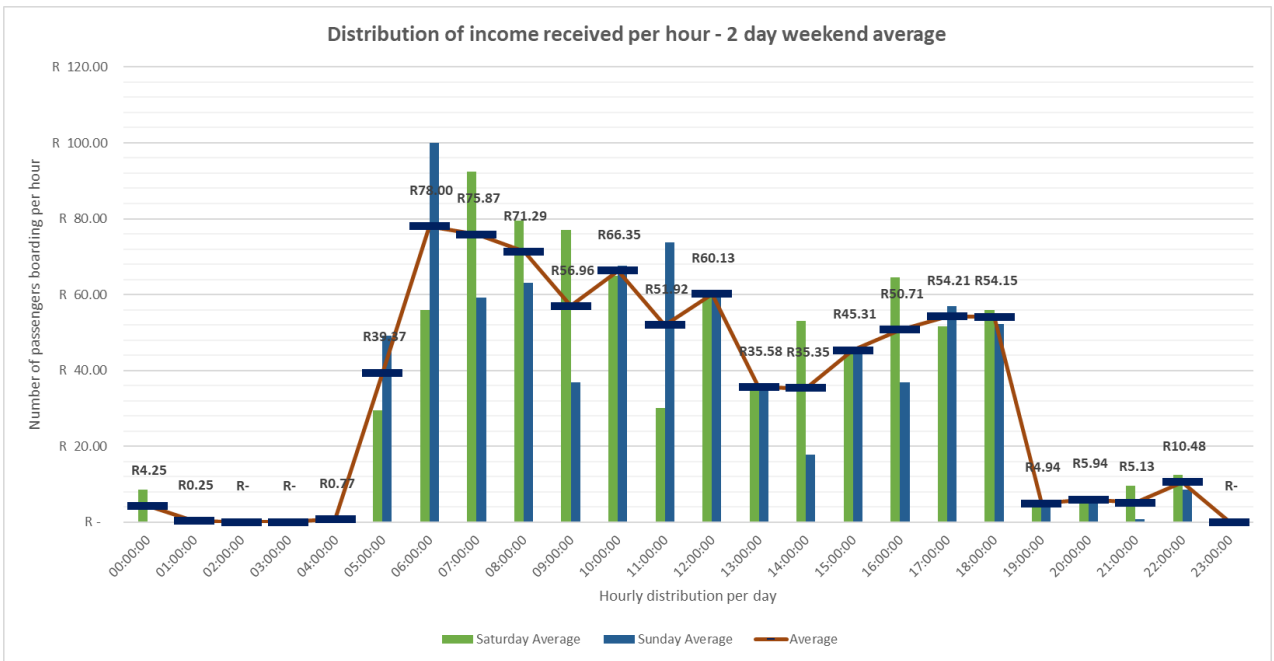




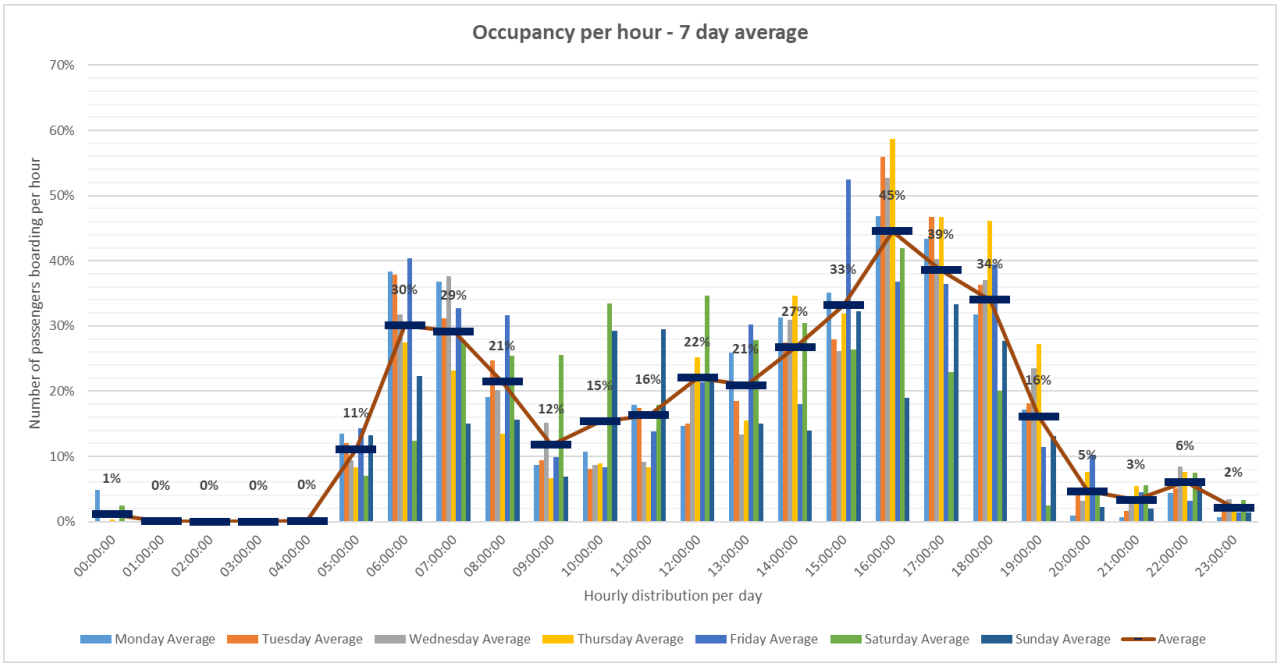
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

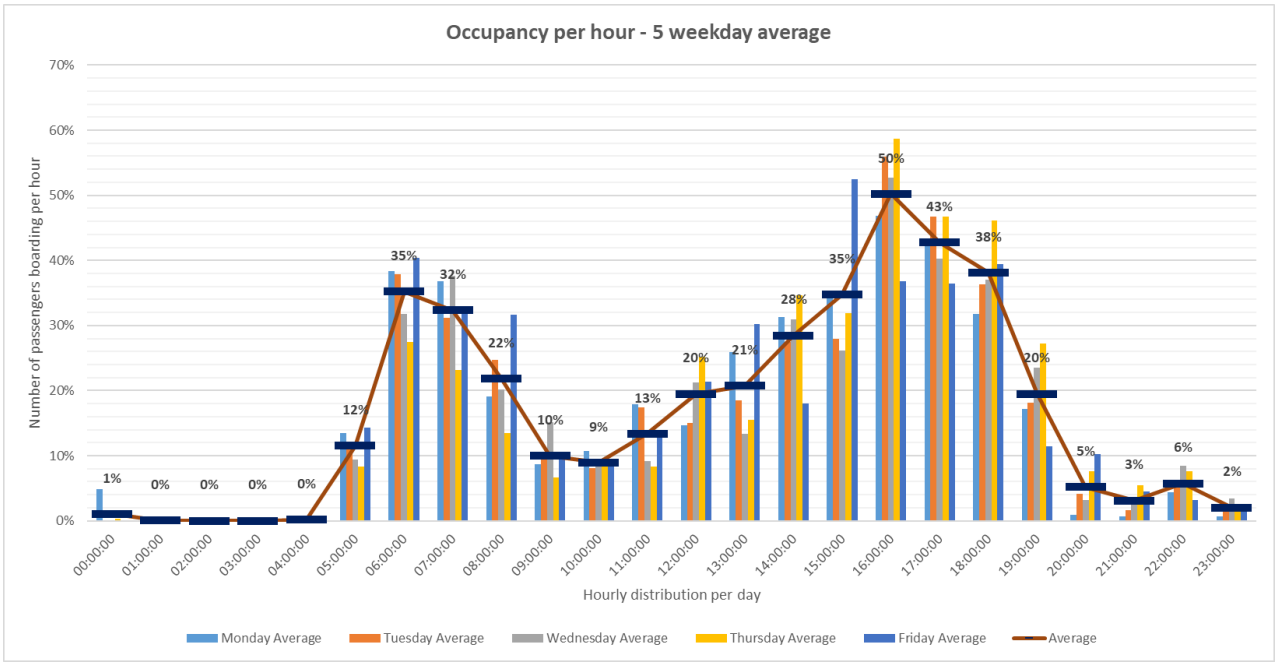


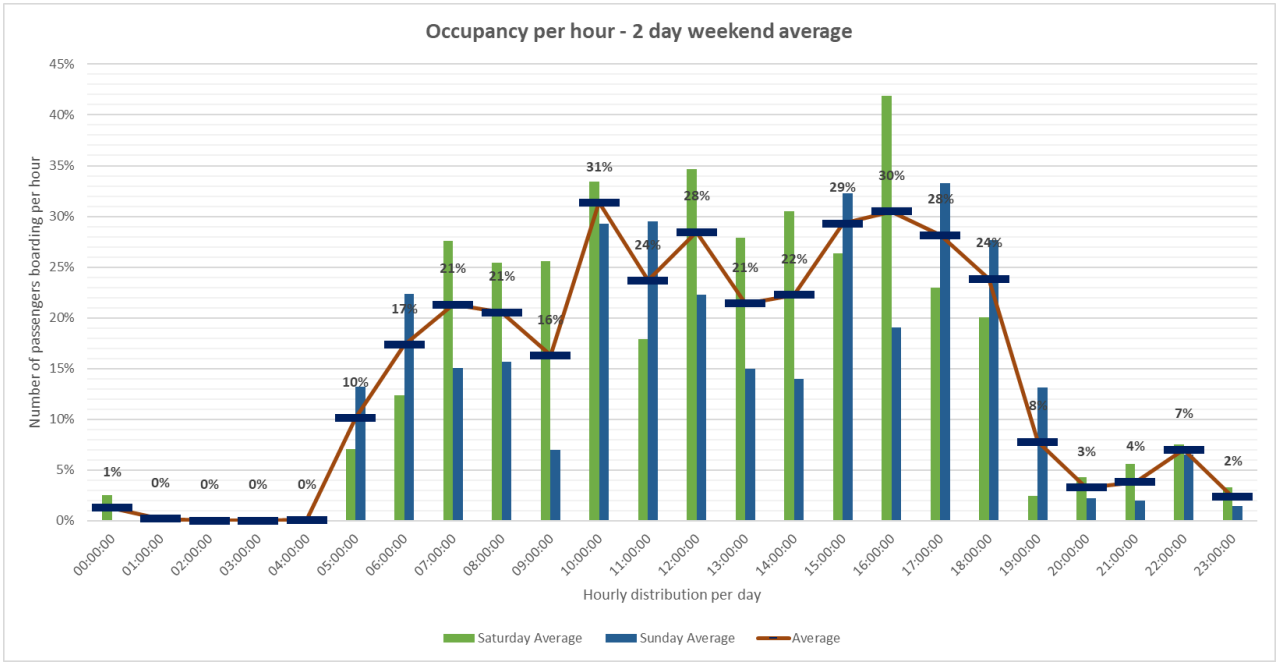

Distribution of income received per hour - 5 weekday average
Number of passengers boarding per hour
R 180.00
R 160.00
R 140.00
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R1.56
R-
R-
R-
R1.46
R50.84
R150.63
R134.63
R54.36
R29.85
R24.15
R20.20
R31.75
R36.38
R50.90
R66.38
R103.89
R139.36
R98.81
R29.93
R4.46
R6.33
R10.31
R0.95
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R4.25
R0.25
R-
R-
R0.77
R39.37
R78.00
R75.87
R71.29
R56.96
R66.35
R51.92
R60.13
R35.58
R35.35
R45.31
R50.71
R54.21
R54.15
R4.94
R5.94
R5.13
R10.48
R-
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

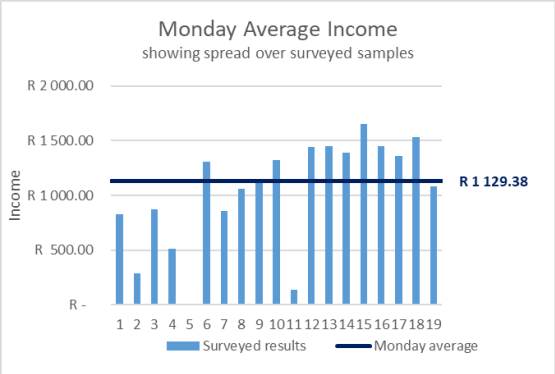


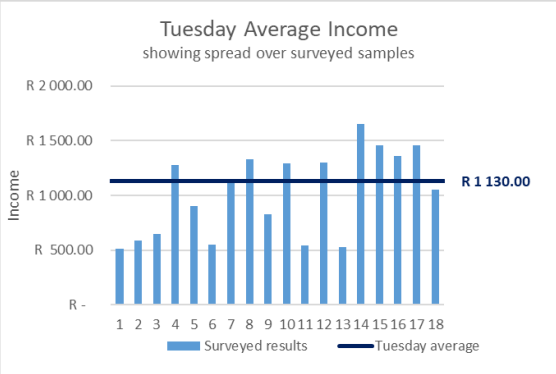


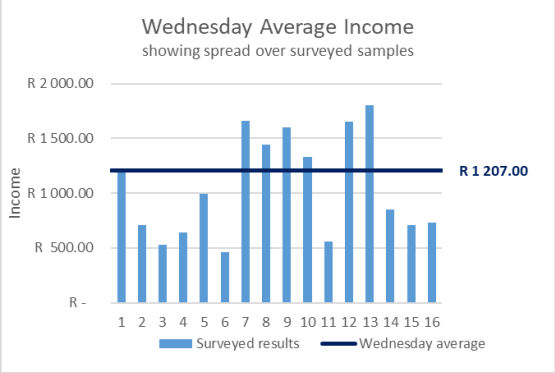

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
1%
0%
0%
0%
0%
10%
17%
21%
21%
16%
31%
24%
28%
21%
22%
29%
30%
28%
24%
8%
3%
4%
7%
2%
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

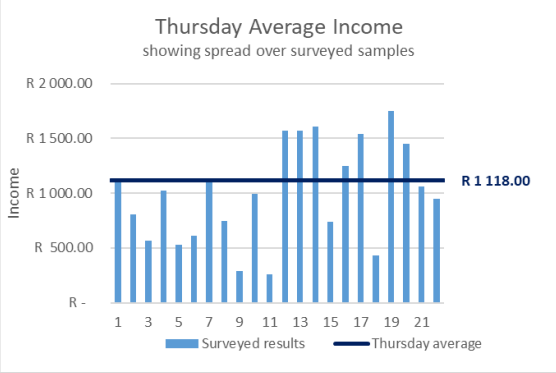
4. DETAILED SURVEY RESULTS

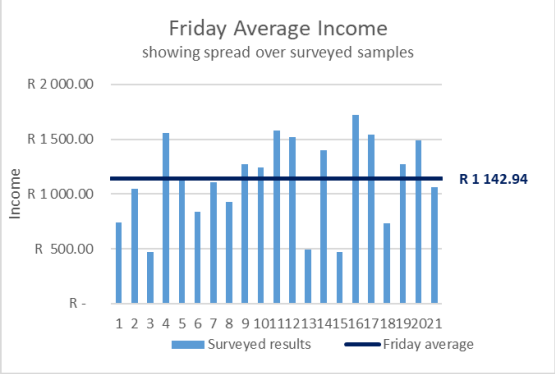
4.1. Income distribution

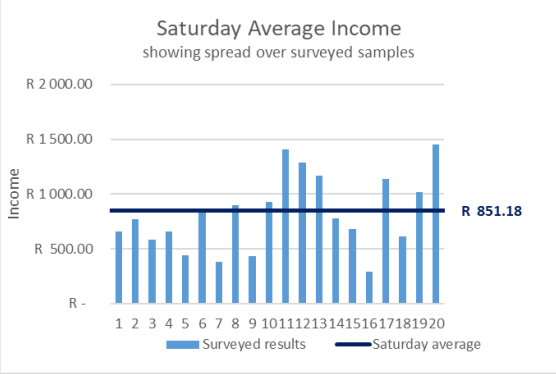


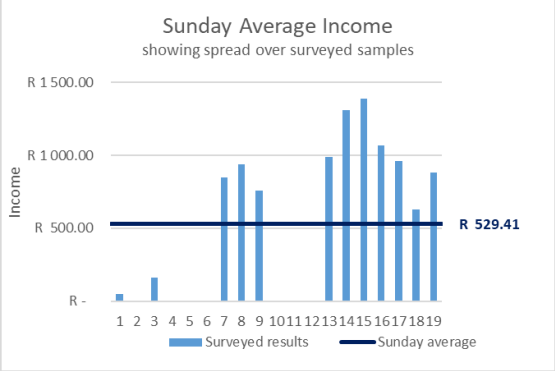




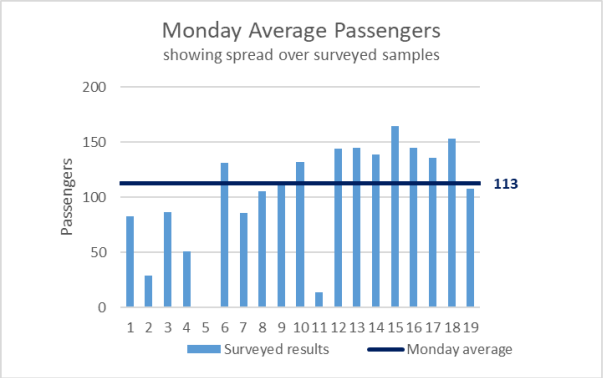


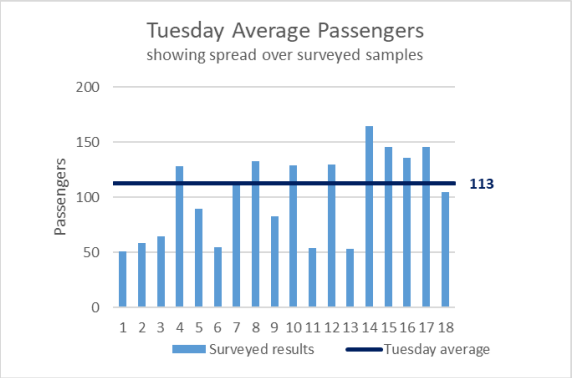


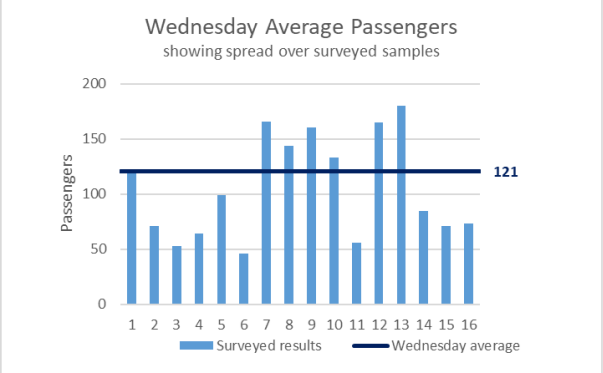


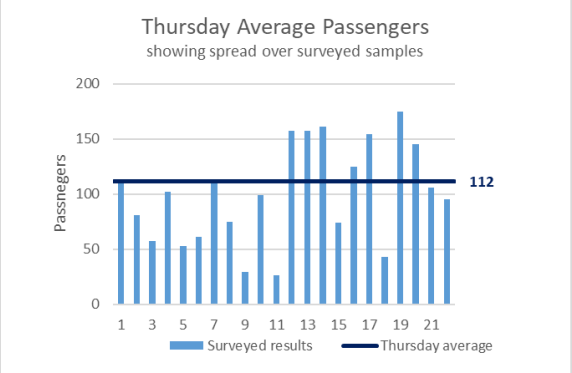


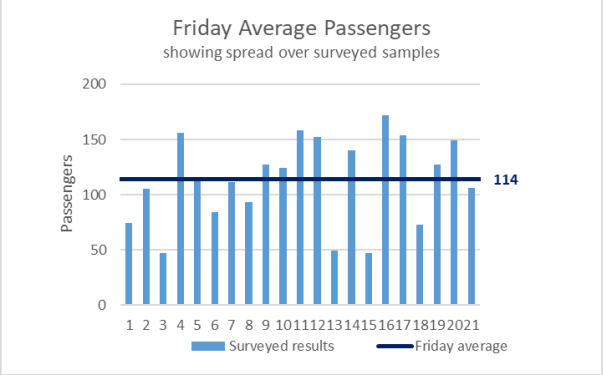
4.2. Passenger number distribution

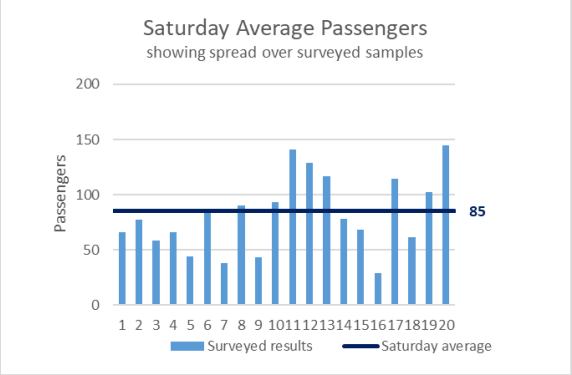


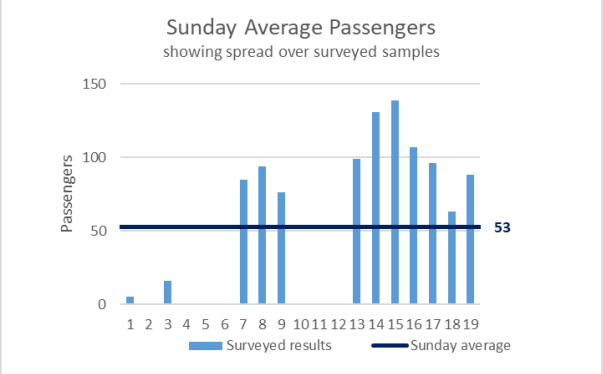










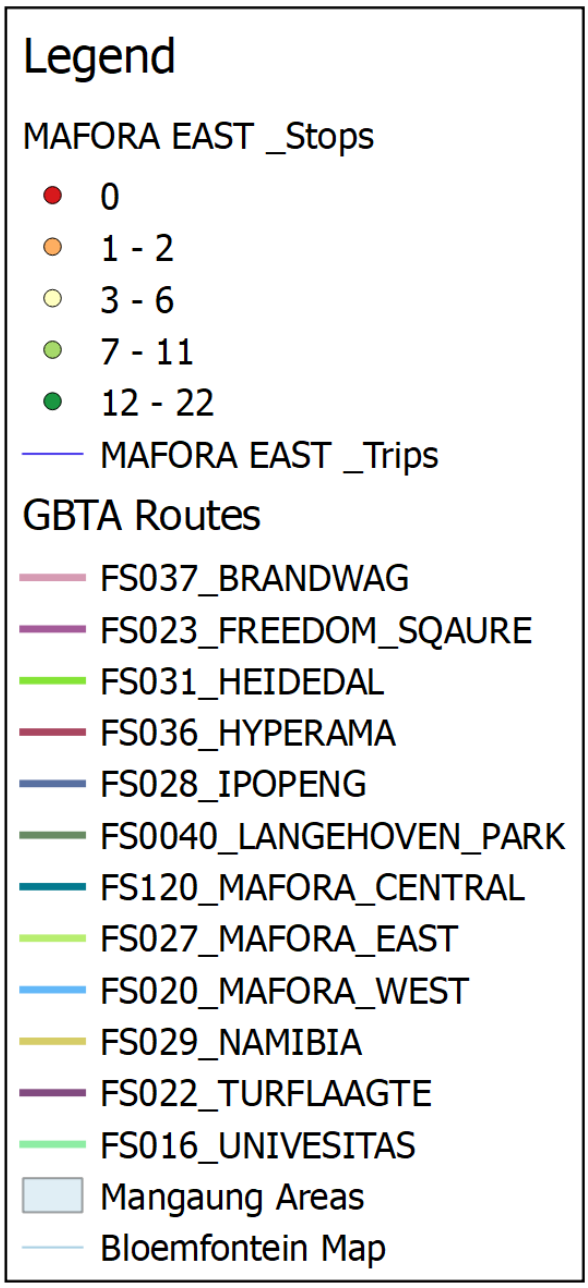


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps



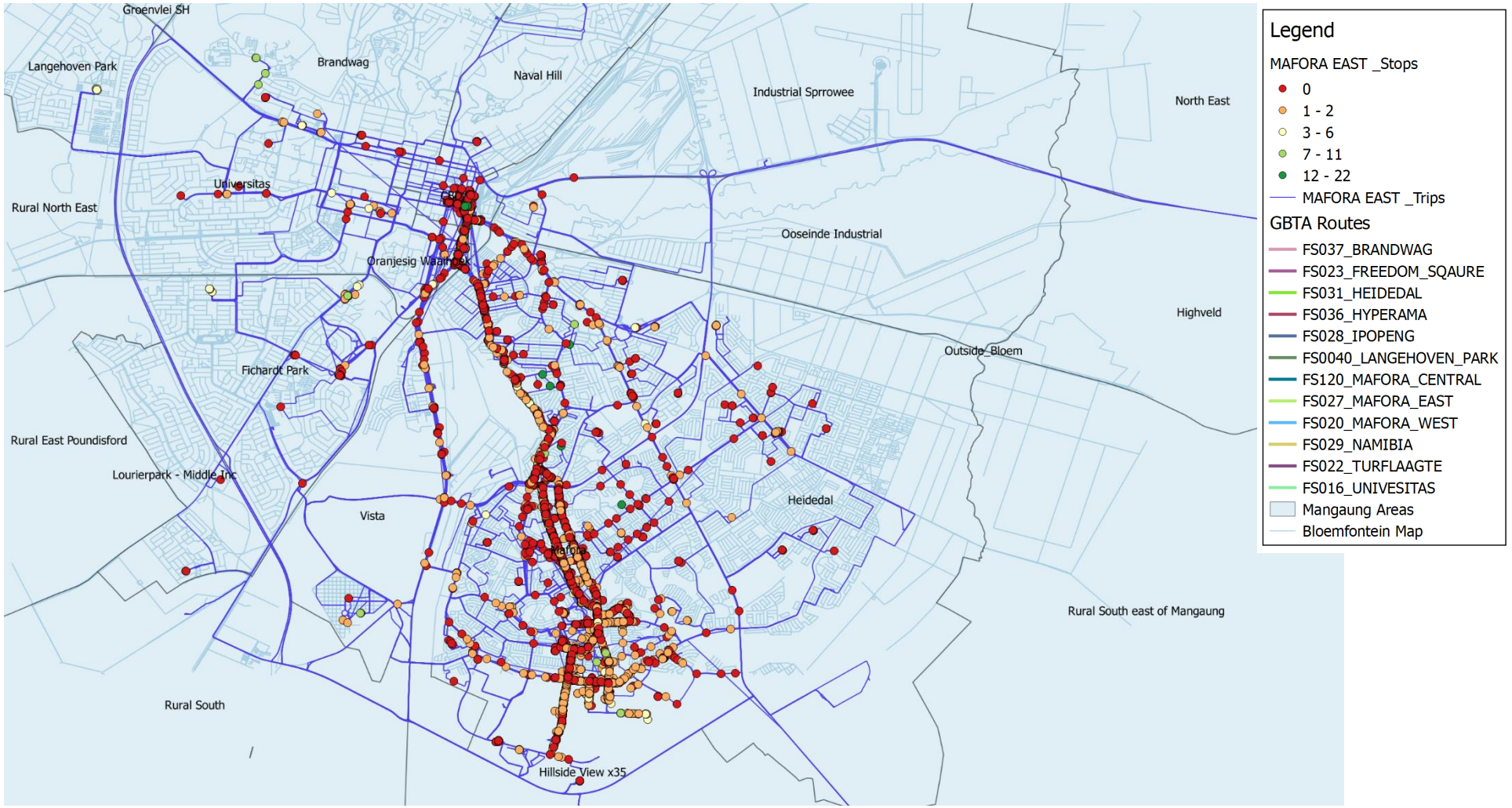
5.1. All surveyed operations

The tracks in blue illustrates the operations of all the surveyed taxis.

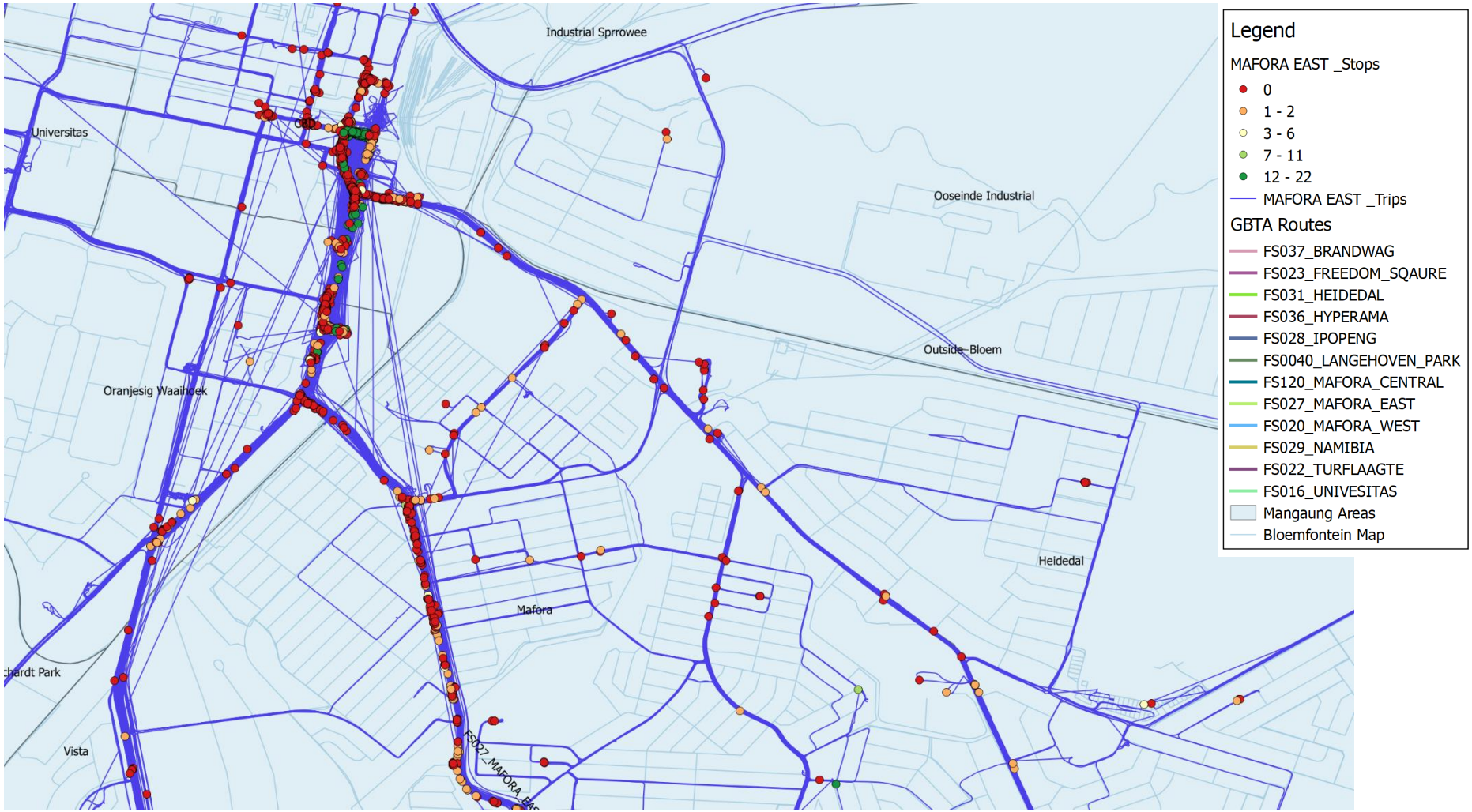
All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

Operations of all surveyed taxis including stops

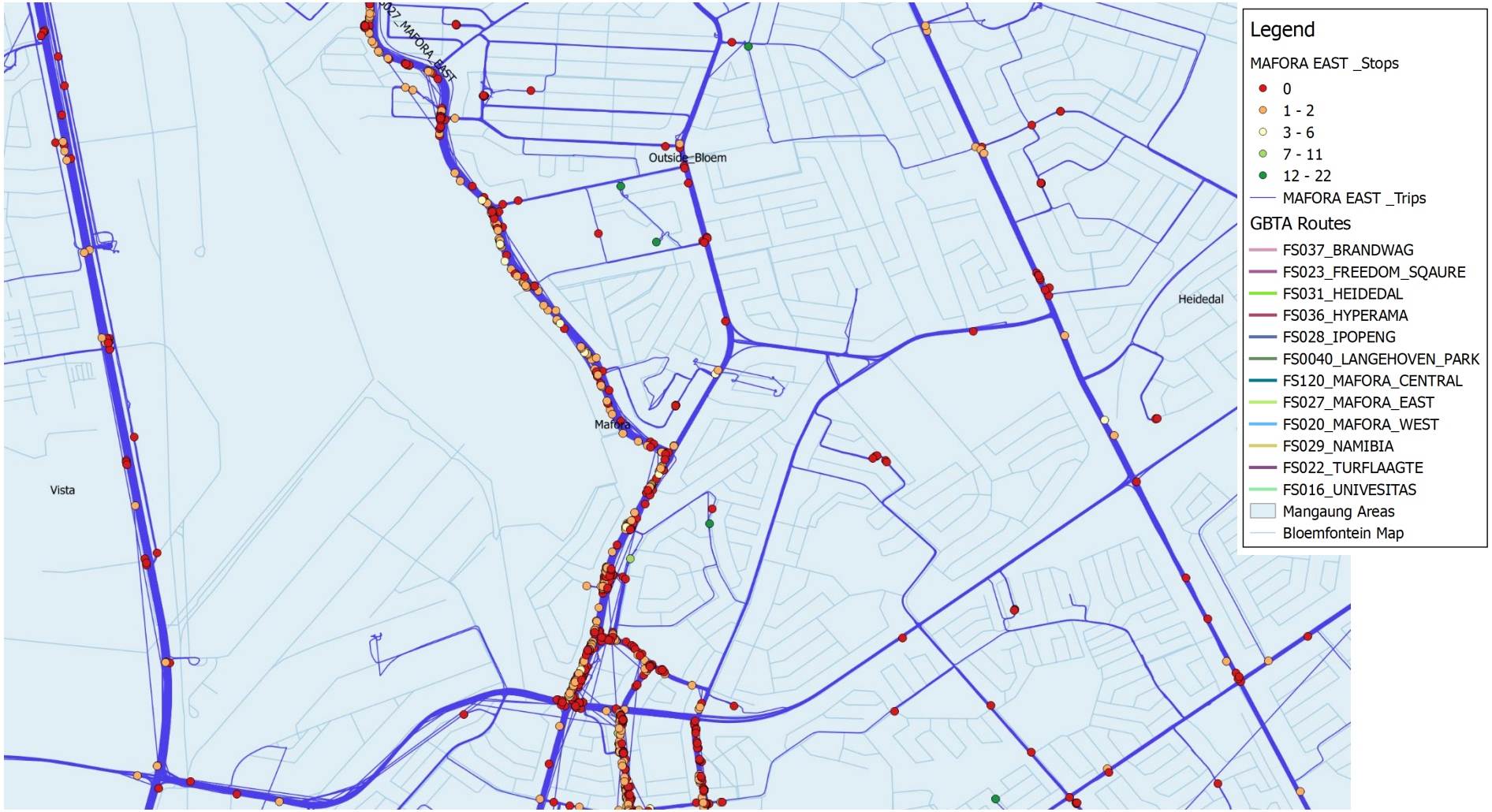
Operations of all surveyed taxis including stops – Focused on the MAFORA EAST route



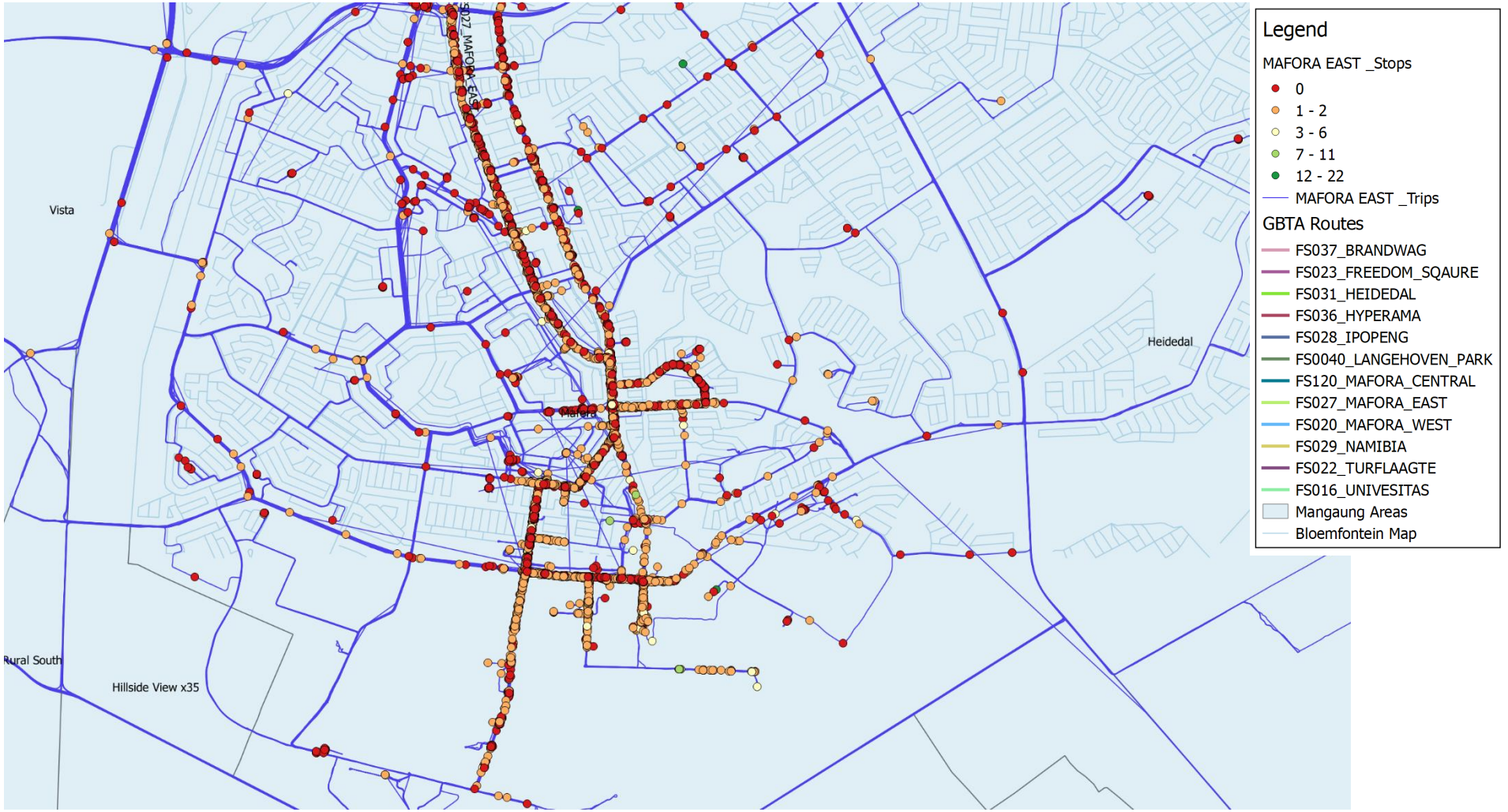
Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on the PHAHAMENG area



Operations of all surveyed taxis including stops – Focused on the MAFORA EAST area

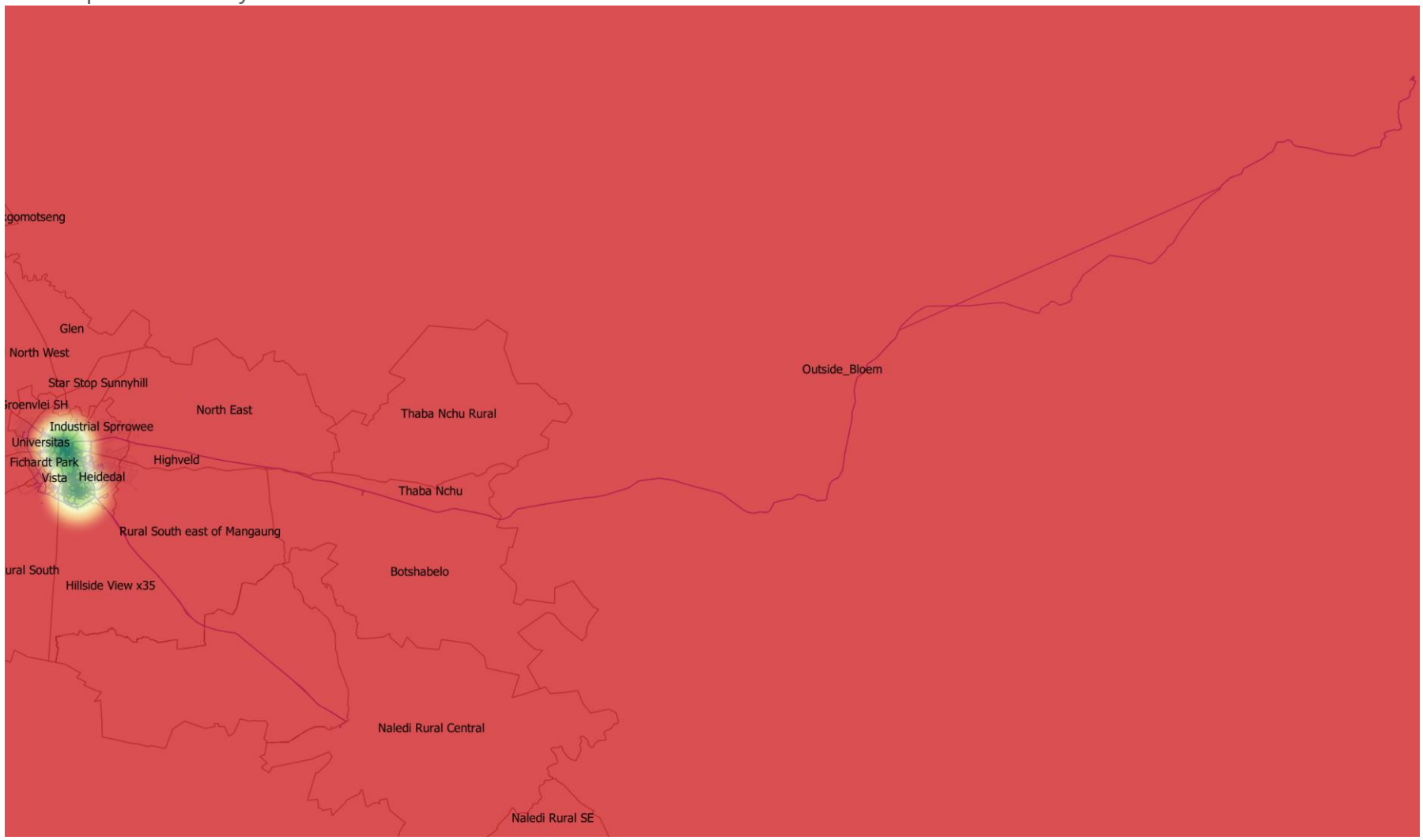


5.2. Heatmaps of taxi operations

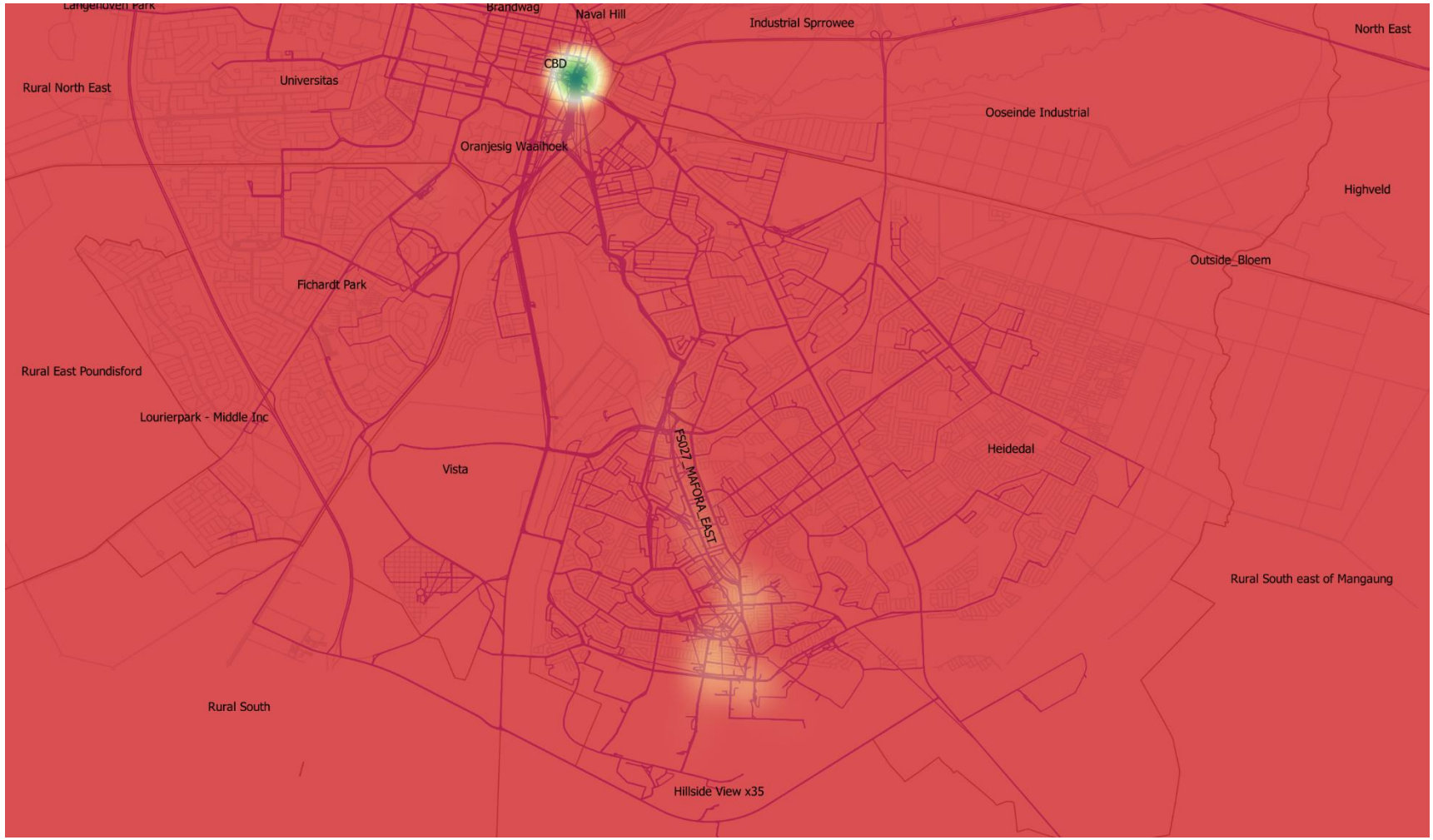
The following maps demonstrate the volume of passengers in each area.

- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

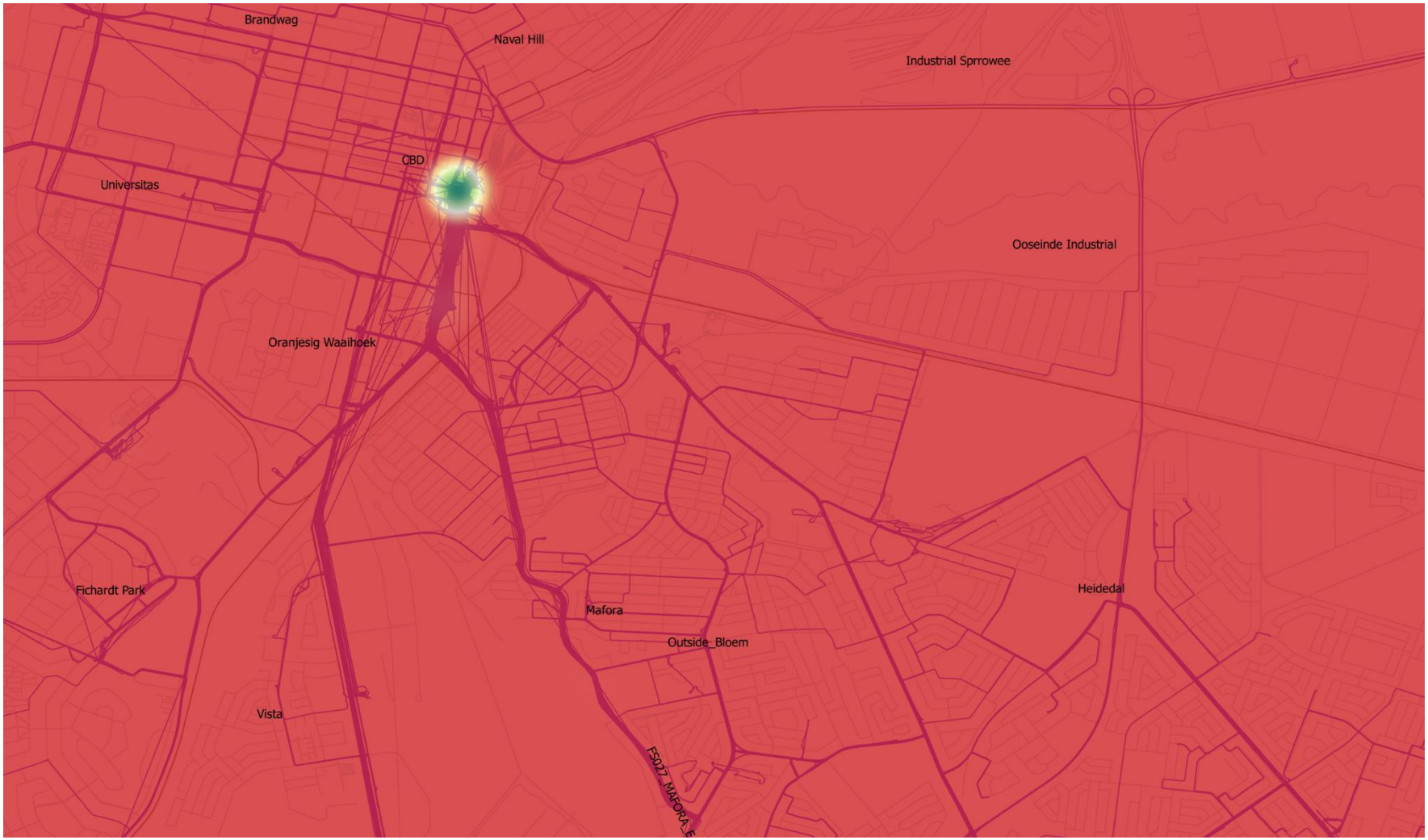
Heatmap of total surveyed area.



Heatmap of total surveyed area – Focused on the MAFORA EAST route

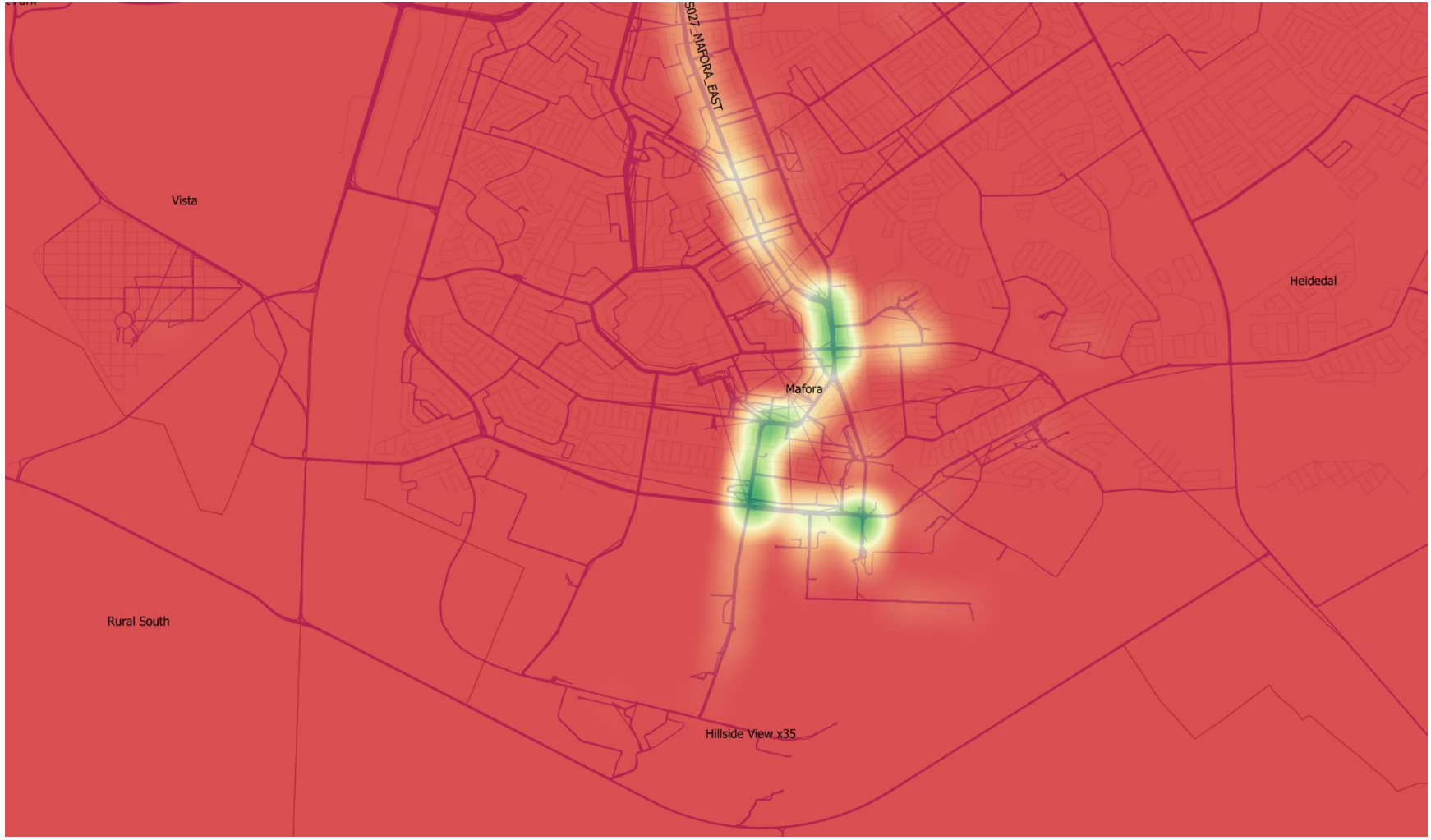


Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on PHAHAMENG area

Heatmap of total surveyed area – Focused on MAFORA EAST



ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – MAFORA WEST

iSAHA

Table of Contents

ROUTE: MAFORA WEST
REPORT DATE: 27 November 2017

1. INTRODUCTION

The electronic on-board survey results for Mafora West Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Mafora West Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

	Option A		*Option B*		*Option C*	
Average operating income per month	**R 39 859.48**		**R 35 300.33**		**R 49 080.55**	
Average operating income per day	R	1 315.06	R	1 164.64	R	1 619.29
Cost of operations per month	**R 21 338.03**		**R 20 006.76**		**R 24 275.33**	
Cost of operations per day	R	700.76	R	657.04	R	797.22
Operational cost - Fuel & Oil	*R 9 967.69*	*R 327.35*	*R 12 557.39*	*R 412.39*	*R 9 388.48*	*R 308.32*
Operational cost - Maintenance	*R 4 191.00*	*R 137.64*	*R 3 331.04*	*R 109.39*	*R 4 998.52*	*R 164.16*
Fixed cost	*R 6 721.00*	*R 220.72*	*R 3 660.00*	*R 120.20*	*R 9 430.00*	*R 309.69*
Overhead cost	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*
Average monthly operating profit*	**R 18 521.45**		**R 15 293.57**		**R 24 805.22**	
Average daily operating profit *	R	614.30	R	507.61	R	822.07
** Excluding driver salary*						
Excluding payments to owner						

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1			
Driver Salary	R 5 000.00	R 5 000.00	R 5 000.00
Average monthly operating profit	R 18 521.45	R 15 293.57	R 24 805.22
Driver Salary	R 5 000.00	R 5 000.00	R 5 000.00
Monthly profit to Owner	**R 13 521.45**	**R 10 293.57**	**R 19 805.22**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2			
Daily usage fee paid by the driver to the owner:			
Total usage fee paid to owner per month	R 17 617.50	R 11 745.00	R 21 097.50
Average operating income per month	R 39 859.48	R 35 300.33	R 49 080.55
Monthly usage fee to Owner	R 17 617.50	R 11 745.00	R 21 097.50
Usage cost per month (fuel, oil)	R 9 967.69	R 12 557.39	R 9 388.48
Monthly profit to Driver	**R 12 274.29**	**R 10 997.94**	**R 18 594.57**
Monthly usage fee to Owner	R 17 617.50	R 11 745.00	R 21 097.50
Maintenance cost per month	R 4 191.00	R 3 331.04	R 4 998.52
Fixed cost per month	R 6 721.00	R 3 660.00	R 9 430.00
Overhead cost per month	R 458.33	R 458.33	R 458.33
Monthly profit to Owner (scenario 2)	**R 6 247.16**	**R 4 295.63**	**R 6 210.65**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income			
	Option A	*Option B*	*Option C*
	Average income per day	Average income per day	Average income per day
Monday	R 1 448.50	R 1 486.67	R 2 100.00
Tuesday	R 1 555.79	R 1 196.67	R 1 930.00
Wednesday	R 1 501.00	R 1 236.67	R 1 030.00
Thursday	R 1 384.40	R 1 483.33	R 1 970.00
Friday	R 1 656.80	R 1 676.67	R 2 182.50
Saturday	R 1 185.60	R 1 072.50	R 1 725.00
Sunday	R 473.33	R -	R 397.50
Total weekly income	**R 9 205.42**	**R 8 152.50**	**R 11 335.00**
Average daily income	**R 1 315.06**	**R 1 164.64**	**R 1 619.29**

4. COST CALCULATIONS

4.1. General information

	Option A	*Option B*	*Option C*
General information			
Vehicle type	Quantum 15 Seater	Hi-Ace 14 Seater	Sprinter 22 Seater
Average km driven per day	202 km	186 km	190 km
Cost of fuel	R 14.00 per litre	R 14.00 per litre	R 14.00 per litre
Cost of oil	R 60.00 per 500 ml	R 60.00 per 500 ml	R 60.00 per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil
Operational cost

Usage cost assumptions
These expenses are usually for the driver's account under Scenario 2

Fuel consumption	10	km / litre		7	km / litre		10	km / litre
Oil consumption: one 500ml can of oil every	2	days		2	days		2	days
Fuel and Oil usage per day	**R**	**327.35**		**R**	**412.39**		**R**	**308.32**
Fuel and Oil usage per month	**R**	**9 967.69**		**R**	**12 557.39**		**R**	**9 388.48**

Maintenance cost assumptions
These expenses are always for the owner's account

Main service cost	R	3 500.00		R	1 200.00		R	6 000.00	
Number of main services		2	per year		2	per year		1	per year
Minor service cost	R	1 400.00		R	700.00		R	4 000.00	
Number of minor services		6	per year		6	per year		2	per year
Wheel maintenance cost	R	2 000.00		R	1 200.00		R	5 000.00	
(brake pads, wheel cylinder, etc)									
Number of wheel maintenances		4	per year		4	per year		3	per year
Wheel alignment cost	R	360.00		R	360.00		R	360.00	
Number of wheel alignments		12	per year		12	per year		12	per year
Price of tyres	R	1 350.00	per tyre	R	700.00	per tyre	R	2 500.00	per tyre
Tyre lifespan		30 000.00	km		11 200.00	km		60 000.00	km
Upholstery, cost of replacement	R	2 200.00		R	1 200.00		R	2 200.00	
Number of times upholstery is replaced		2	per year		2	per year		2	per year
Unforeseen cost (average per event)	R	2 300.00		R	2 300.00		R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)									
Number of times of unforeseen expenses		1	per year		1	per year		1	per year
Cost of cleaning, per event	R	50.00		R	50.00		R	50.00	
Number of times cleaning is done		52	per year		52	per year		52	per year
Maintenance: average cost per day	**R**	**137.64**		**R**	**109.39**		**R**	**164.16**	
Maintenance: average cost per month	**R**	**4 191.00**		**R**	**3 331.04**		**R**	**4 998.52**	

4.3. Fixed cost

Fixed cost

Fixed costs are related to a vehicle, independent of the operations of the vehicle

Insurance installment	R 18 000.00 per year	R 9 600.00 per year	R 22 000.00 per year
Insurance excess amount in case of a claim	R 5 000.00 per year	R 5 000.00 per year	R 5 000.00 per year
Monthly vehicle installments (financing)	R 55 560.00 per year	R 27 780.00 per year	R 83 340.00 per year
Vehicle licence fees cost	R 1 500.00 per year	R 900.00 per year	R 1 700.00 per year
Roadworthy test cost	R 480.00 per year	R 480.00 per year	R 960.00 per year
Operating licence cost, once every 5 years	R 12.00	R 60.00	R 60.00
Monthly association fee	R 100.00 per year	R 100.00 per year	R 100.00 per year
Fixed cost: average cost per day	**R 220.72**	**R 120.20**	**R 309.69**
Fixed cost: average cost per month	**R 6 721.00**	**R 3 660.00**	**R 9 430.00**

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*								
Number of taxis in fleet			3			3			3
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year	R	2 000.00	per year	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year	R	500.00	per year	R	500.00	per year
Security	*(security, parking fees)*	R	500.00	per year	R	500.00	per year	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year	R	1 000.00	per year	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**		**R**	**15.05**		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**		**R**	**458.33**		**R**	**458.33**	

Commented [A1]: Why are the numbers in the 2 columns different and yet the averages are the same? I suggest that we drop this cost by 50%.

ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – MAFORA WEST

iSAHA

Table of Contents

ROUTE: MAFORA WEST
REPORT DATE: 7 December 2017

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

32 taxis were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 11: 15 August 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

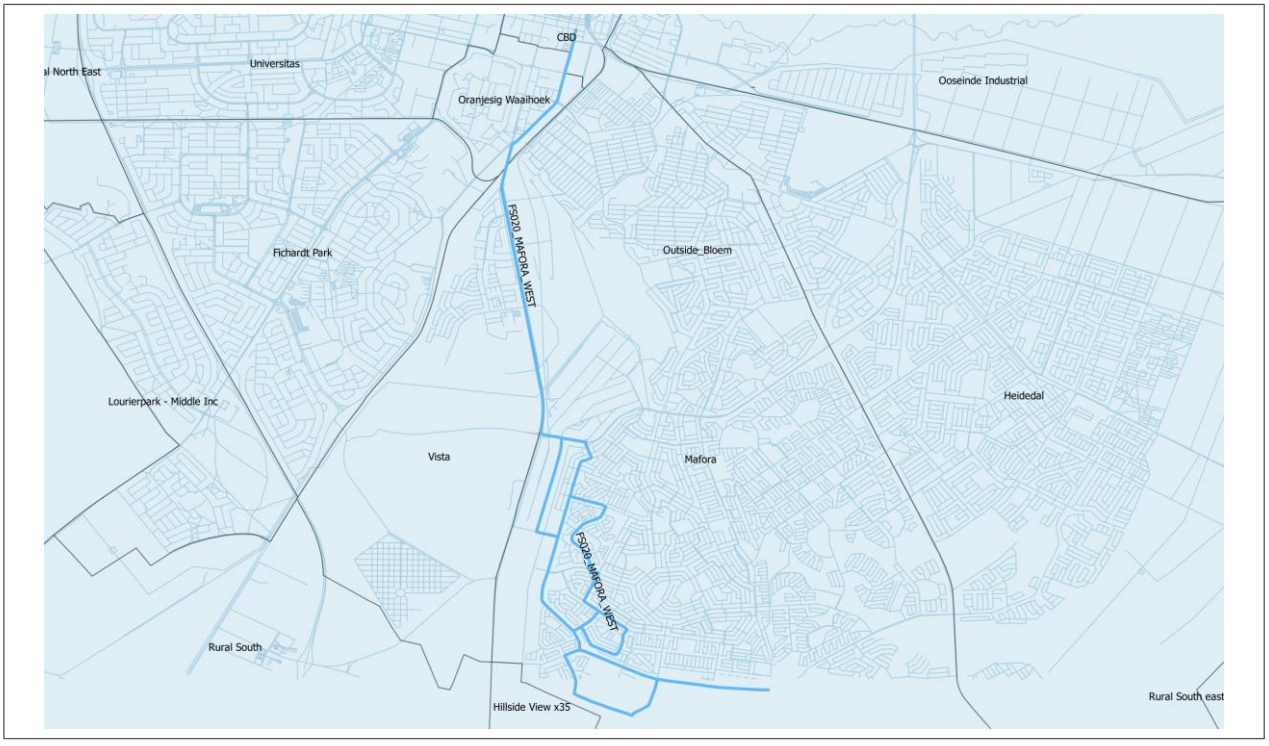
A total of 32 vehicles were surveyed between cycle 1 and cycle 11. 27 vehicles had 6 or more consecutive days of data and 5 vehicles did not have sufficient data.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 1 336.15	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 9 353.05	Per week As determined from survey
Average monthly income	R 40 498.70	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R453 622.82	Calculated from weekly result Formula: 48.5 x weekly average

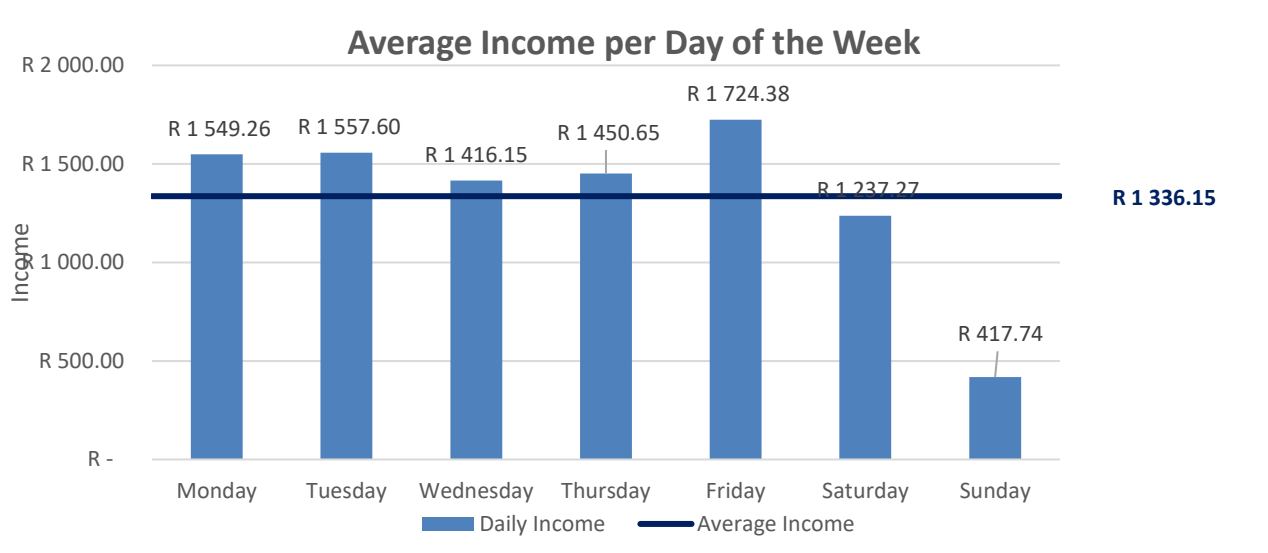


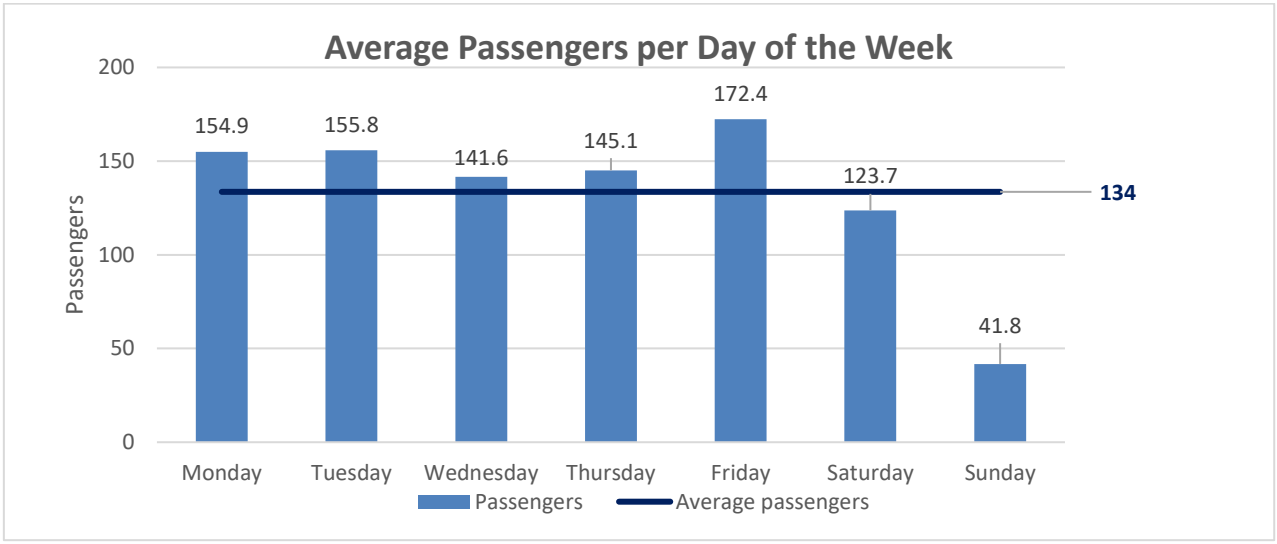
Corridor served by MAFORA WEST Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	155	R 10.00	R 1 549.26
Tuesday	156	R 10.00	R 1 557.60
Wednesday	142	R 10.00	R 1 416.15
Thursday	145	R 10.00	R 1 450.65
Friday	172	R 10.00	R 1 724.38
Saturday	124	R 10.00	R 1 237.27
Sunday	42	R 10.00	R 417.74
Weekly total	935		R 9 353.05
Average	134	R 10.00	R 1 336.15
Weekday Avg	154	R 10.00	R 1 539.61

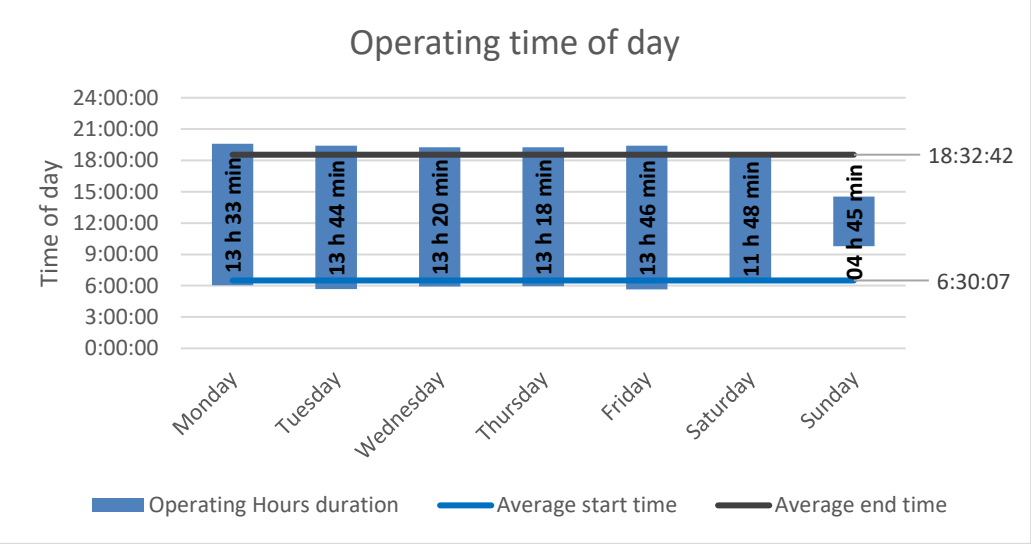



Average Passengers per Day of the Week
200
150
100
50
0
Passengers
154.9
155.8
141.6
145.1
172.4
123.7
41.8
134
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.3. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	6:30:07	18:32:42	12:02:34
Weekday (Mon-Fri) avg	5:50:35	19:23:22	13:32:47
Monday	6:02:20	19:36:08	13:33:48
Tuesday	5:39:59	19:24:30	13:44:31
Wednesday	5:55:06	19:16:03	13:20:56
Thursday	5:56:28	19:15:05	13:18:37
Friday	5:39:02	19:25:05	13:46:03
Saturday	6:31:01	18:19:10	11:48:09
Sunday	9:46:55	14:32:52	4:45:57



3.4. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	199	194	R	6.87	47%
Weekday (Mon-Fri) avg	224	221	R	6.96	47%
Monday	213	213	R	7.26	48%
Tuesday	219	219	R	7.11	47%
Wednesday	215	215	R	6.58	47%
Thursday	231	216	R	6.72	47%
Friday	243	243	R	7.10	48%
Saturday	198	182	R	6.78	47%
Sunday	73	73	R	5.74	41%

3.5. Operational analysis

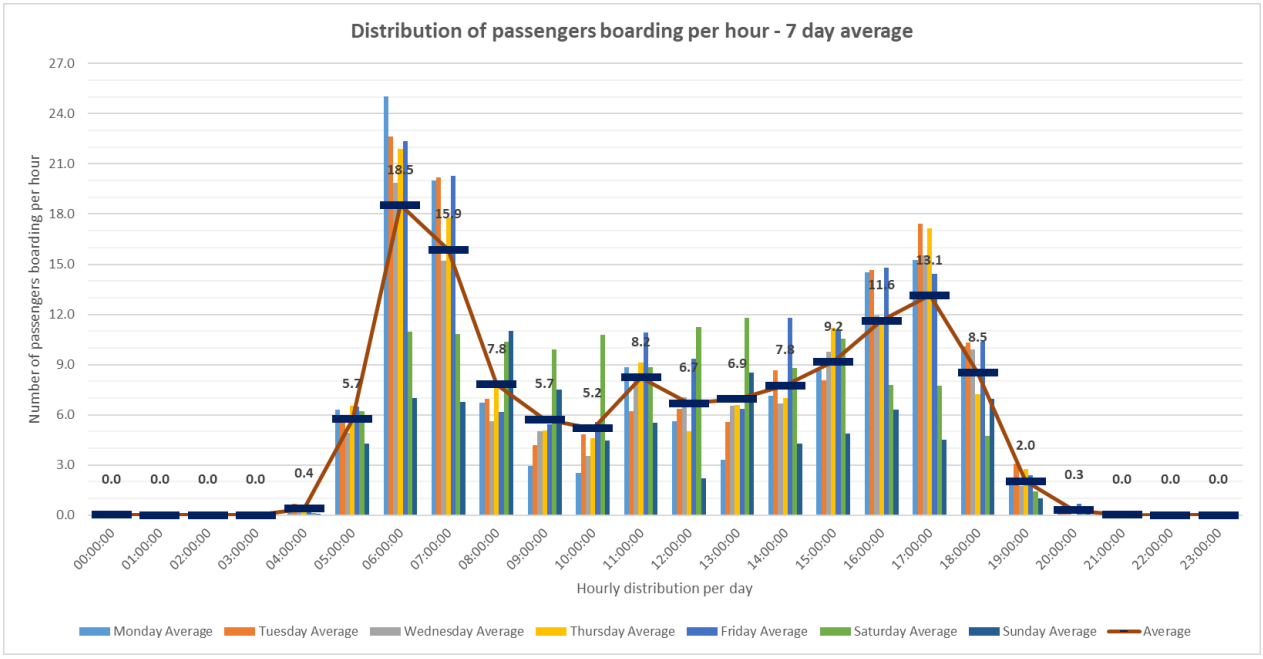
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	194.5	134	1.45	00:06:24	14.4	1655.3	3514.9	47%
Weekday (Mon-Fri) avg	221.3	154	1.44	00:06:09	16.1	1673.2	3541.0	47%
Monday	213.3	155	1.38	00:06:15	15.8	1628.7	3410.5	48%
Tuesday	219.1	156	1.41	00:06:09	16.0	1654.1	3511.4	47%
Wednesday	215.2	142	1.52	00:06:24	15.5	1571.2	3368.7	47%
Thursday	215.7	145	1.48	00:06:16	15.7	1629.1	3512.2	47%
Friday	242.8	172	1.41	00:05:41	17.7	1859.0	3860.9	48%
Saturday	182.4	124	1.46	00:06:58	13.9	1658.9	3494.5	47%
Sunday	72.7	42	1.74	00:07:08	5.9	1373.5	3169.4	41%

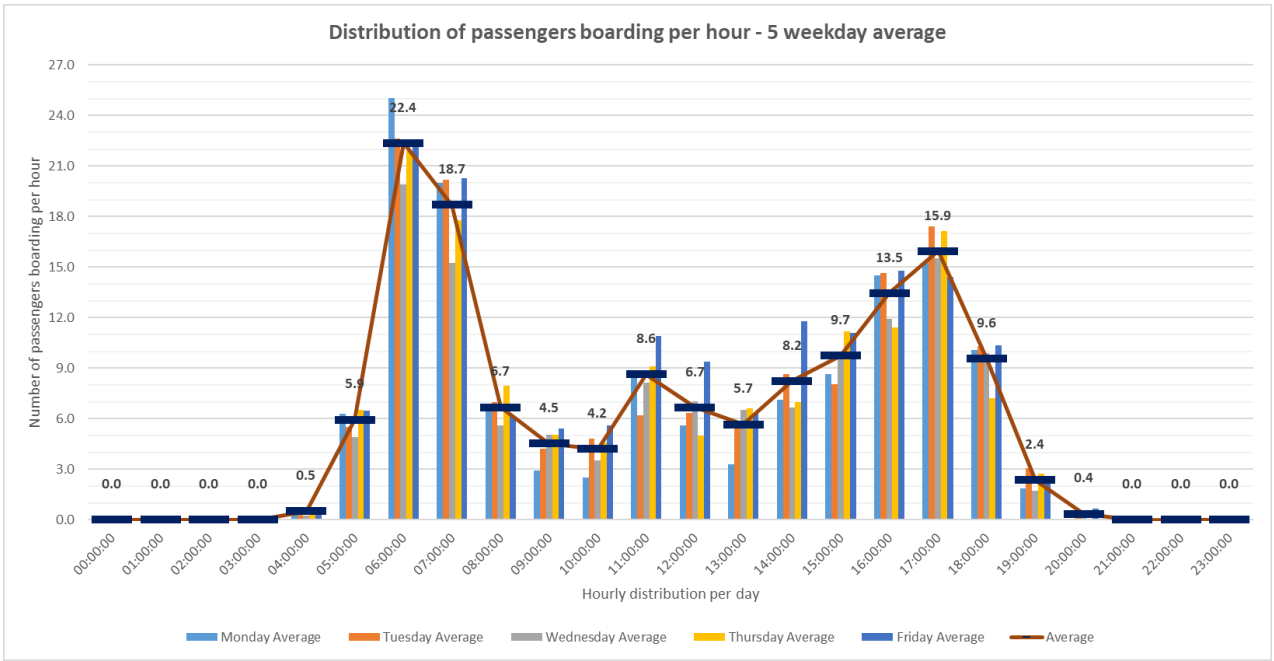
3.6. Fluctuations

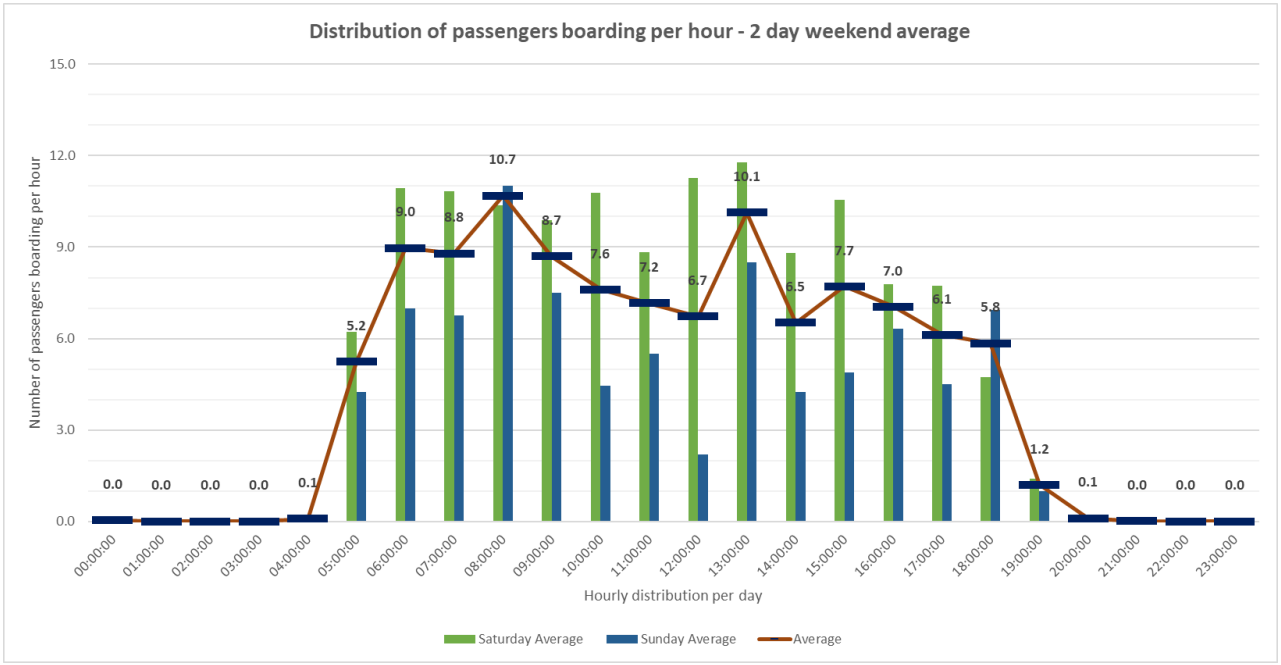
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.0	R 0.09	0%
01:00	01:59	0.0	R -	0%
02:00	02:59	0.0	R -	0%
03:00	03:59	0.0	R -	0%
04:00	04:59	0.4	R 3.94	1%
05:00	05:59	5.7	R 57.46	14%
06:00	06:59	18.5	R 185.33	40%
07:00	07:59	15.9	R 158.68	40%
08:00	08:59	7.8	R 78.24	26%
09:00	09:59	5.7	R 57.17	19%
10:00	10:59	5.2	R 51.74	22%
11:00	11:59	8.2	R 82.17	40%
12:00	12:59	6.7	R 66.84	35%
13:00	13:59	6.9	R 69.41	39%
14:00	14:59	7.8	R 77.53	43%
15:00	15:59	9.2	R 91.67	45%
16:00	16:59	11.6	R 116.24	47%
17:00	17:59	13.1	R 131.41	45%
18:00	18:59	8.5	R 85.08	35%
19:00	19:59	2.0	R 20.29	13%
20:00	20:59	0.3	R 2.90	3%
21:00	21:59	0.0	R 0.08	0%
22:00	22:59	0.0	R -	0%
23:00	23:59	0.0	R -	0%

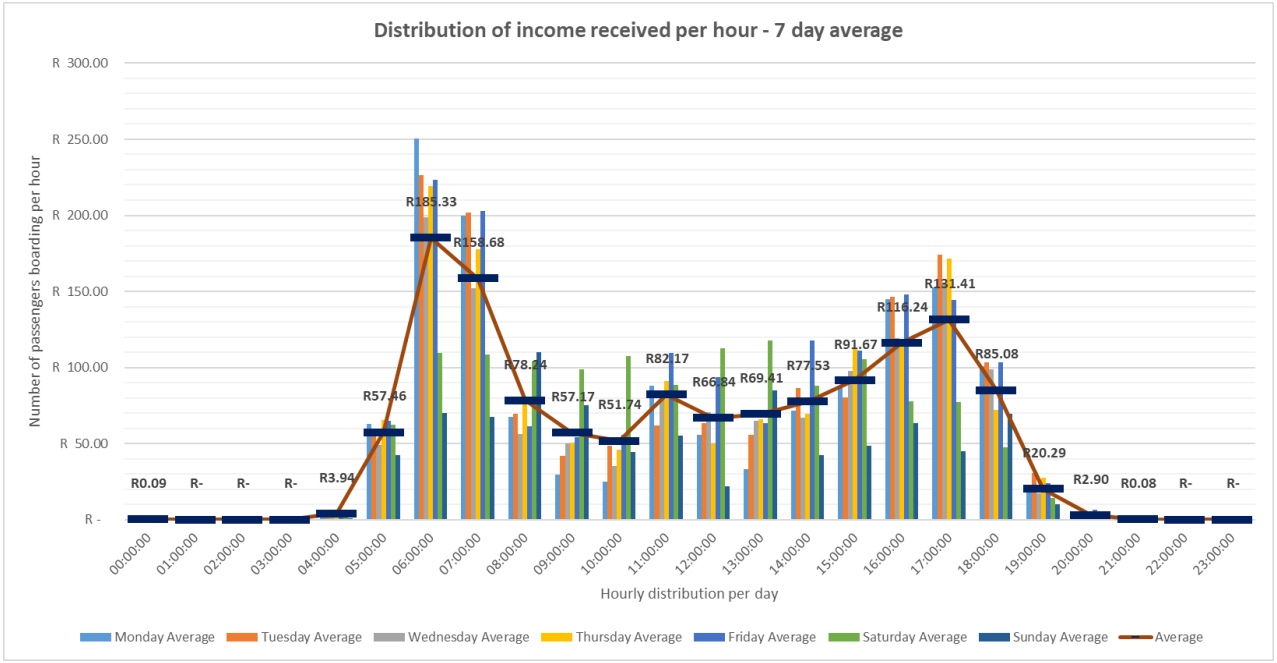
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

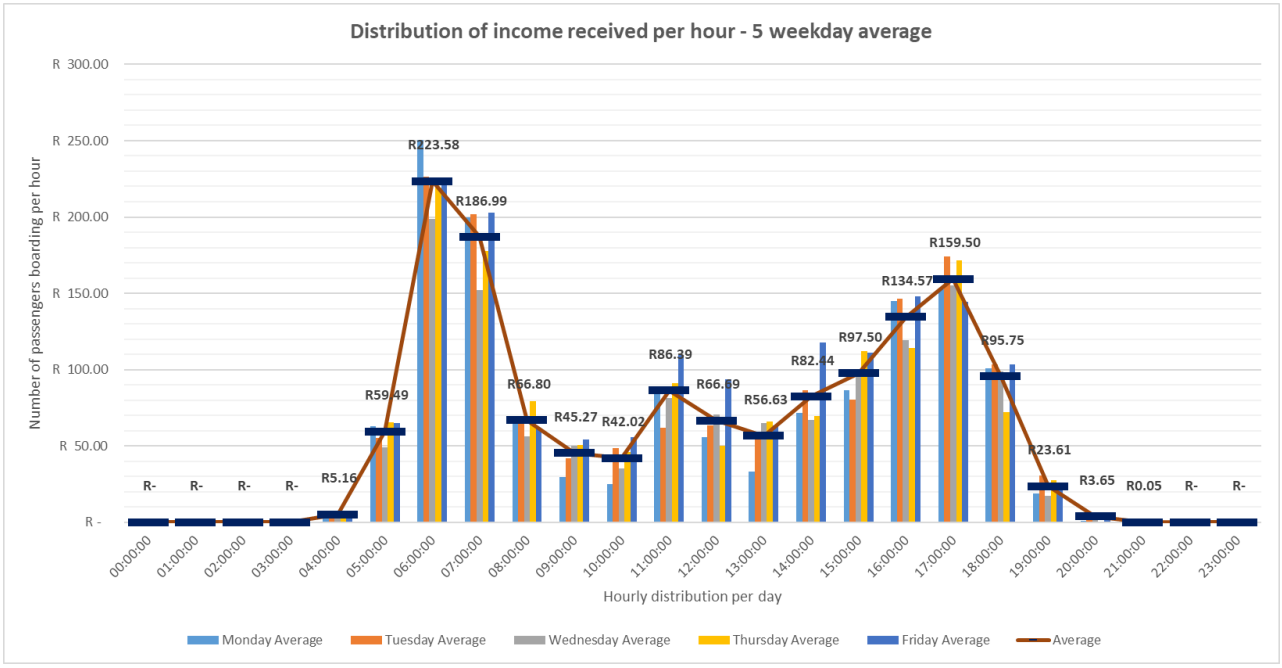


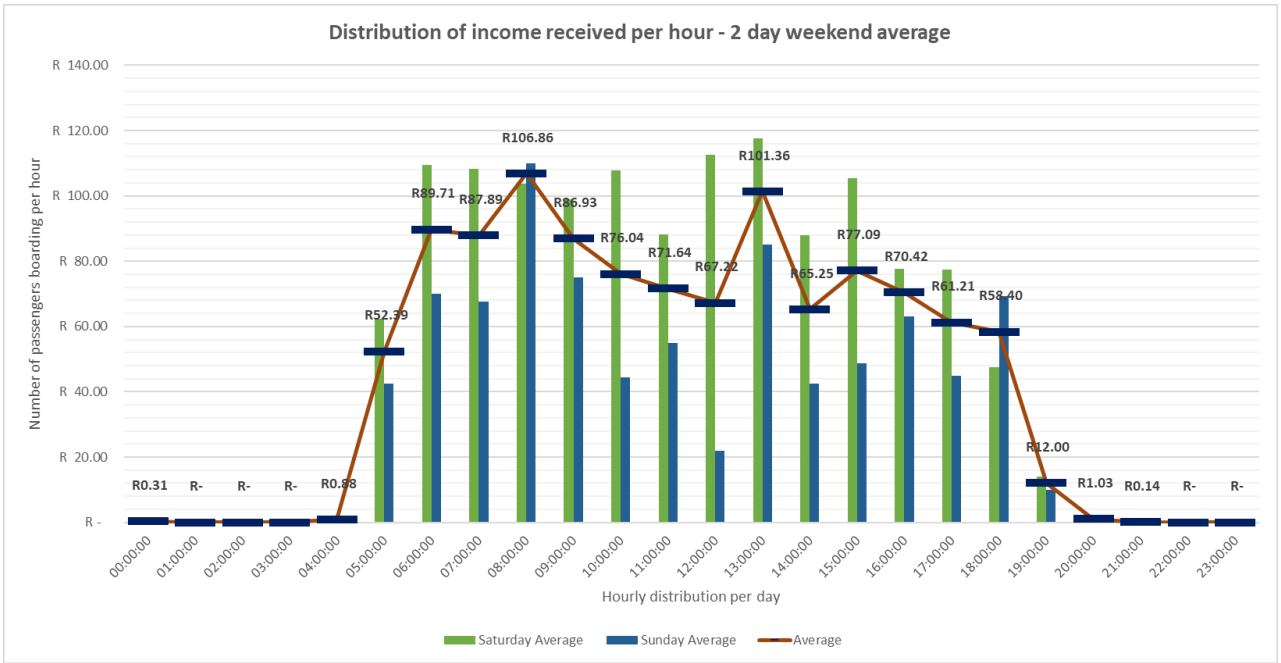




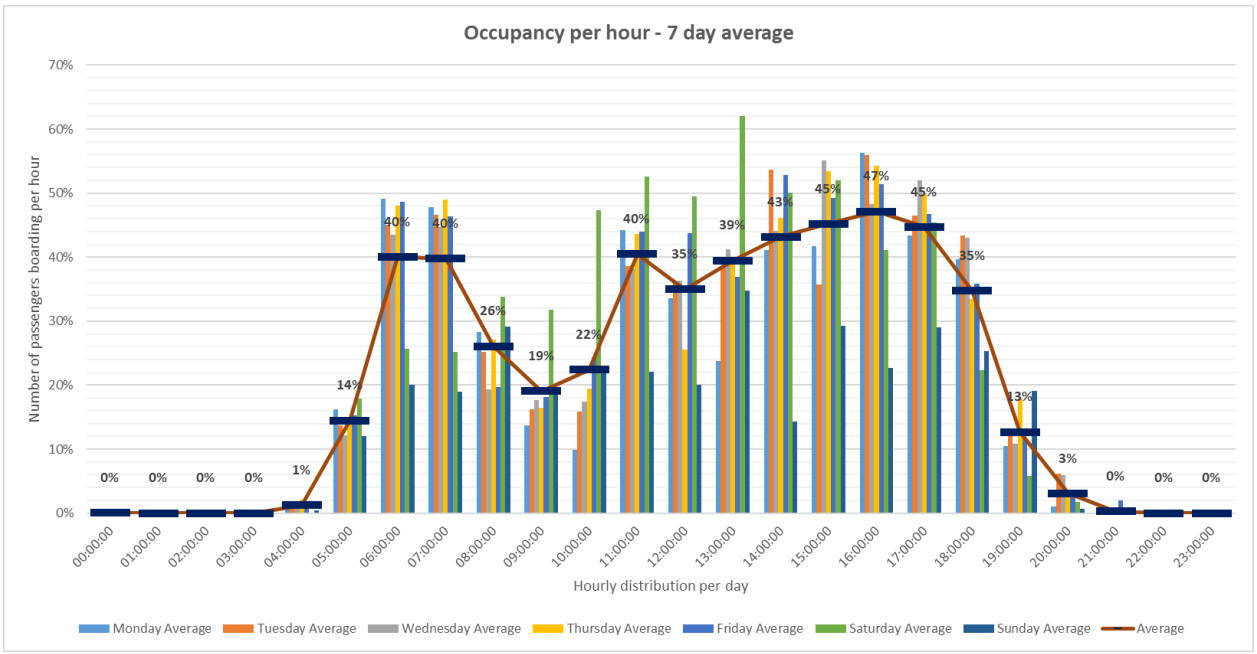
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

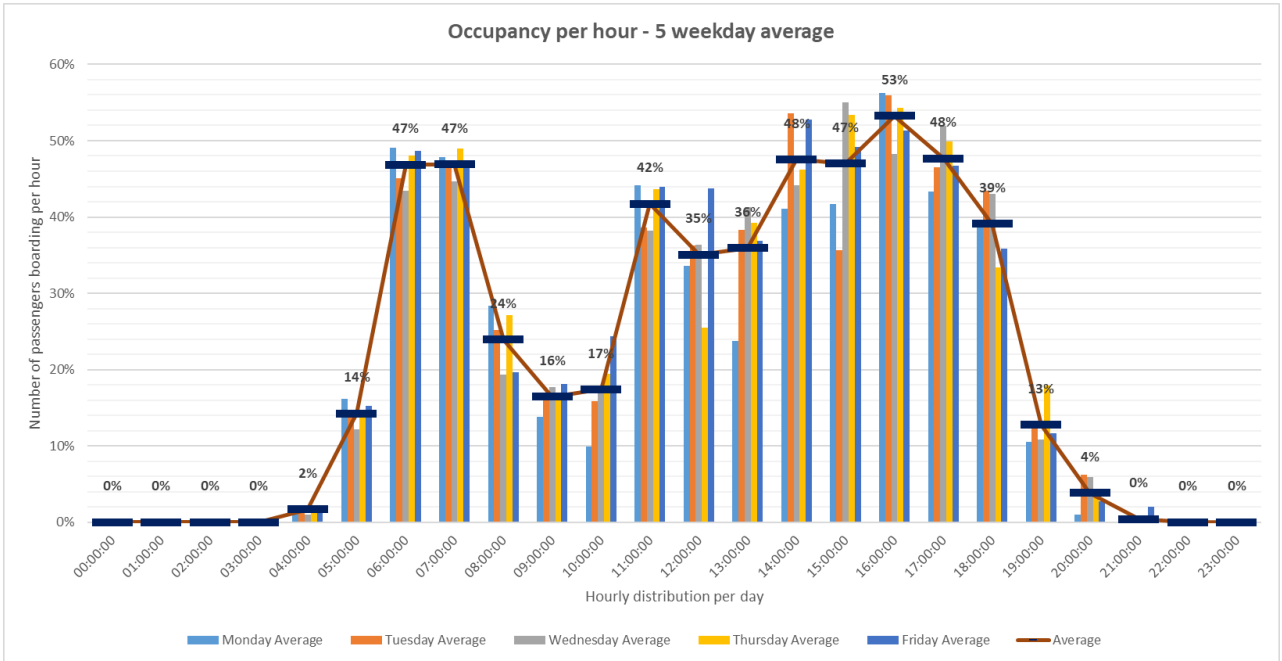


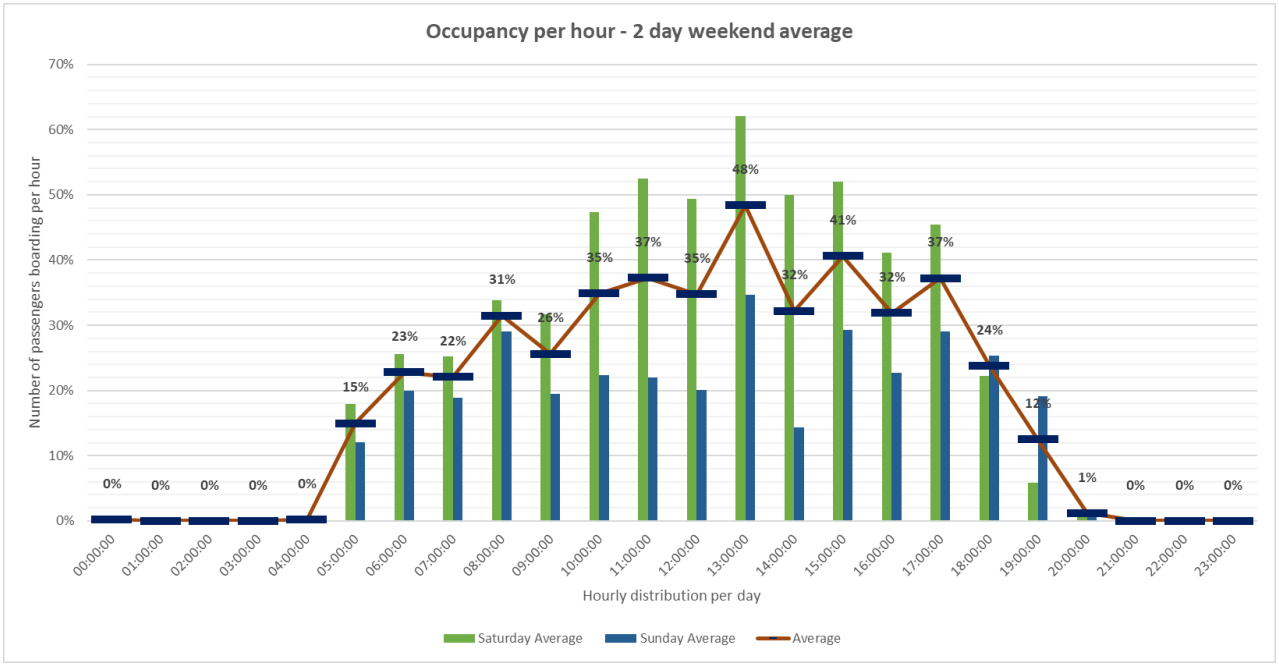

Distribution of income received per hour - 5 weekday average
Number of passengers boarding per hour
R 300.00
R 250.00
R 200.00
R 150.00
R 100.00
R 50.00
R -
R- R- R- R- R5.16 R59.49 R223.58 R186.99 R66.80 R45.27 R42.02 R86.39 R66.89 R56.63 R82.44 R97.50 R134.57 R159.50 R95.75 R23.61 R3.65 R0.05 R- R-
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 140.00
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R0.31 R- R- R- R0.88 R52.39 R89.71 R87.89 R106.86 R86.93 R76.04 R71.64 R67.22 R101.36 R65.25 R77.09 R70.42 R61.21 R58.40 R12.00 R1.03 R0.14 R- R-
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

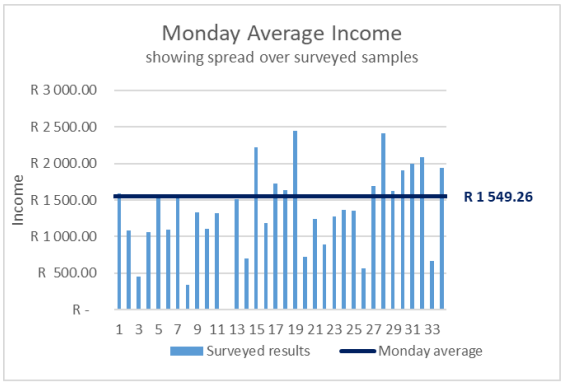


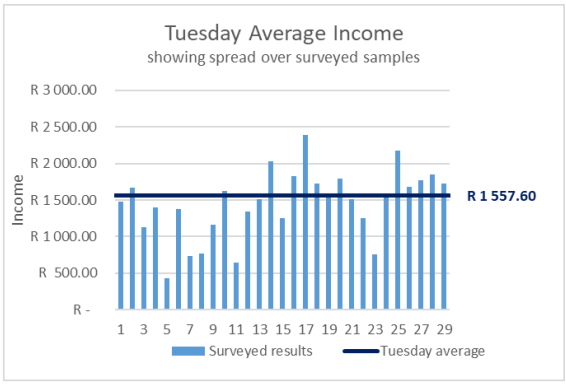


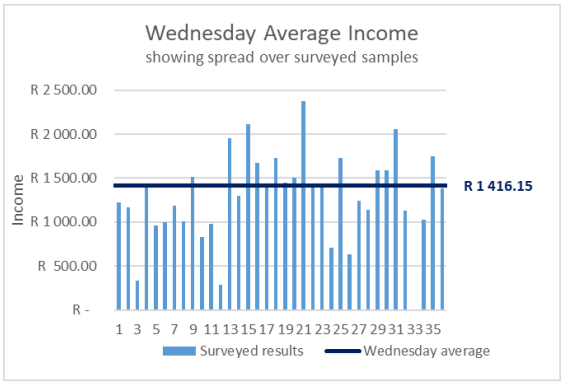

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
70%
60%
50%
40%
30%
20%
10%
0%
0% 0% 0% 0% 0% 15% 23% 22% 31% 26% 35% 37% 35% 48% 32% 41% 32% 37% 24% 12% 1% 0% 0% 0%
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

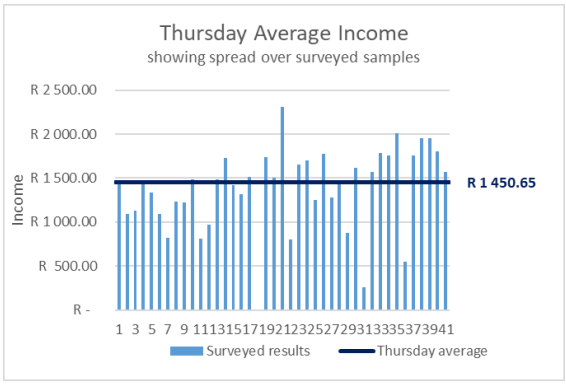
4. DETAILED SURVEY RESULTS

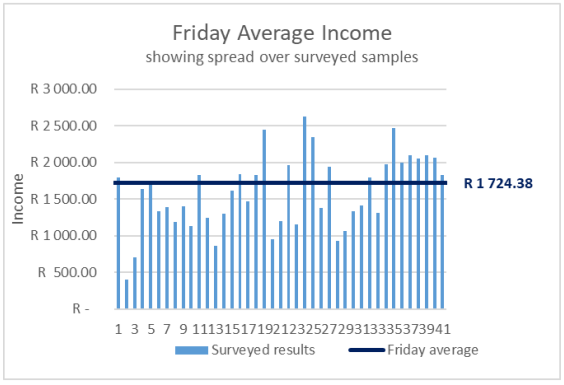
4.1. Income distribution

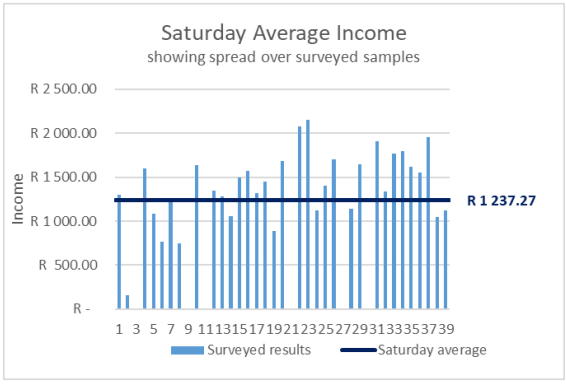


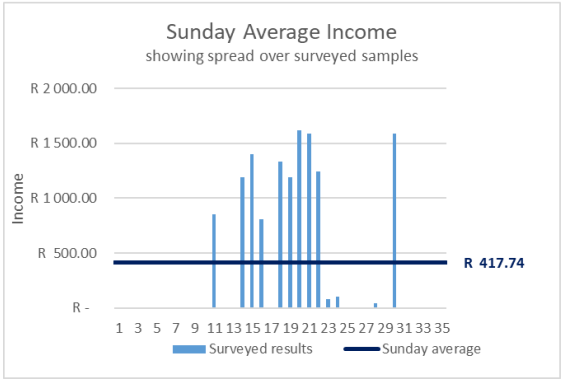




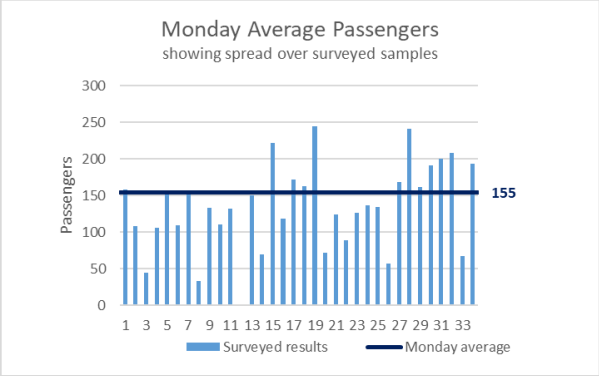


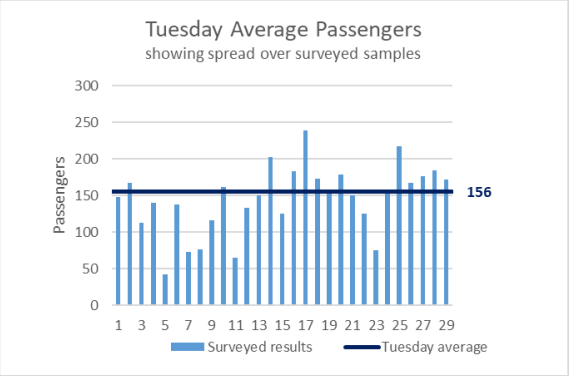


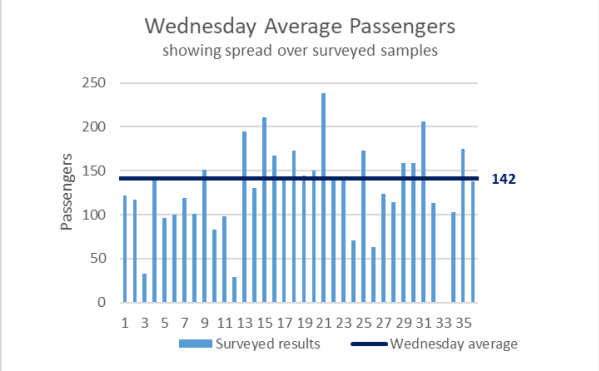


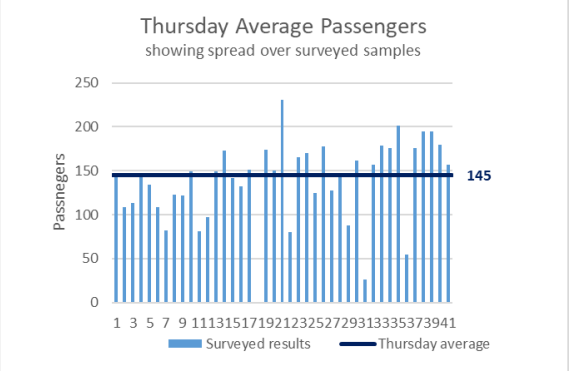


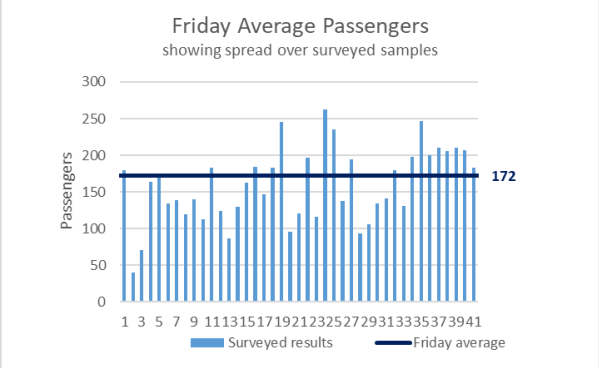
4.2. Passenger number distribution

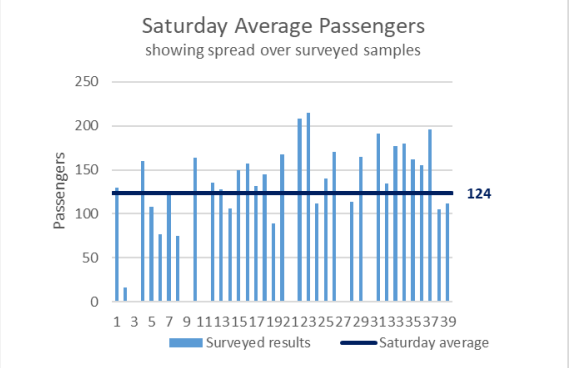


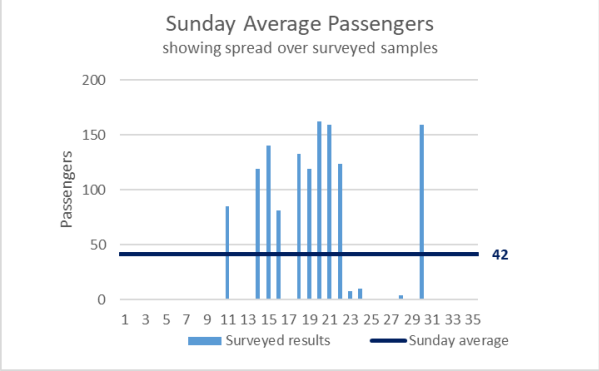










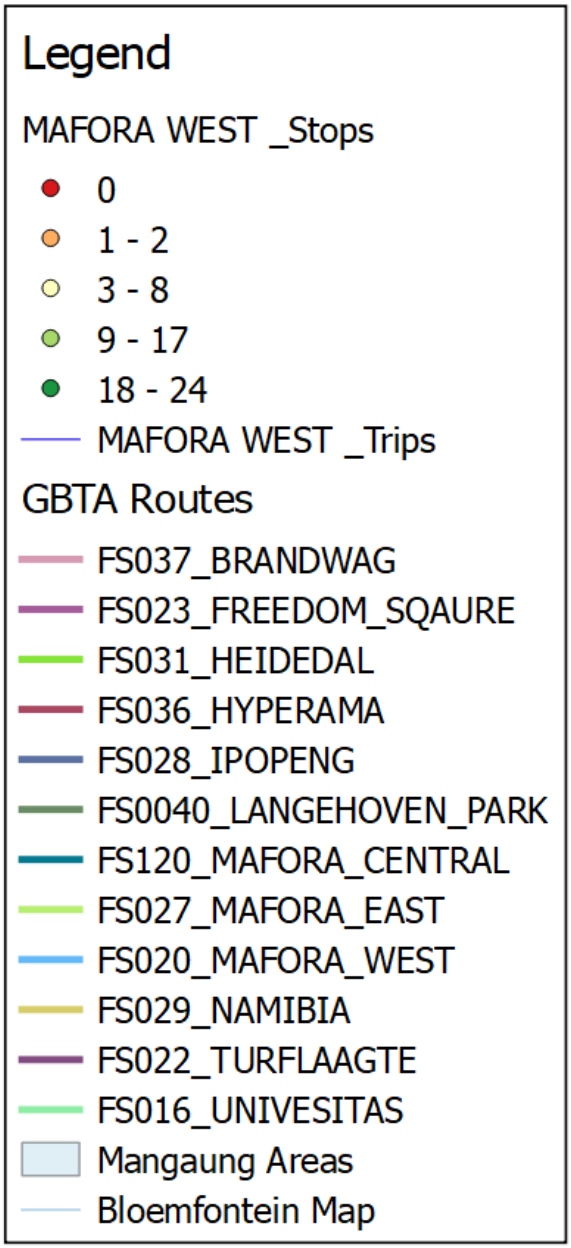


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps

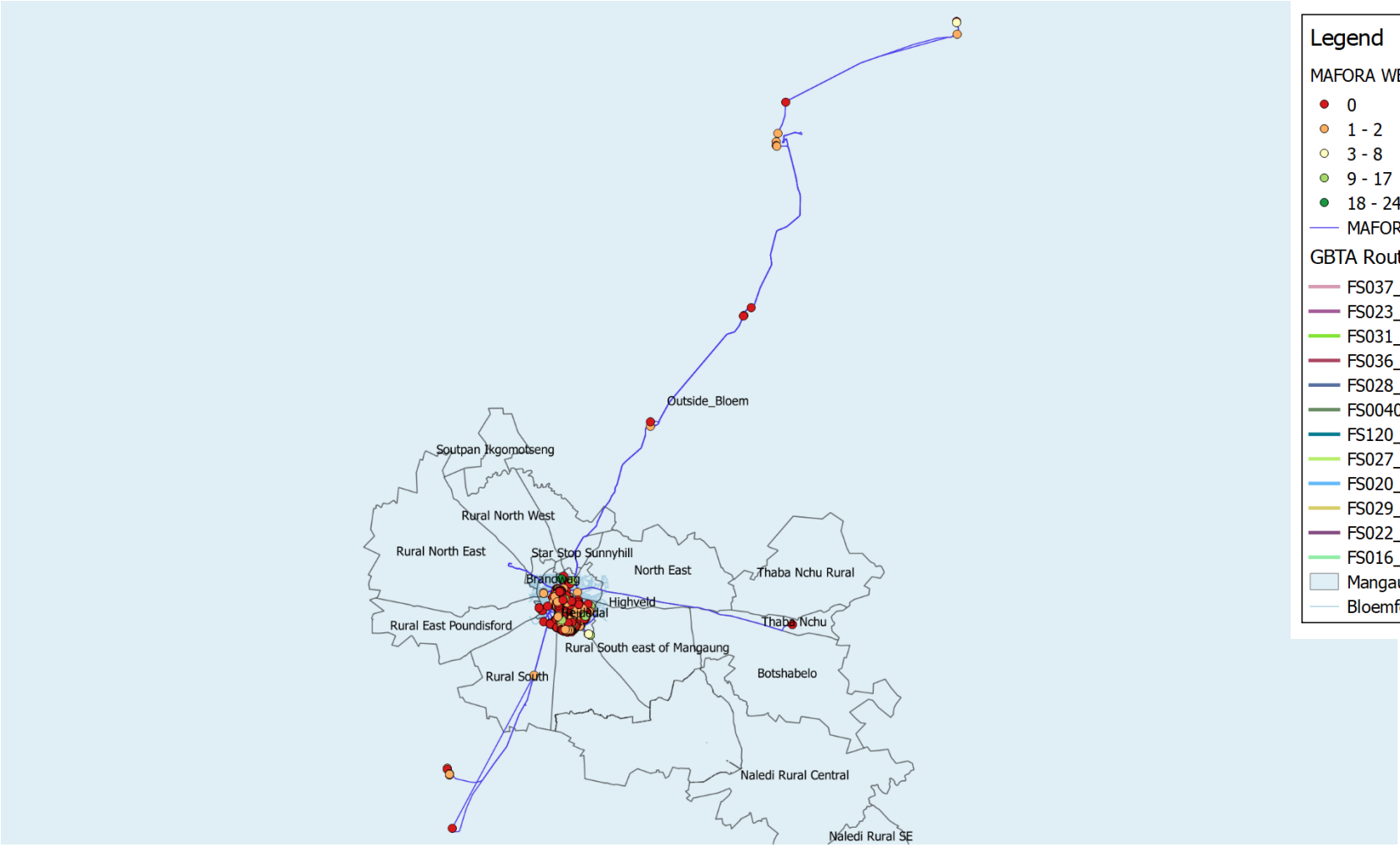


5.1. All surveyed operations

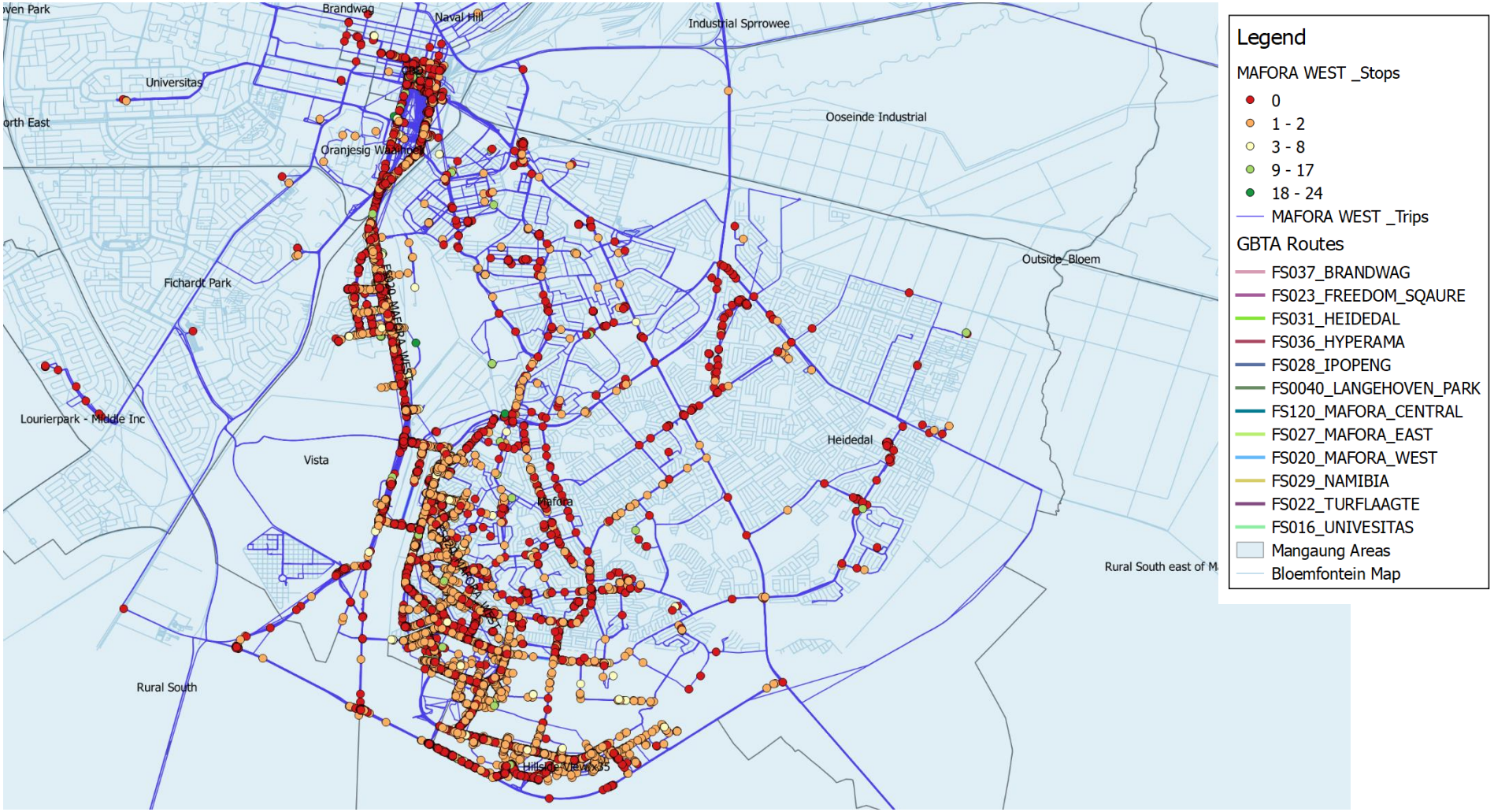
The tracks in blue illustrates the operations of all the surveyed taxis.

All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

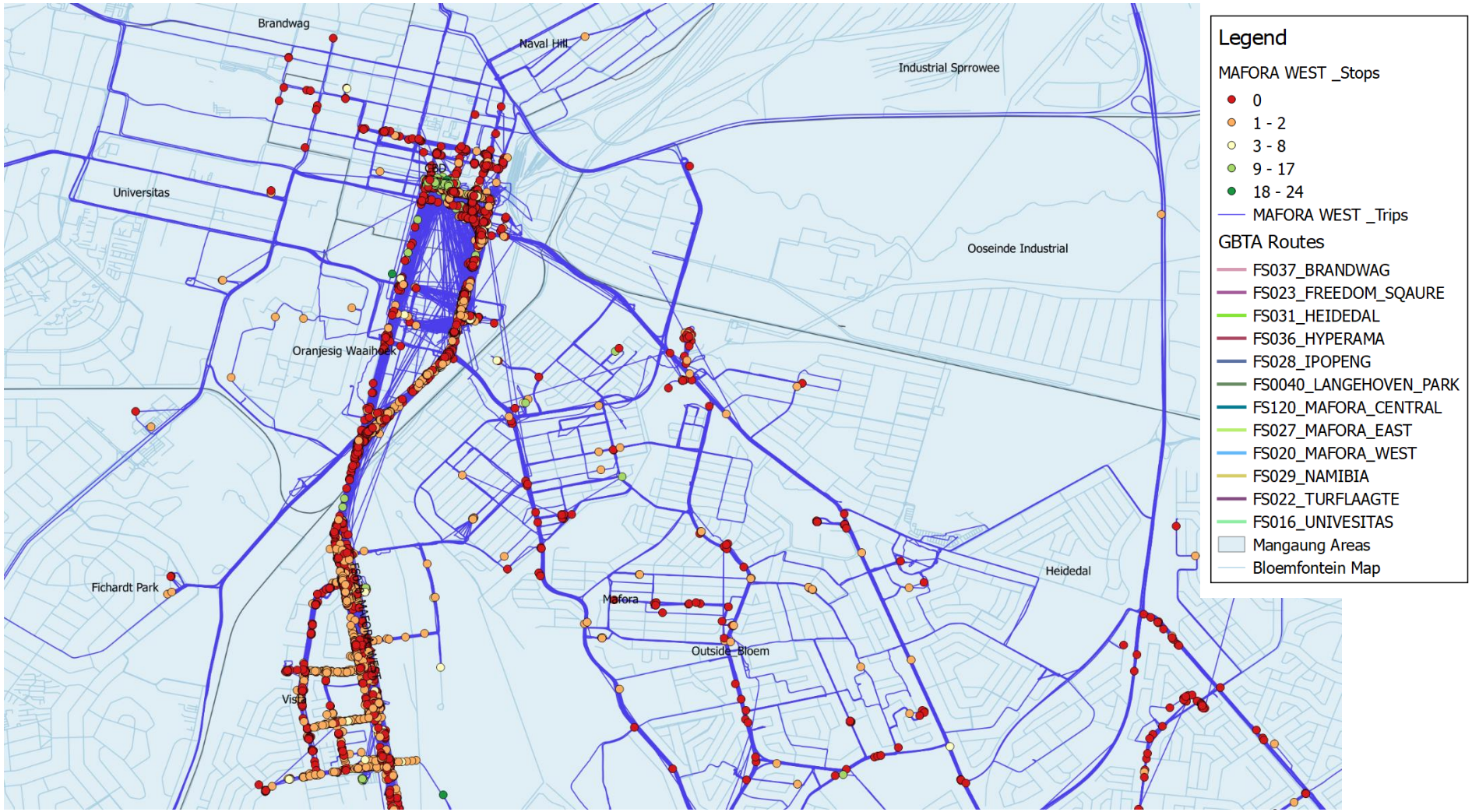
Operations of all surveyed taxis including stops



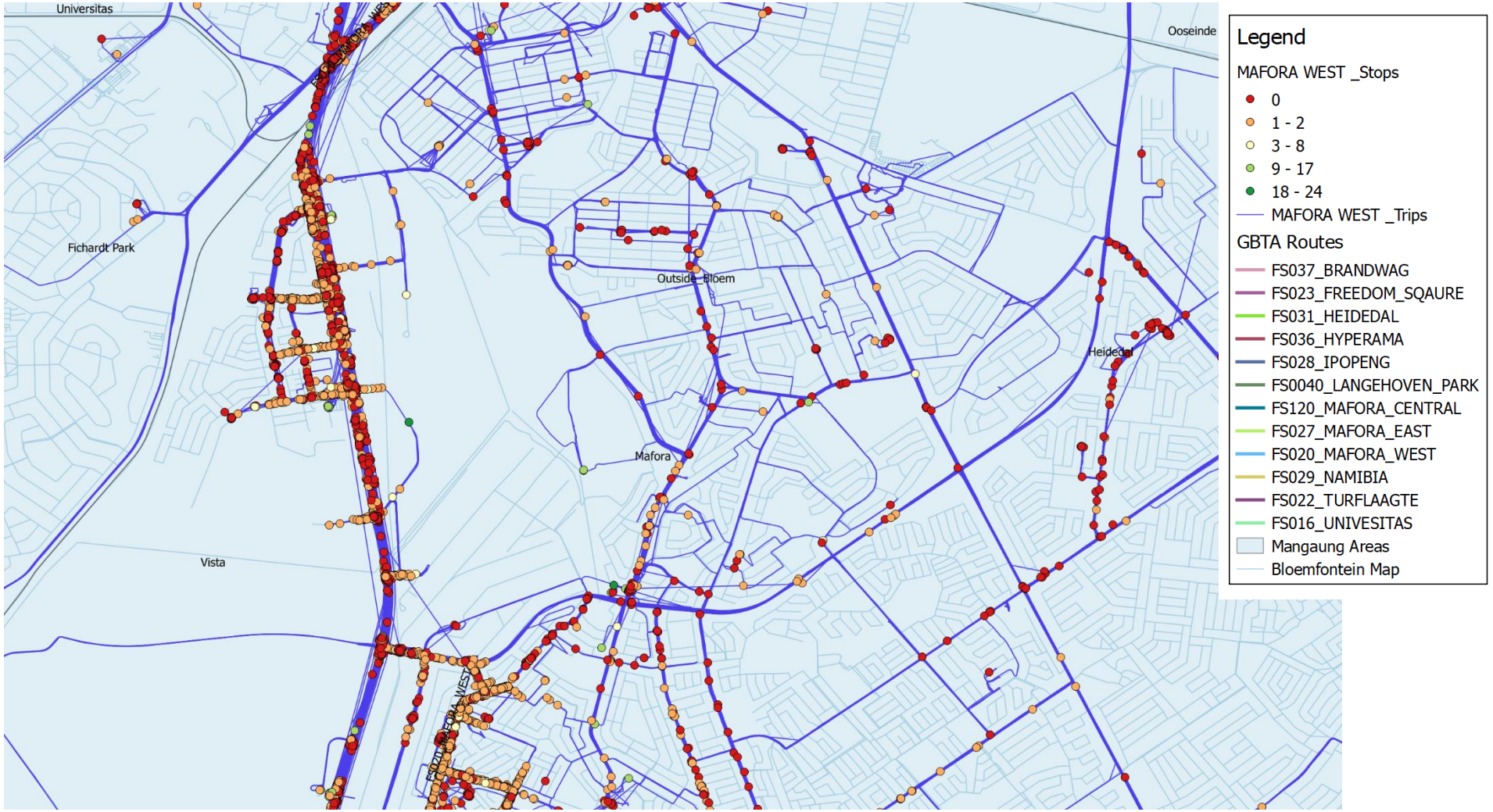
Operations of all surveyed taxis including stops – Focused on the MAFORA WEST route



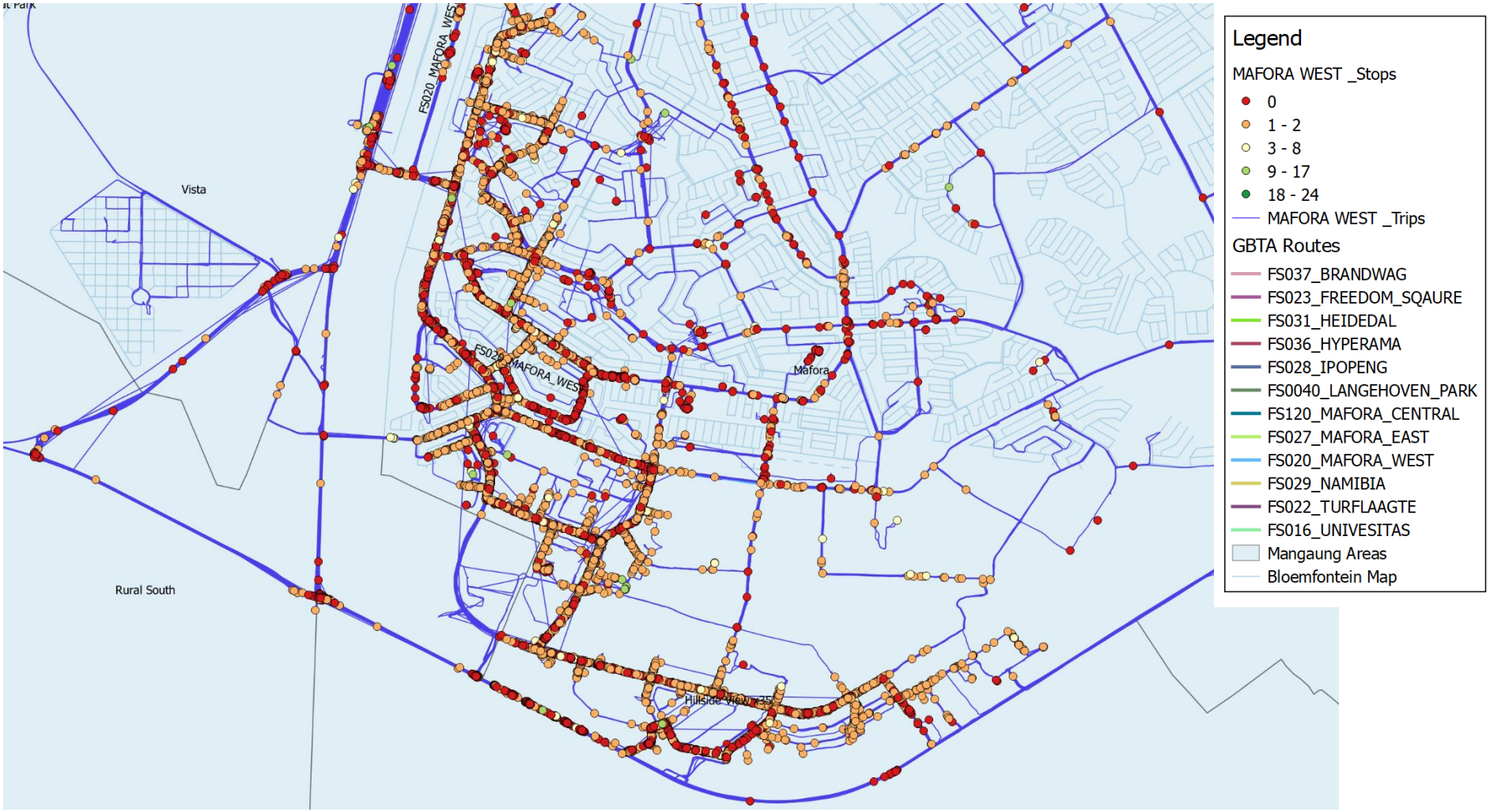
Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on the Ehrlich Park area



Operations of all surveyed taxis including stops – Focused on the MAFORA WEST area

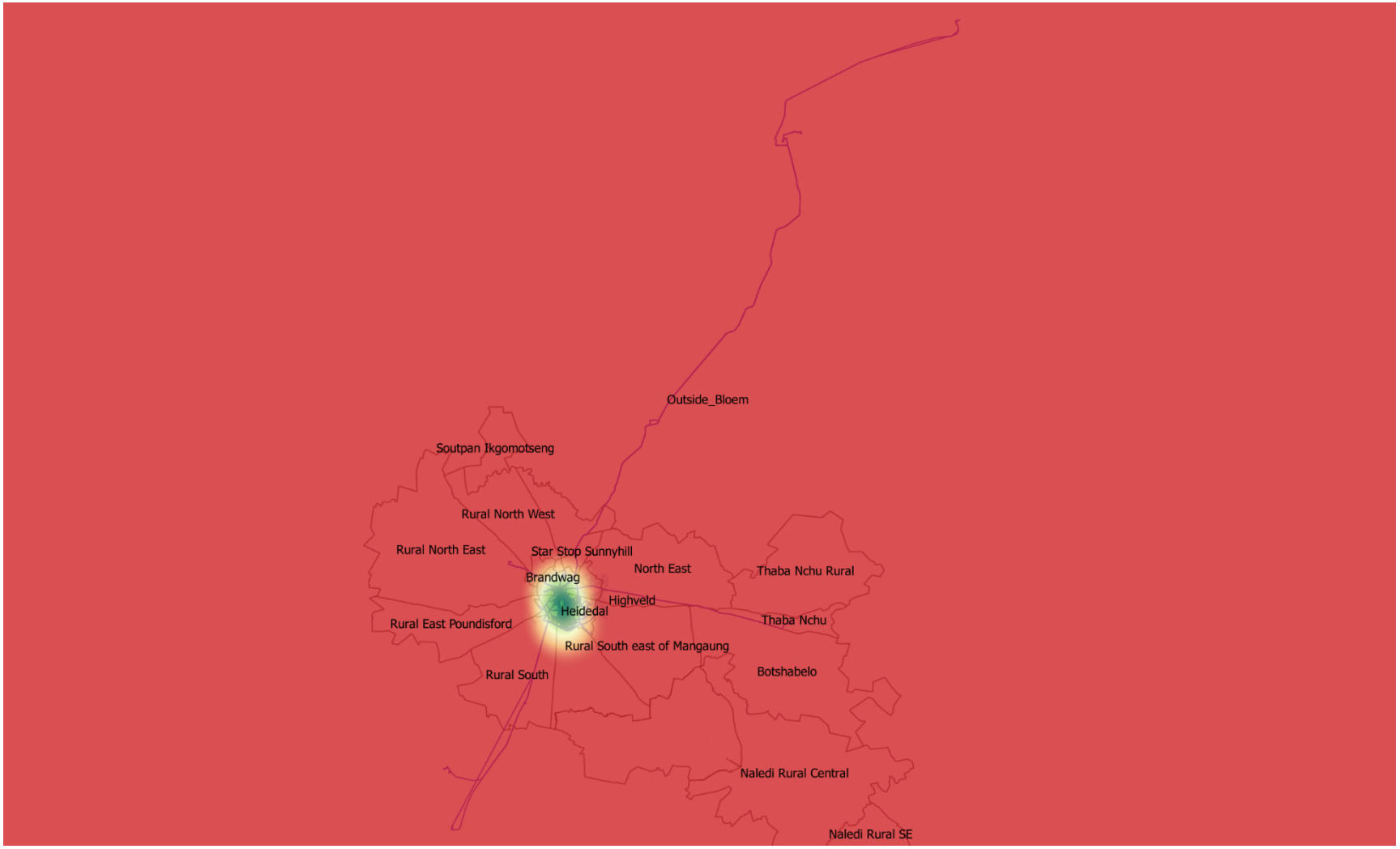


5.2. Heatmaps of taxi operations

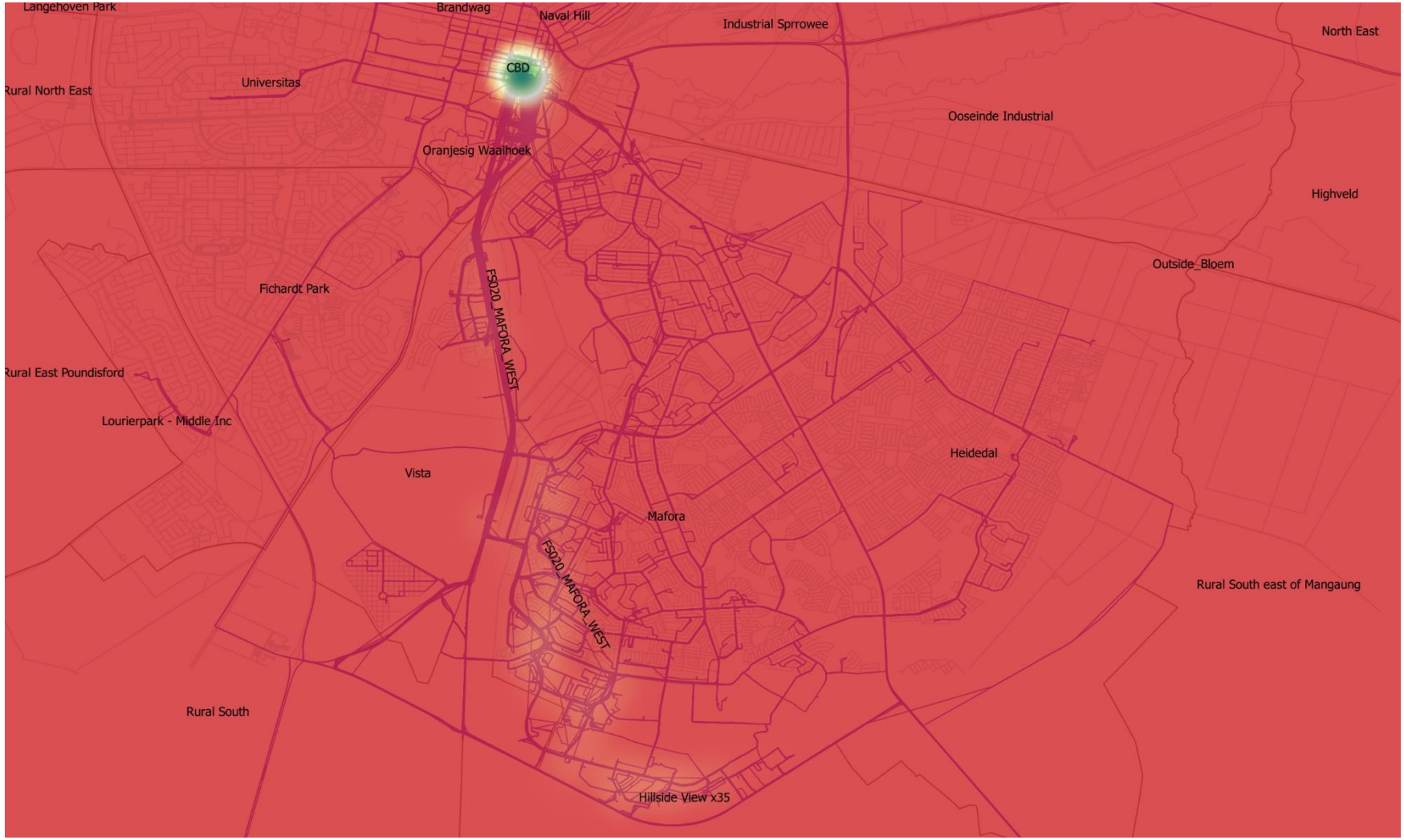
The following maps demonstrate the volume of passengers in each area.

- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

Heatmap of total surveyed area.



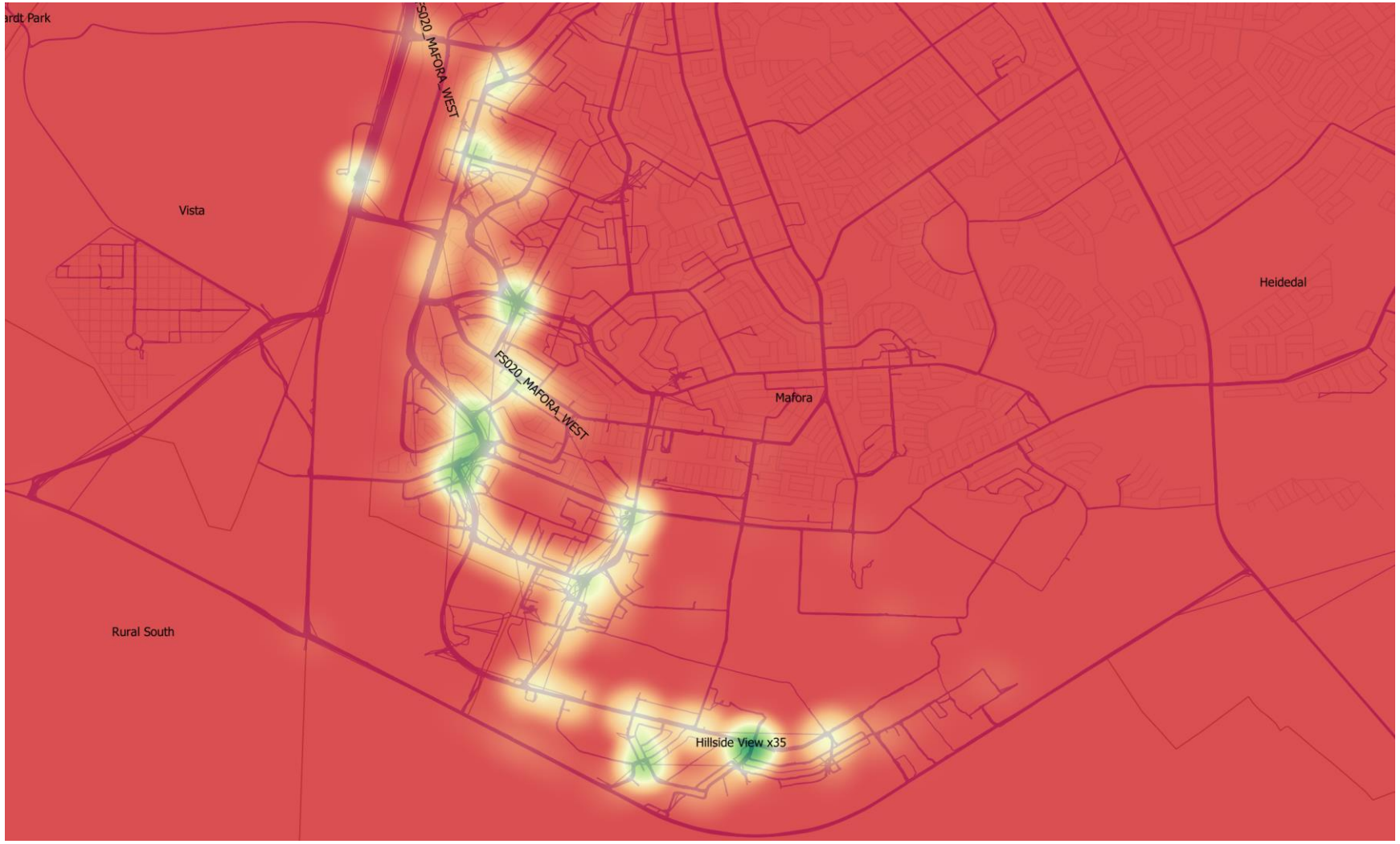
Heatmap of total surveyed area – Focused on the MAFORA WEST route



Heatmap of total surveyed area – Focused on the CBD

Heatmap of total surveyed area – Focused on the Ehrlich Park area

Heatmap of total surveyed area – Focused on MAFORA WEST



ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – NAMIBIA

iSAHA

Table of Contents

ROUTE: **NAMIBIA**
REPORT DATE: **11 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Namibia Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Namibia Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

	Option A		*Option C*	
Average operating income per month	**R 30 455.36**		**R 32 236.85**	
Average operating income per day		R 1 004.80		R 1 063.57
Cost of operations per month	**R 17 625.93**		**R 19 150.29**	
Cost of operations per day		R 578.85		R 628.91
Operational cost - Fuel & Oil	*R 6 626.35*	*R 217.61*	*R 4 947.79*	*R 162.49*
Operational cost - Maintenance	*R 3 820.25*	*R 125.46*	*R 4 314.17*	*R 141.68*
Fixed cost	*R 6 721.00*	*R 220.72*	*R 9 430.00*	*R 309.69*
Overhead cost	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*
Average monthly operating profit*	**R 12 829.43**		**R 13 086.56**	
Average daily operating profit *		R 425.95		R 434.66
** Excluding driver salary*				
Excluding payments to owner				

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1		
Driver Salary	**R 5 000.00**	**R 5 000.00**
Average monthly operating profit	**R 12 829.43**	**R 13 086.56**
Driver Salary	**R 5 000.00**	**R 5 000.00**
Monthly profit to Owner	**R 7 829.43**	**R 8 086.56**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:				
Total usage fee paid to owner per month	**R**	**17 617.50**	**R**	**21 097.50**
Average operating income per month	**R**	**30 455.36**	**R**	**32 236.85**
Monthly usage fee to Owner	**R**	**17 617.50**	**R**	**21 097.50**
Usage cost per month (fuel, oil)	**R**	**6 626.35**	**R**	**4 947.79**
Monthly profit to Driver	**R**	**6 211.52**	**R**	**6 191.56**
Monthly usage fee to Owner	**R**	**17 617.50**	**R**	**21 097.50**
Maintenance cost per month	R	3 820.25	R	4 314.17
Fixed cost per month	R	6 721.00	R	9 430.00
Overhead cost per month	R	458.33	R	458.33
Monthly profit to Owner (scenario 2)	**R**	**6 617.91**	**R**	**6 895.00**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income			
	Option A	*Option B*	*Option C*
	Average income per day	Average income per day	Average income per day
Monday	R 1 038.57	R -	R 1 460.00
Tuesday	R 941.67	R -	R 1 410.00
Wednesday	R 1 248.33	R -	R 1 520.00
Thursday	R 1 297.50	R -	R 1 290.00
Friday	R 1 220.00	R -	R 1 165.00
Saturday	R 920.00	R -	R 600.00
Sunday	R 367.50	R -	R -
Total weekly income	**R 7 033.57**	**R -**	**R 7 445.00**
Average daily income	**R 1 004.80**	**R -**	**R 1 063.57**

4. COST CALCULATIONS

4.1. General information

	Option A			*Option C*		
General information						
Vehicle type	Quantum 15 Seater			Sprinter 22 Seater		
Average km driven per day	134		km	100		km
Cost of fuel	R	14.00	per litre	R	14.00	per litre
Cost of oil	R	60.00	per 500 ml	R	60.00	per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil					
Operational cost					
Usage cost assumptions					
Scenario 2					
Fuel consumption	10	km / litre		10	km / litre
Oil consumption: one 500ml can of oil every	2	days		2	days
Fuel and Oil usage per day	**R**	**217.61**		**R**	**162.49**
Fuel and Oil usage per month	**R**	**6 626.35**		**R**	**4 947.79**
Maintenance cost assumptions					
These expenses are always for the owner's account					
Main service cost	R	3 500.00		R	6 000.00
Number of main services		2	per year		1	per year
Minor service cost	R	1 400.00		R	4 000.00	
Number of minor services		6	per year		2	per year
Wheel maintenance cost	R	2 000.00		R	5 000.00	
(brake pads, wheel cylinder, etc)					
Number of wheel maintenances		4	per year		3	per year
Wheel alignment cost	R	360.00		R	360.00	
Number of wheel alignments		12	per year		12	per year
Price of tyres	R	1 350.00	per tyre	R	2 500.00	per tyre
Tyre lifespan		30 000.00	km		60 000.00	km
Upholstery, cost of replacement	R	2 200.00		R	2 200.00	
Number of times upholstery is replaced		2	per year		2	per year
Unforeseen cost (average per event)	R	2 300.00		R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)					
Number of times of unforeseen expenses		1	per year		1	per year
Cost of cleaning, per event	R	50.00		R	50.00	
Number of times cleaning is done		52	per year		52	per year
Maintenance: average cost per day	**R**	**125.46**		**R**	**141.68**	
Maintenance: average cost per month	**R**	**3 820.25**		**R**	**4 314.17**	

4.3. Fixed cost

Fixed cost *operations of the vehicle*					
Insurance installment	R	18 000.00	per year	R 22 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year	R 5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year	R 83 340.00	per year
Vehicle licence fees cost	R	1 500.00	per year	R 1 700.00	per year
Roadworthy test cost	R	480.00	per year	R 960.00	per year
Operating licence cost, once every 5 years	R	12.00		R 60.00	
Monthly association fee	R	100.00	per year	R 100.00	per year
Fixed cost: average cost per day	**R**	**220.72**		**R 309.69**	
Fixed cost: average cost per month	**R**	**6 721.00**		**R 9 430.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*							
Number of taxis in fleet			3			3		
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year	R	2 000.00	per year	
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year	R	500.00	per year	
Security	*(security, parking fees)*	R	500.00	per year	R	500.00	per year	
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year	R	1 000.00	per year	
Overhead cost: average cost per day per taxi		**R**	**15.05**		**R**	**15.05**		
Overhead cost: average cost per month per taxi		**R**	**458.33**		**R**	**458.33**		

ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – NAMIBIA

iSAHA

Table of Contents

ROUTE: **NAMIBIA**
REPORT DATE: **11 December 2017**

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

8 taxis were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 10: 20 July 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

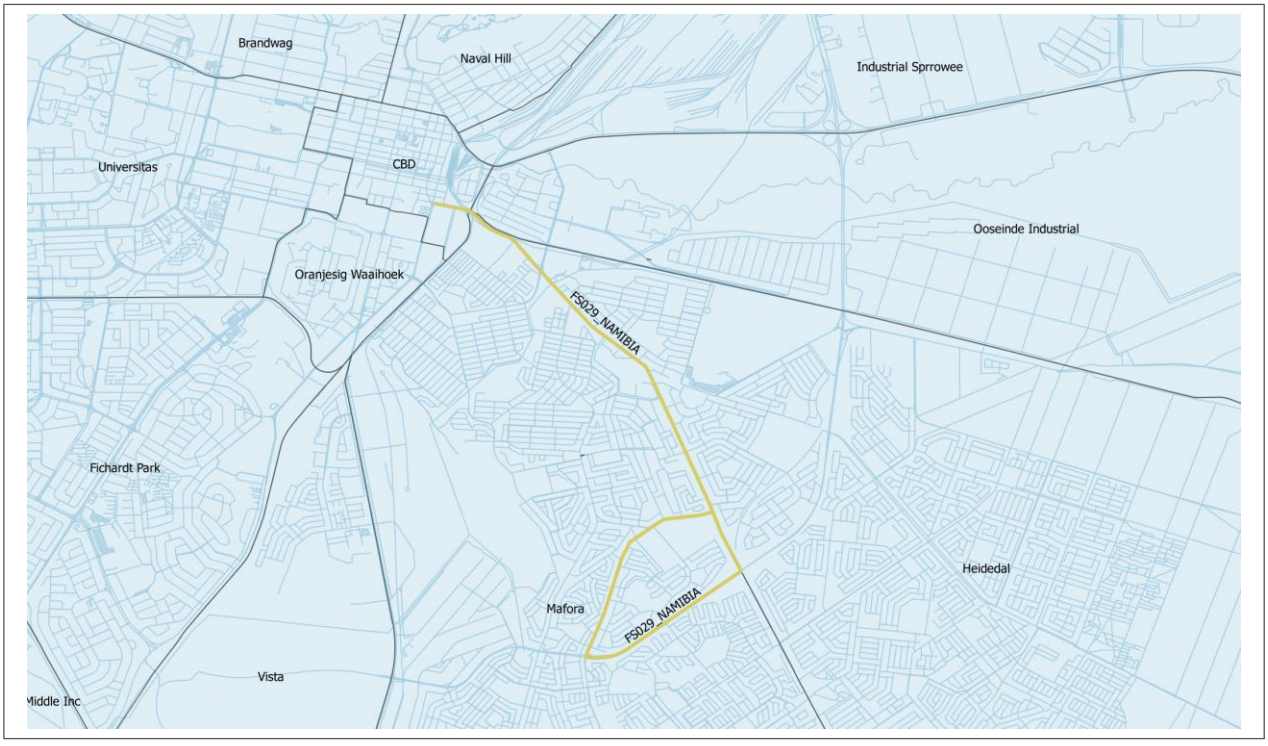
A total of 8 vehicles were surveyed between cycle 1 and cycle 10. All 8 vehicles had 6 or more consecutive days of data.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 1 023.10	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 7 161.68	Per week As determined from survey
Average monthly income	R 31 010.06	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R347 341.32	Calculated from weekly result Formula: 48.5 x weekly average

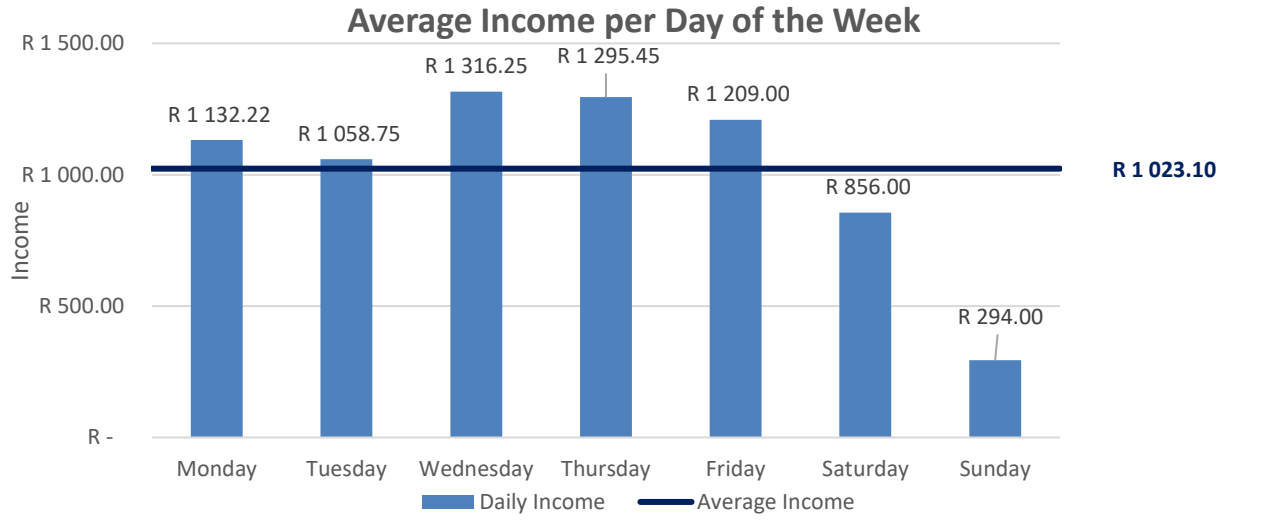


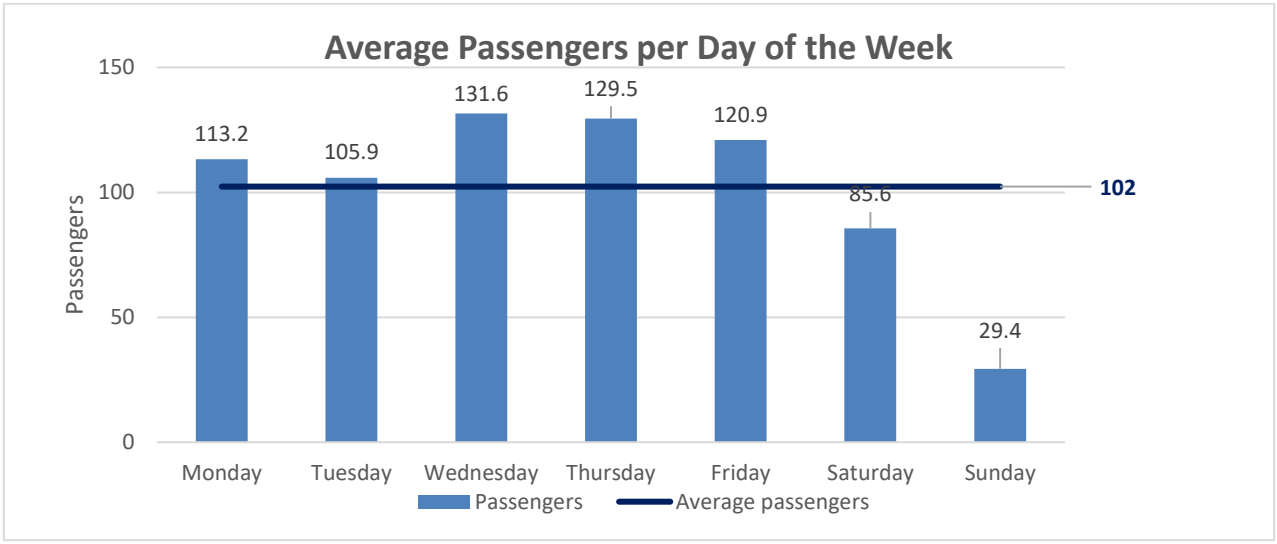
Corridor served by NAMIBIA Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	113	R 10.00	R 1 132.22
Tuesday	106	R 10.00	R 1 058.75
Wednesday	132	R 10.00	R 1 316.25
Thursday	130	R 10.00	R 1 295.45
Friday	121	R 10.00	R 1 209.00
Saturday	86	R 10.00	R 856.00
Sunday	29	R 10.00	R 294.00
Weekly total	716		R 7 161.68
Average	102	R 10.00	R 1 023.10
Weekday Avg	120	R 10.00	R 1 202.34

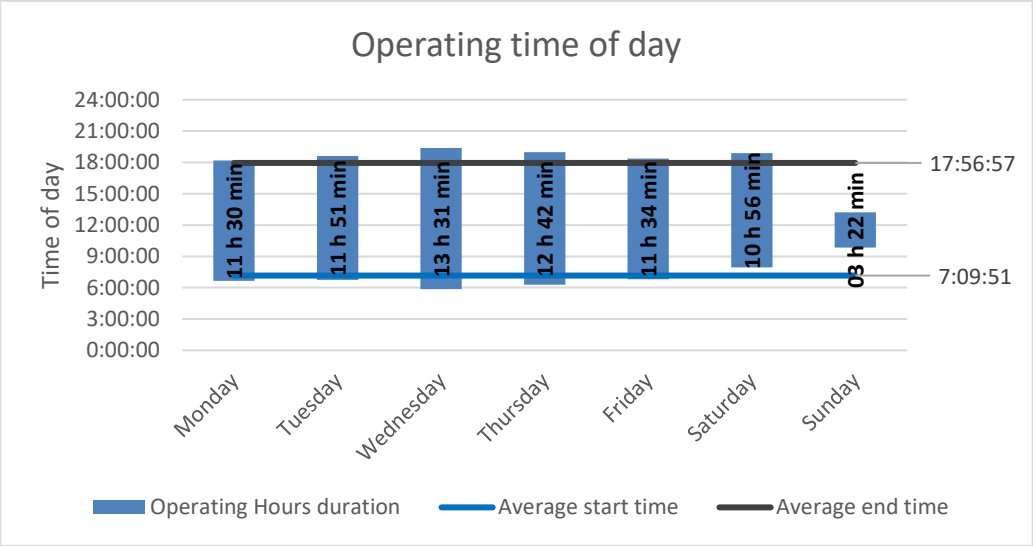



Average Passengers per Day of the Week
150
100
50
0
Passengers
113.2
105.9
131.6
129.5
120.9
85.6
29.4
102
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.3. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	7:09:51	17:56:57	10:47:05
Weekday (Mon-Fri) avg	6:28:13	18:42:13	12:14:01
Monday	6:39:22	18:10:05	11:30:43
Tuesday	6:44:22	18:36:02	11:51:40
Wednesday	5:52:03	19:23:23	13:31:20
Thursday	6:17:13	18:59:25	12:42:13
Friday	6:48:05	18:22:12	11:34:08
Saturday	7:57:01	18:53:45	10:56:44
Sunday	9:50:56	13:13:45	3:22:49



3.4. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	127	126	R	8.14	35%
Weekday (Mon-Fri) avg	141	141	R	8.51	36%
Monday	135	135	R	8.40	36%
Tuesday	126	126	R	8.43	34%
Wednesday	154	154	R	8.55	36%
Thursday	148	148	R	8.73	36%
Friday	143	143	R	8.43	36%
Saturday	132	128	R	6.71	34%
Sunday	50	46	R	6.42	29%

3.5. Operational analysis

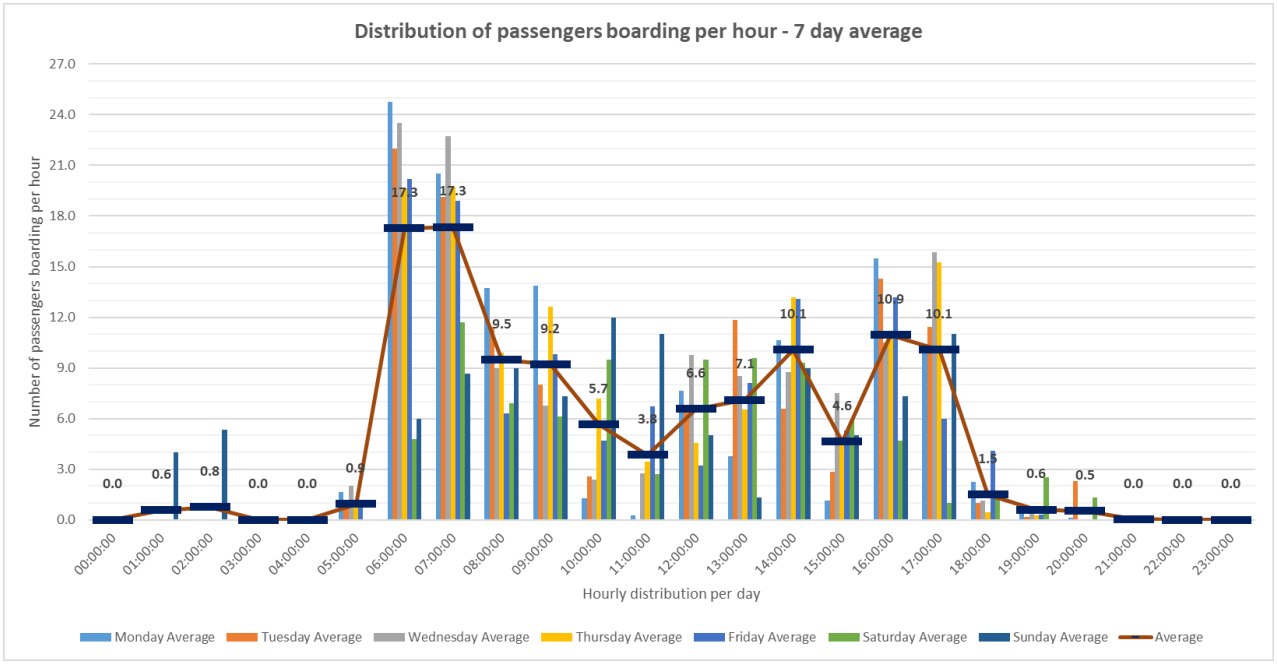
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	125.6	102	1.22	00:06:59	10.1	864.6	2517.9	35%
Weekday (Mon-Fri) avg	141.2	120	1.17	00:06:31	11.0	891.6	2550.4	36%
Monday	134.7	113	1.19	00:06:31	10.6	912.6	2635.2	36%
Tuesday	125.7	106	1.19	00:07:09	9.3	831.8	2431.4	34%
Wednesday	154.0	132	1.17	00:06:41	11.4	916.3	2597.1	36%
Thursday	148.3	130	1.14	00:06:11	11.7	878.2	2509.9	36%
Friday	143.5	121	1.19	00:06:02	12.1	911.4	2567.0	36%
Saturday	127.6	86	1.46	00:09:17	11.8	745.0	2210.2	34%
Sunday	45.8	29	1.50	00:07:07	3.9	782.8	2874.3	29%

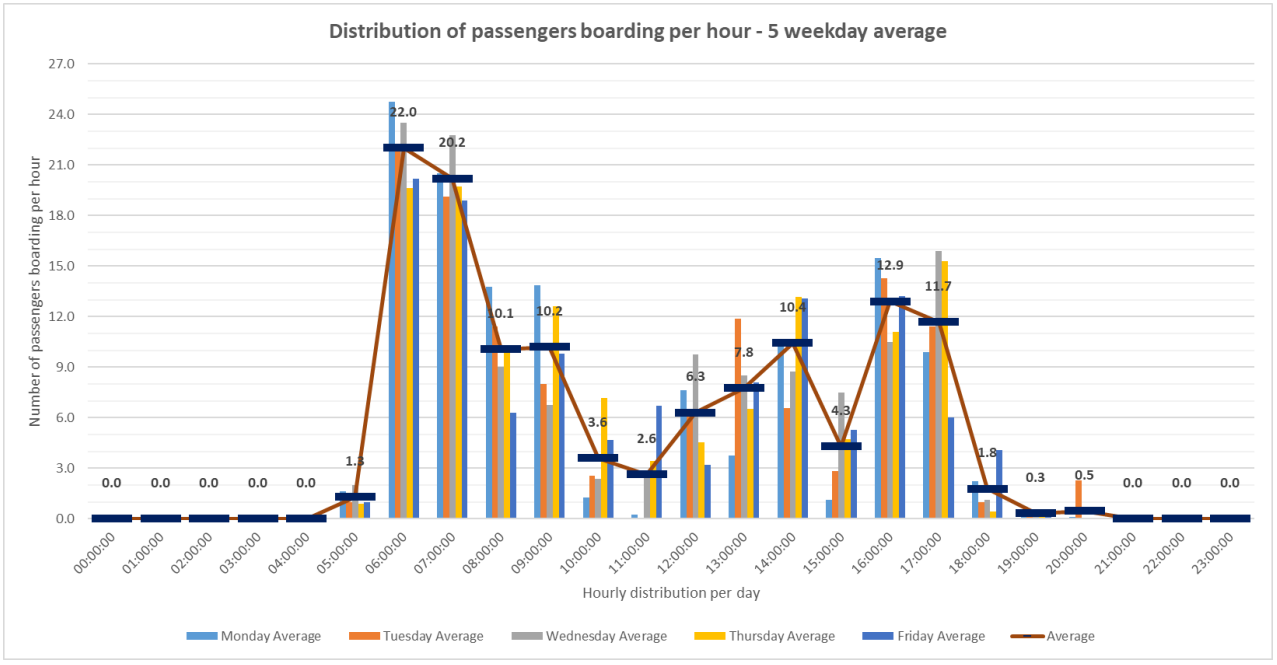
3.6. Fluctuations

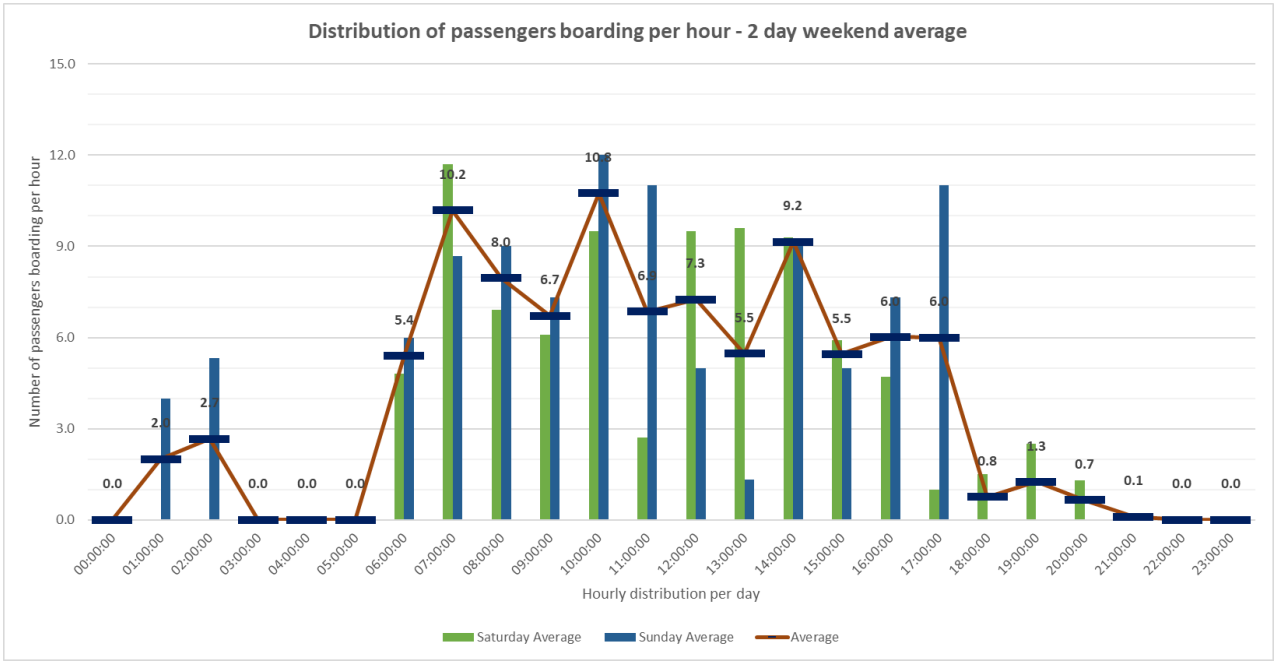
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.0	R -	0%
01:00	01:59	0.6	R 5.71	0%
02:00	02:59	0.8	R 7.62	5%
03:00	03:59	0.0	R -	0%
04:00	04:59	0.0	R -	0%
05:00	05:59	0.9	R 9.33	2%
06:00	06:59	17.3	R 172.69	28%
07:00	07:59	17.3	R 173.41	34%
08:00	08:59	9.5	R 94.70	22%
09:00	09:59	9.2	R 92.14	24%
10:00	10:59	5.7	R 56.54	17%
11:00	11:59	3.8	R 38.36	10%
12:00	12:59	6.6	R 65.78	23%
13:00	13:59	7.1	R 70.98	28%
14:00	14:59	10.1	R 100.75	31%
15:00	15:59	4.6	R 46.30	22%
16:00	16:59	10.9	R 109.44	38%
17:00	17:59	10.1	R 100.64	35%
18:00	18:59	1.5	R 14.90	11%
19:00	19:59	0.6	R 6.02	8%
20:00	20:59	0.5	R 5.30	2%
21:00	21:59	0.0	R 0.29	1%
22:00	22:59	0.0	R -	0%
23:00	23:59	0.0	R -	0%

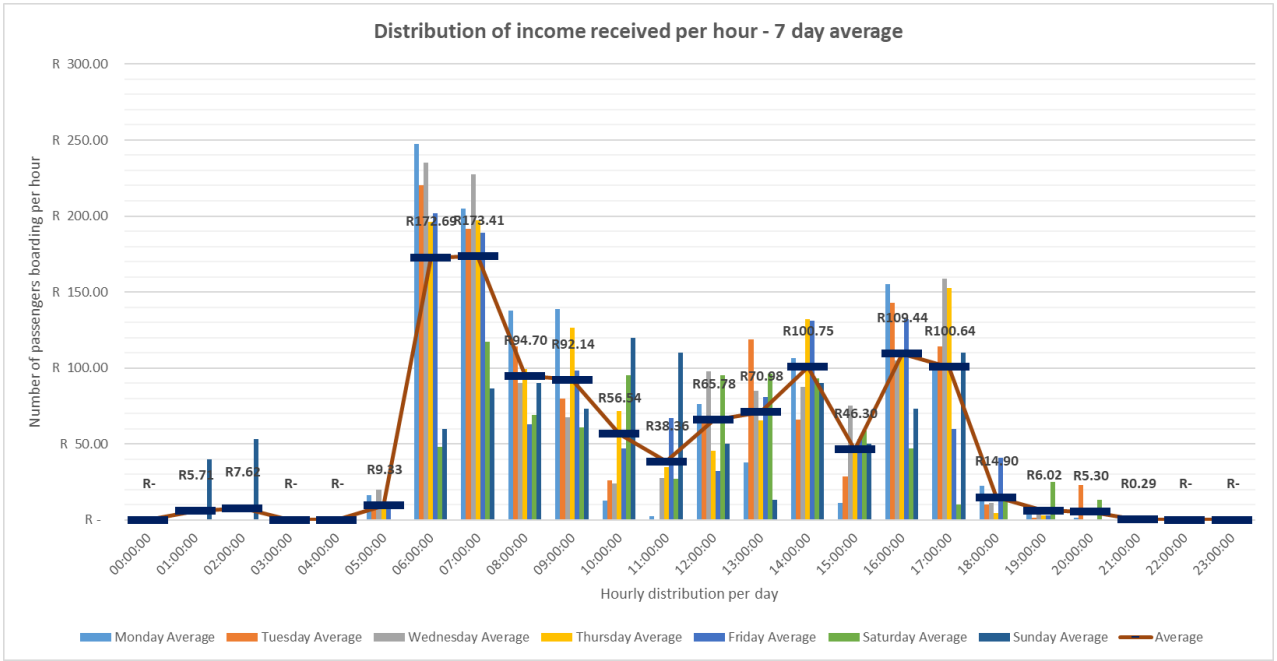
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

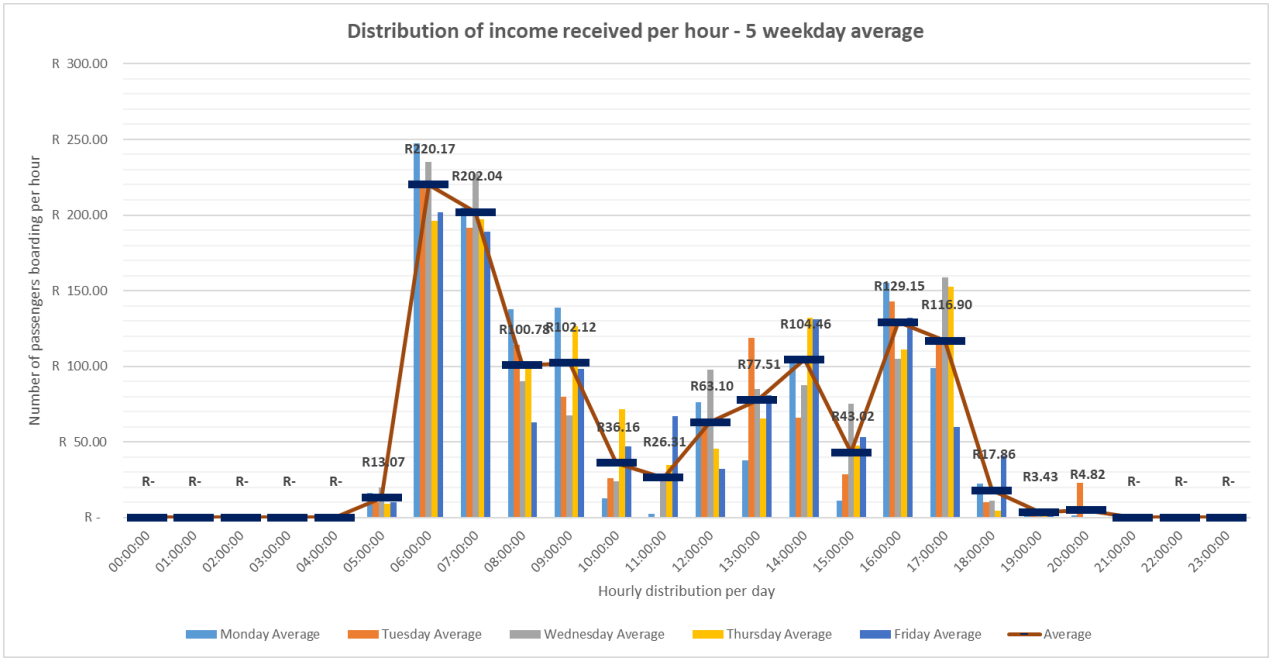


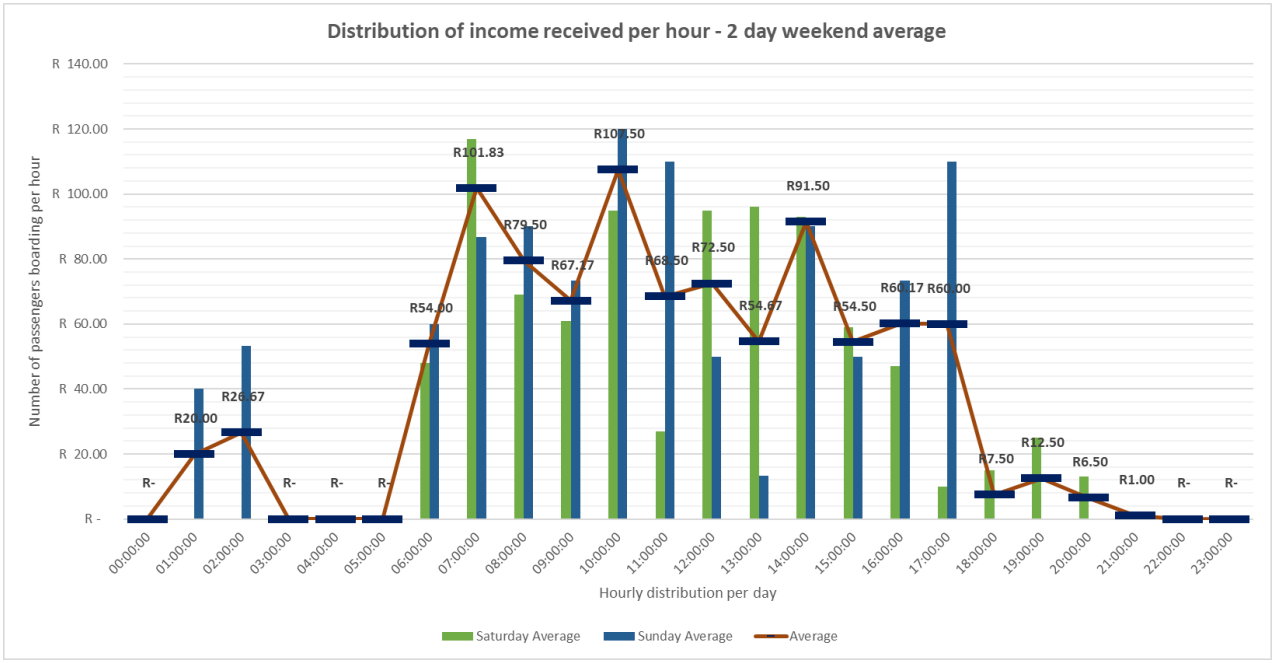




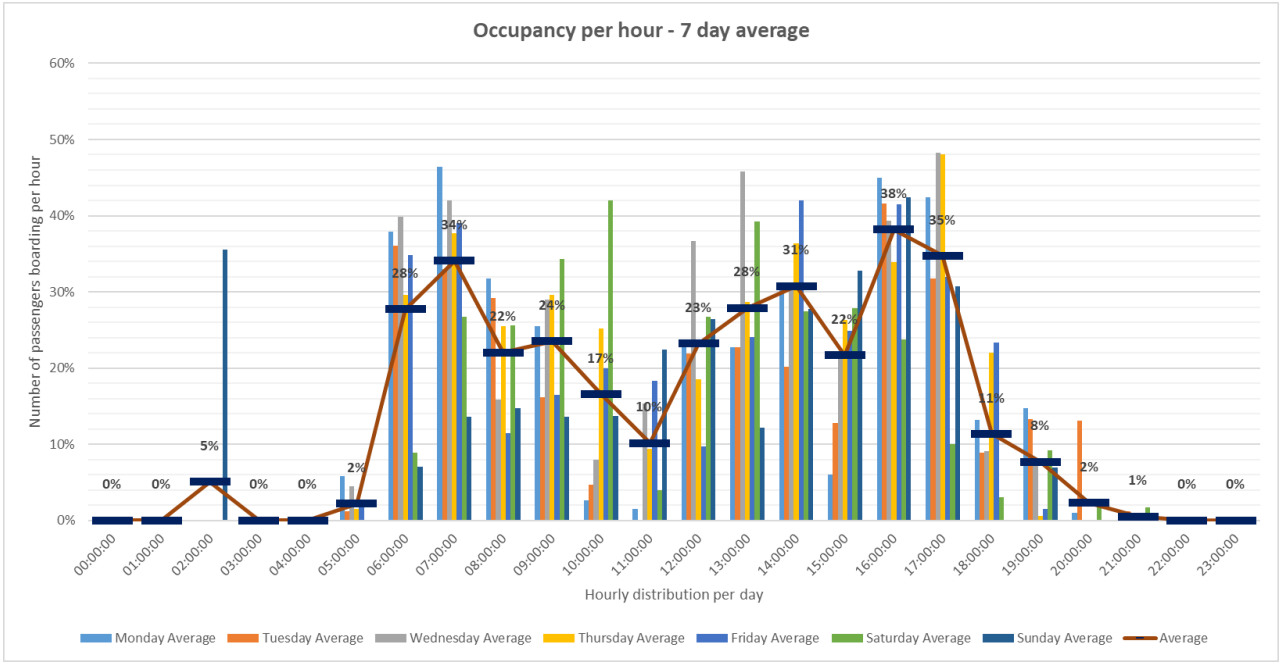
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

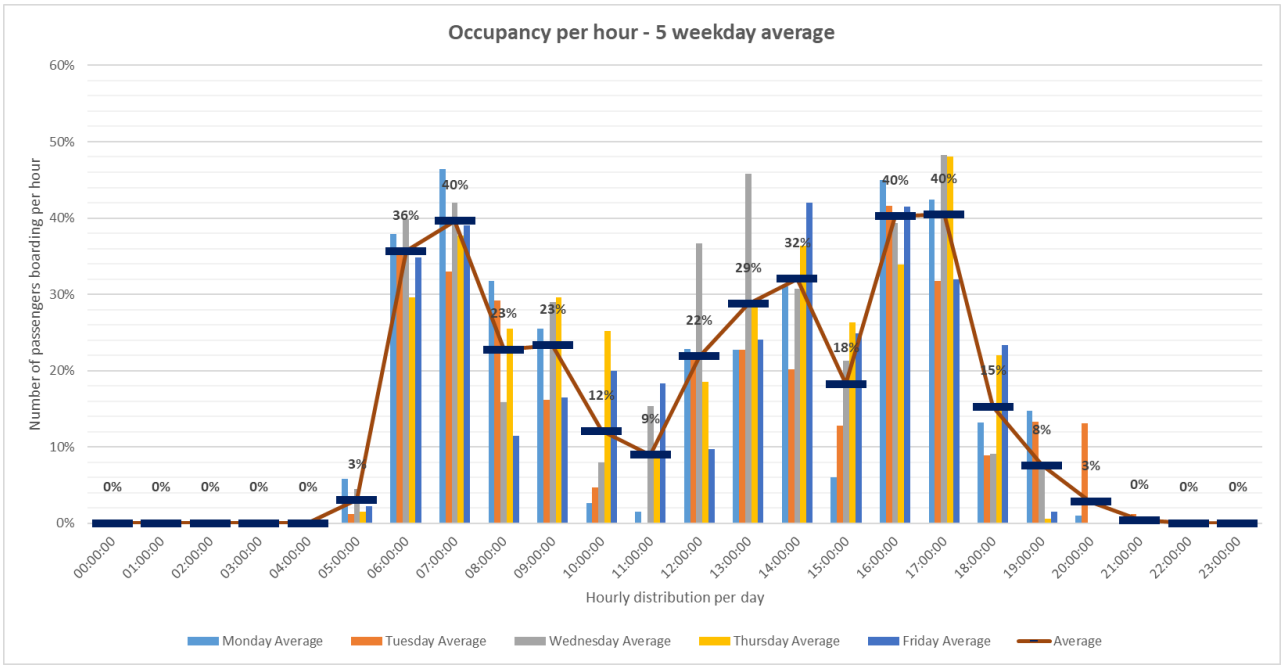


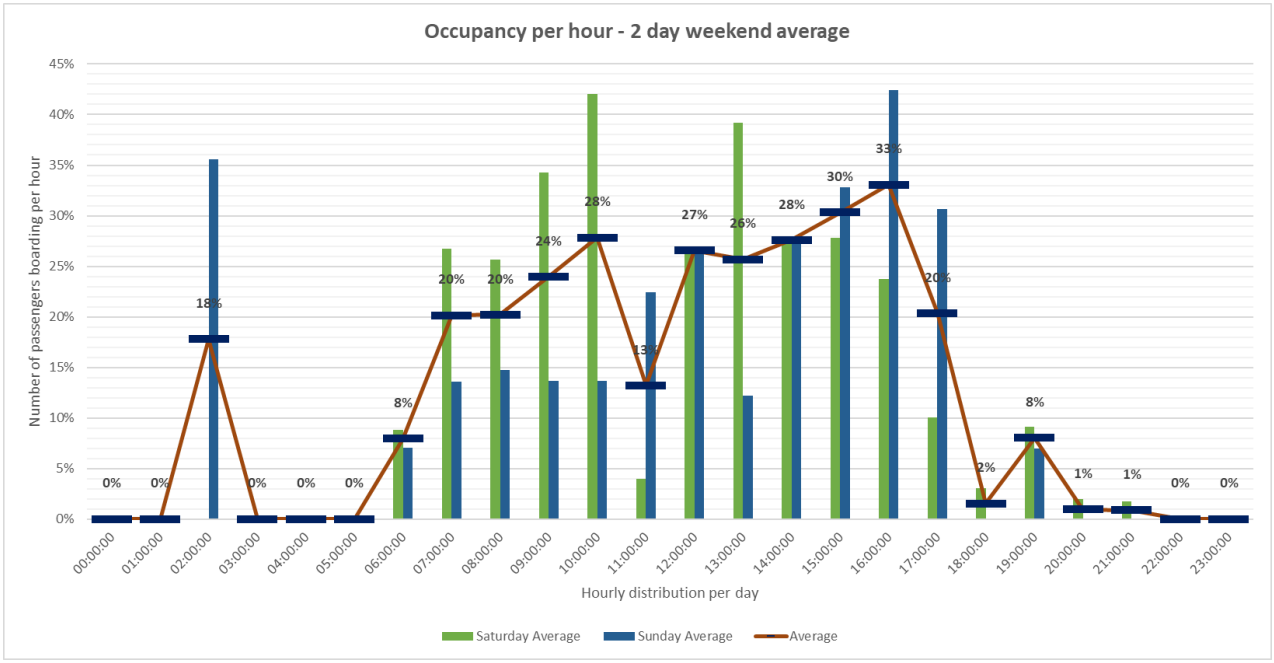

Distribution of income received per hour - 5 weekday average
Number of passengers boarding per hour
R 300.00
R 250.00
R 200.00
R 150.00
R 100.00
R 50.00
R -
R220.17
R202.04
R129.15
R116.90
R104.46
R102.12
R100.78
R77.51
R63.10
R43.02
R36.16
R26.31
R17.86
R13.07
R3.43
R4.82
R-
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 140.00
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R101.83
R101.50
R91.50
R79.50
R72.50
R68.50
R67.17
R60.17
R60.00
R54.67
R54.50
R54.00
R26.67
R20.00
R12.50
R7.50
R6.50
R1.00
R-
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

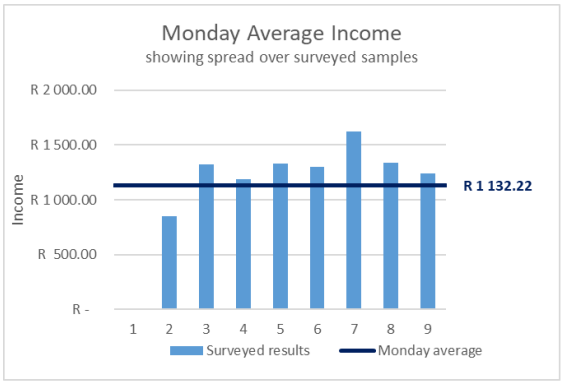


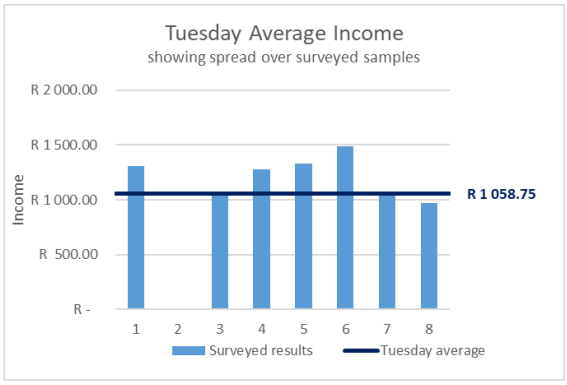


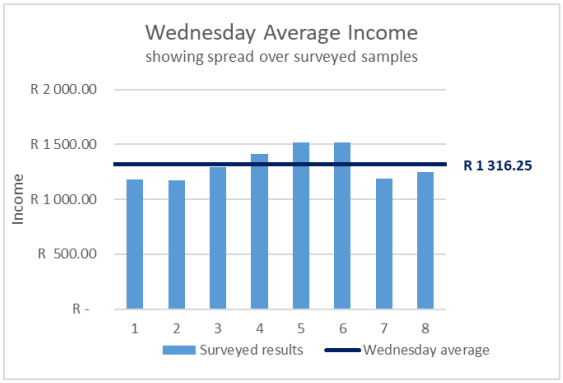

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
0% 0% 18% 0% 0% 0% 8% 20% 20% 24% 28% 13% 27% 26% 28% 30% 33% 20% 2% 8% 1% 1% 0% 0%
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

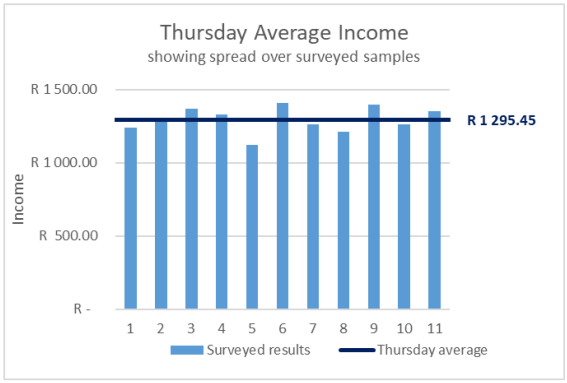
4. DETAILED SURVEY RESULTS

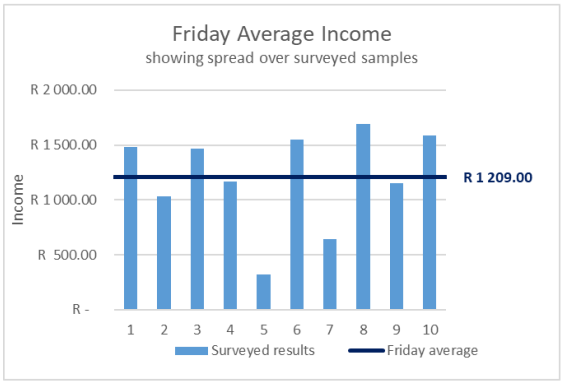
4.1. Income distribution

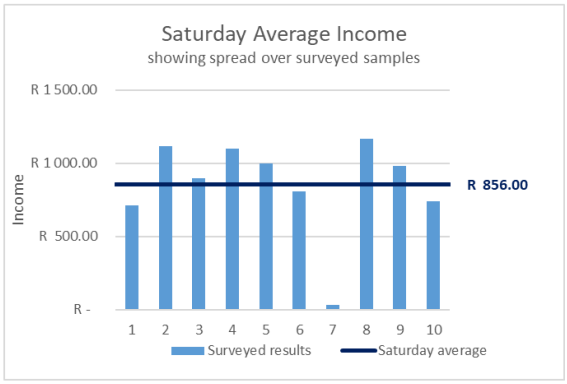


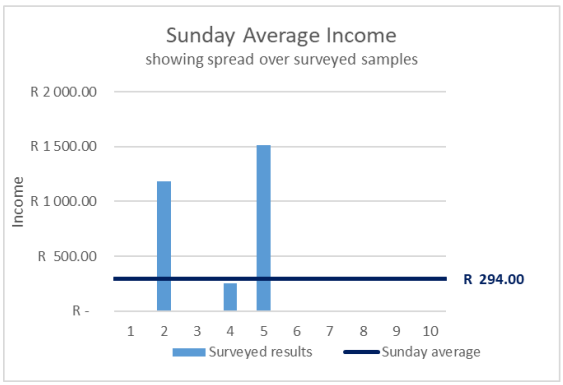




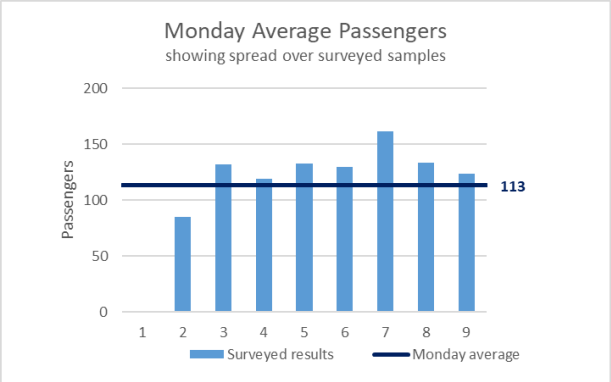


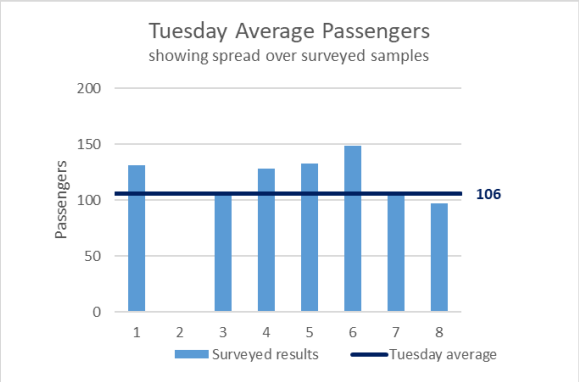


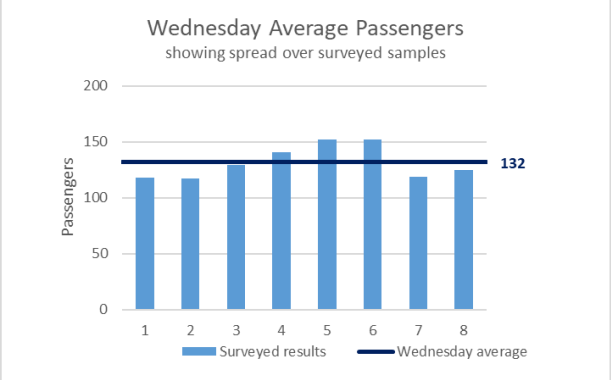


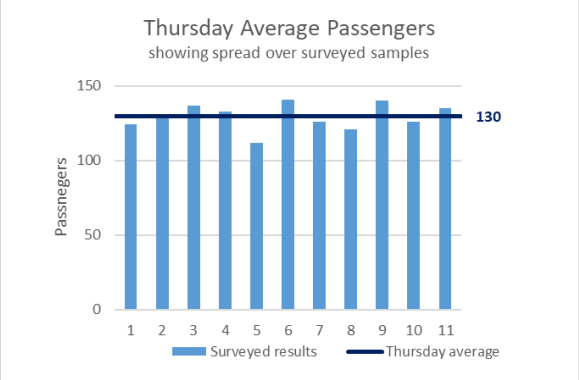


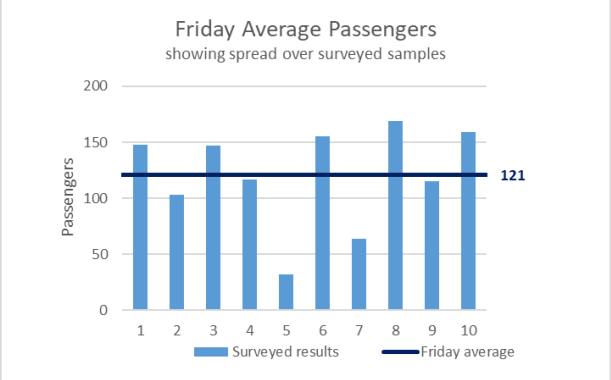
4.2. Passenger number distribution

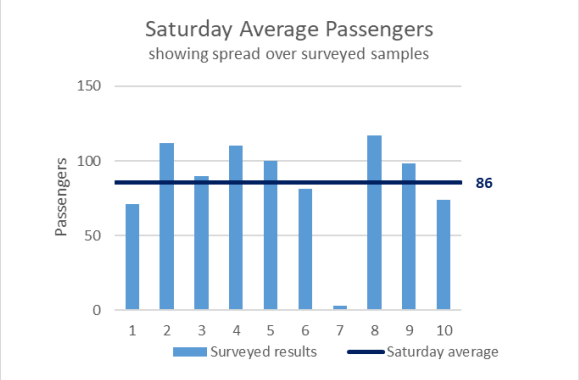


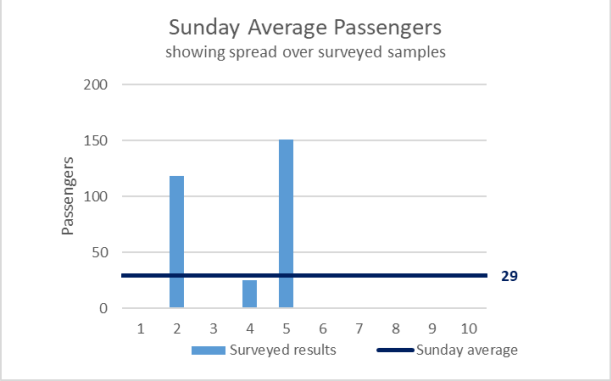










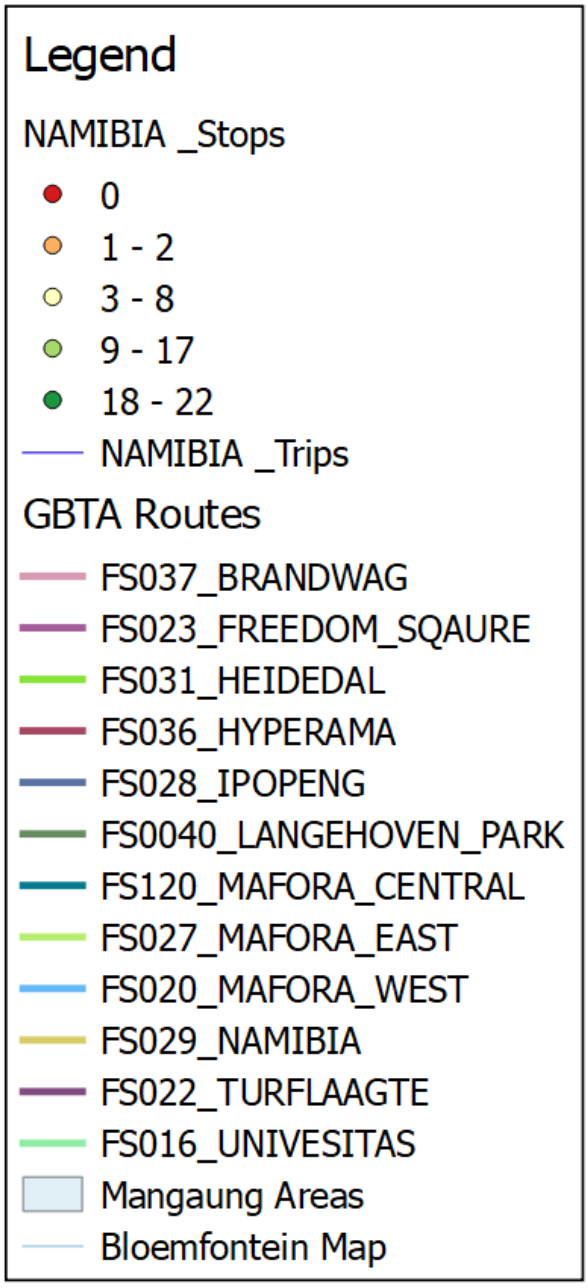


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps

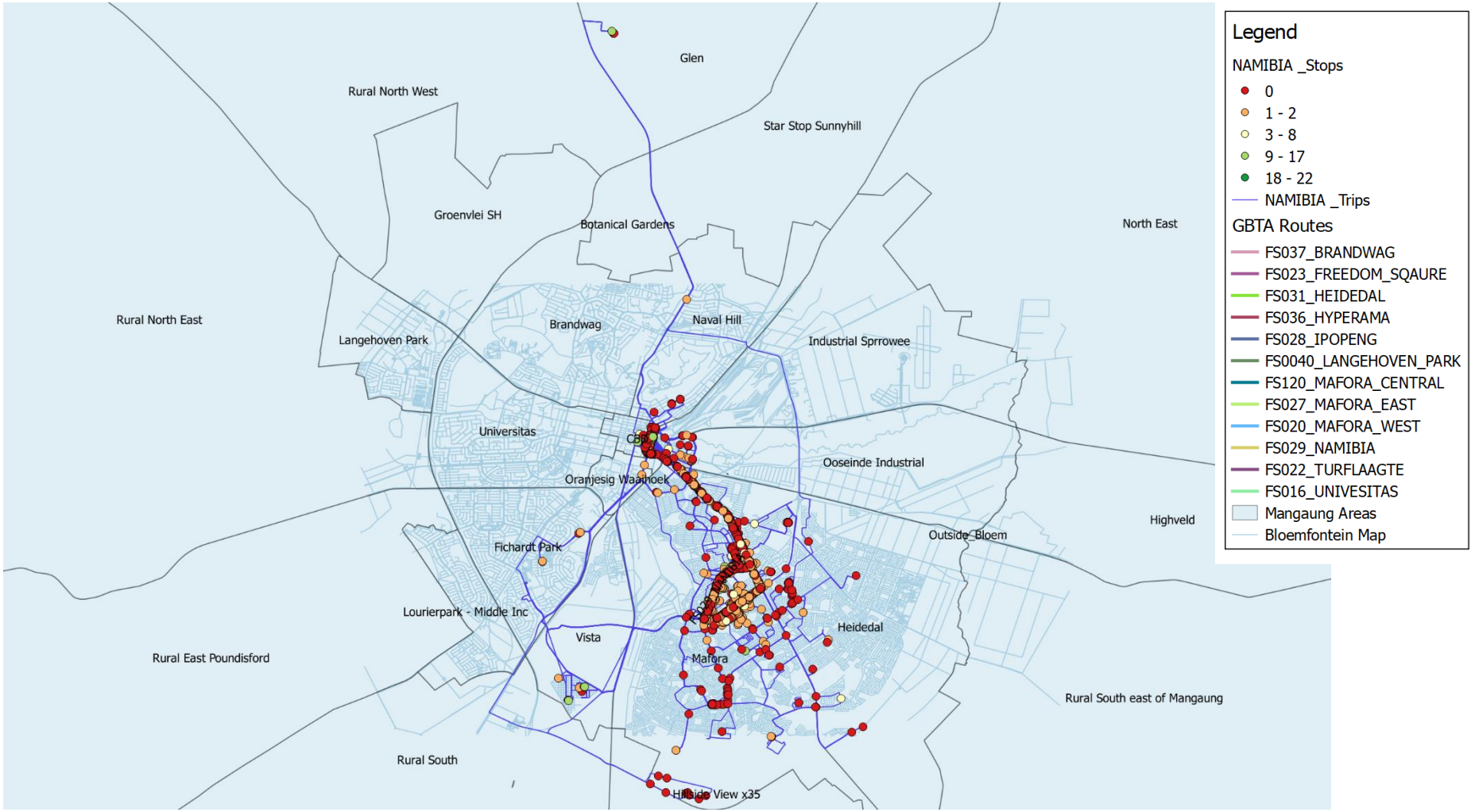


5.1. All surveyed operations

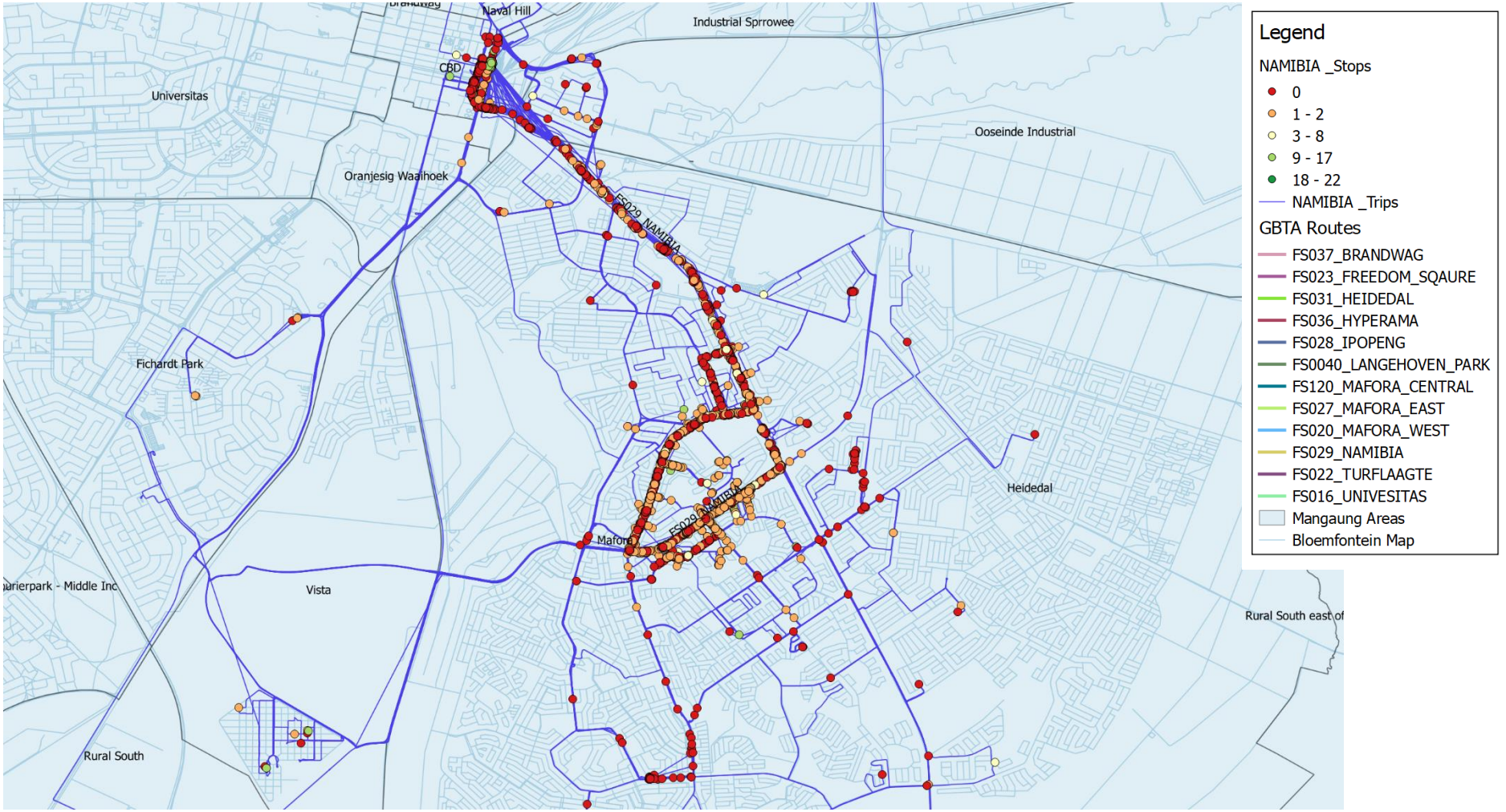
The tracks in blue illustrates the operations of all the surveyed taxis.

All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

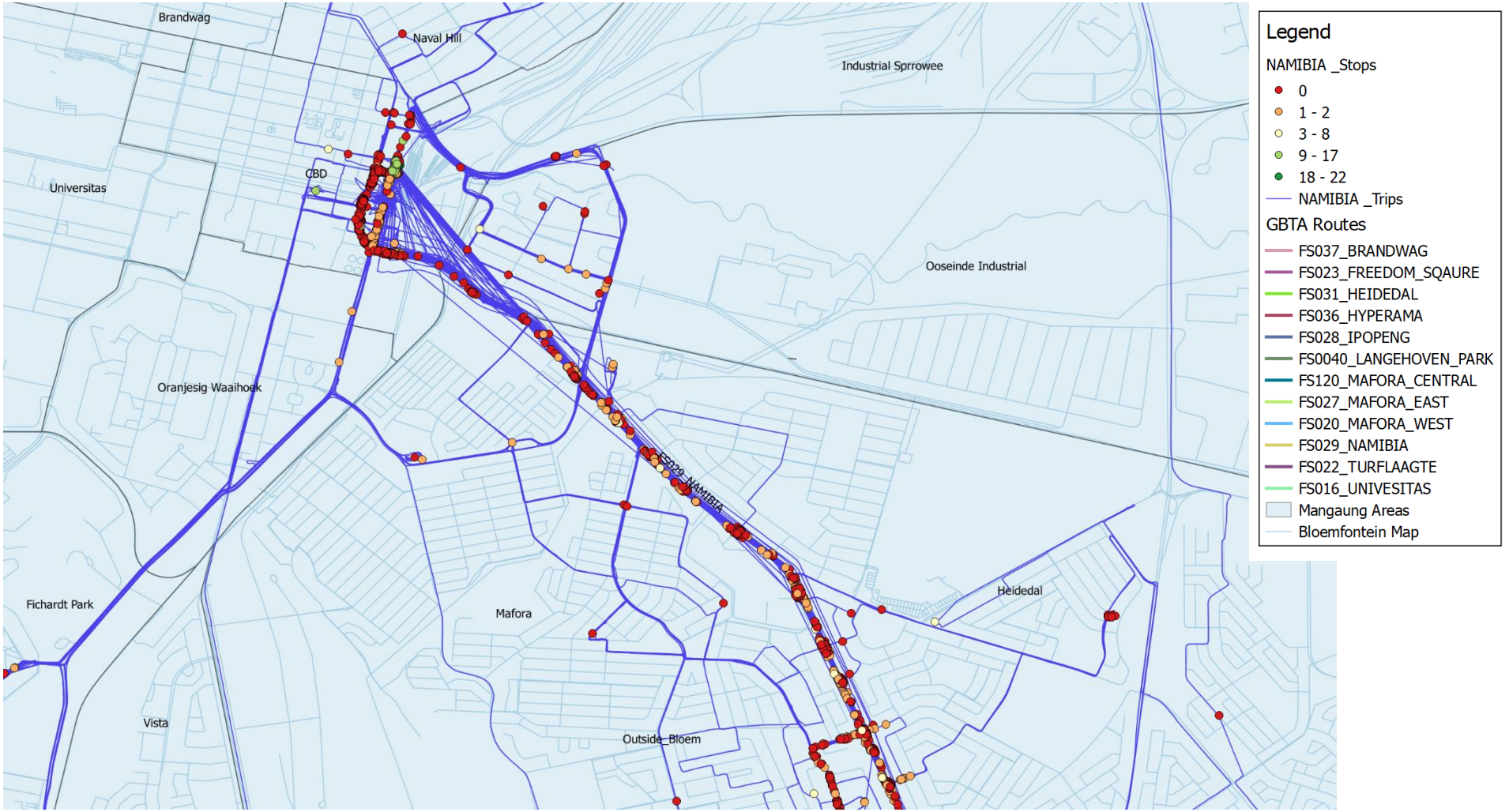
Operations of all surveyed taxis including stops



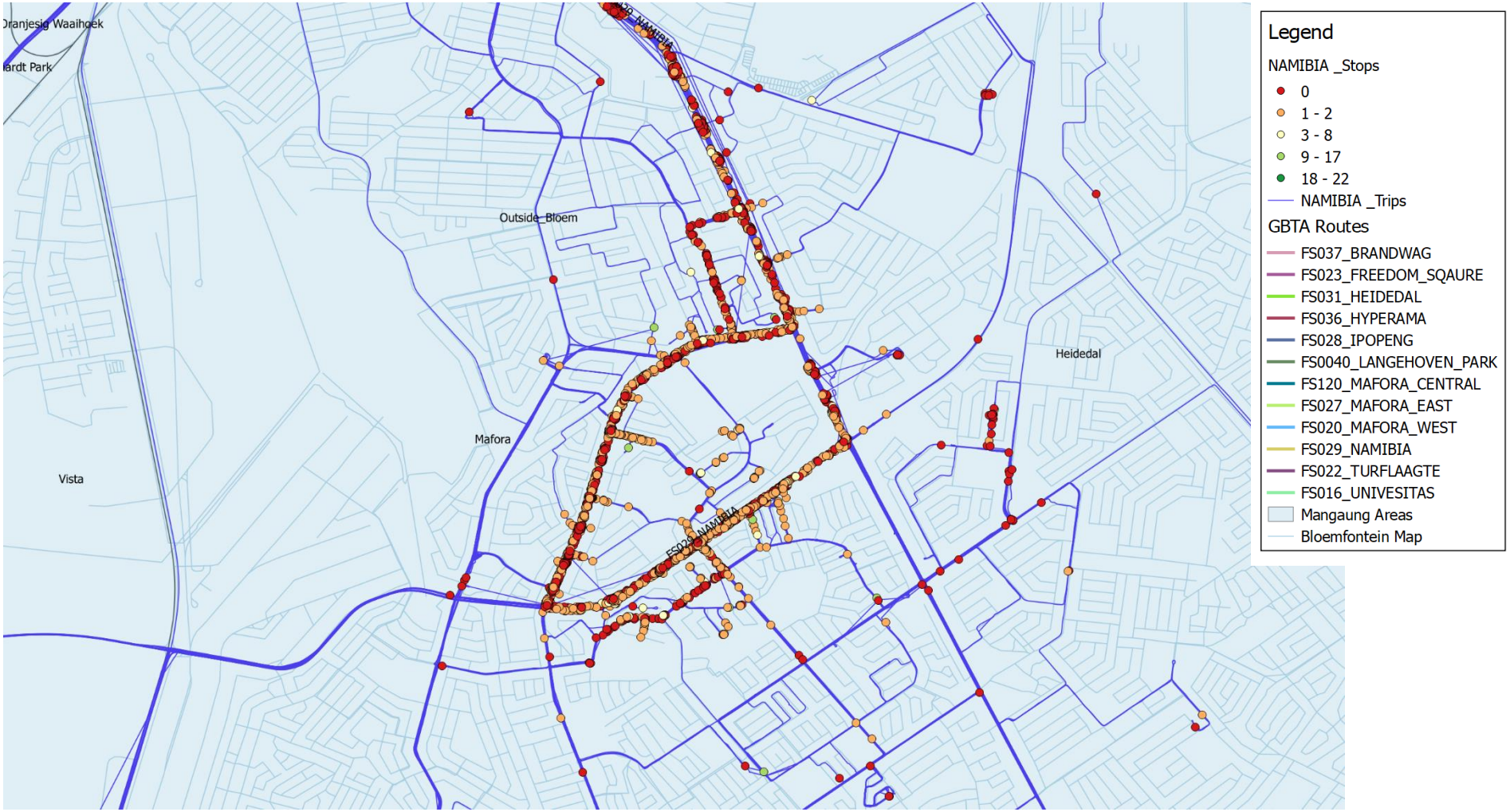
Operations of all surveyed taxis including stops – Focused on the NAMIBIA route



Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on the NAMIBIA area

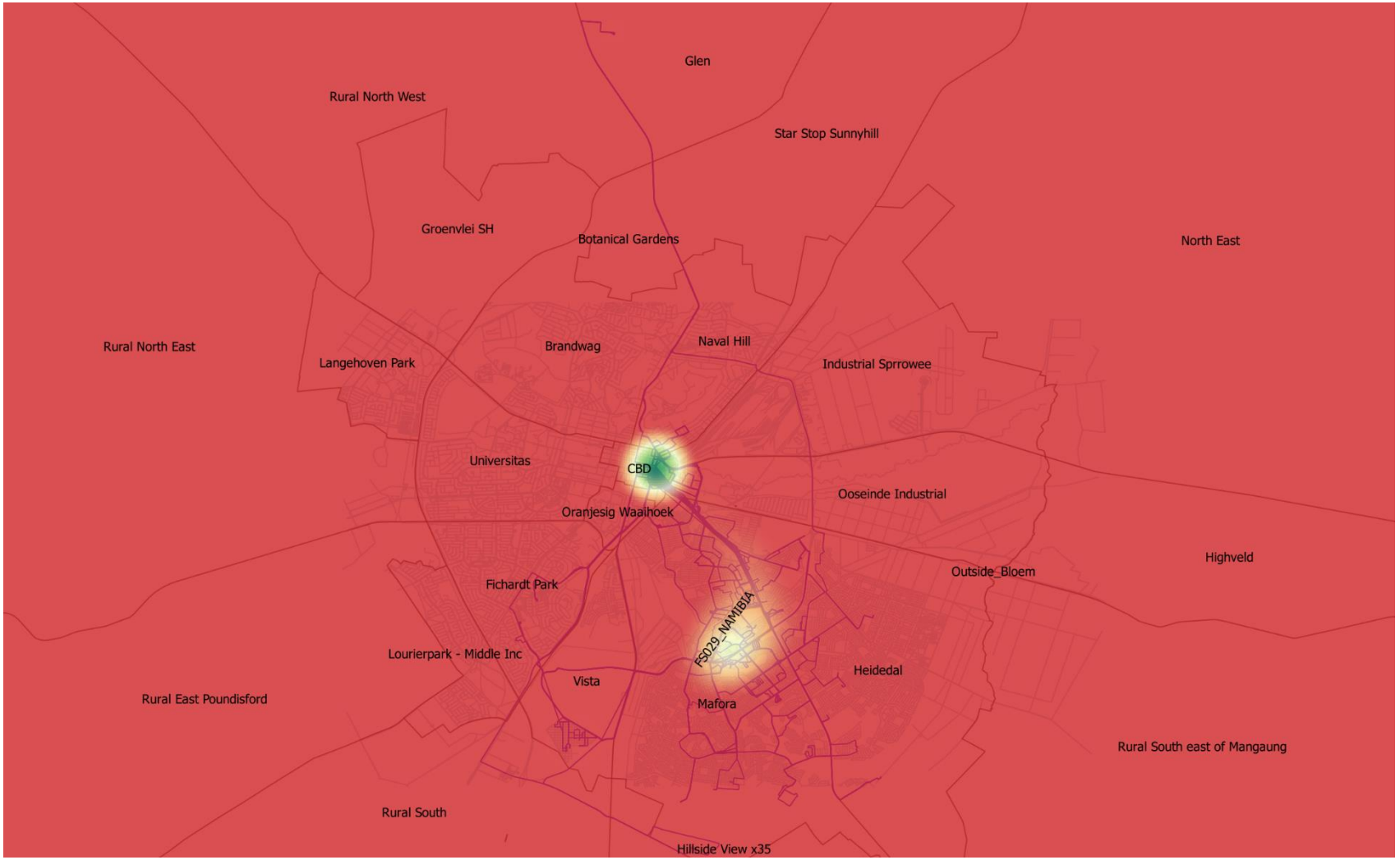


5.2. Heatmaps of taxi operations

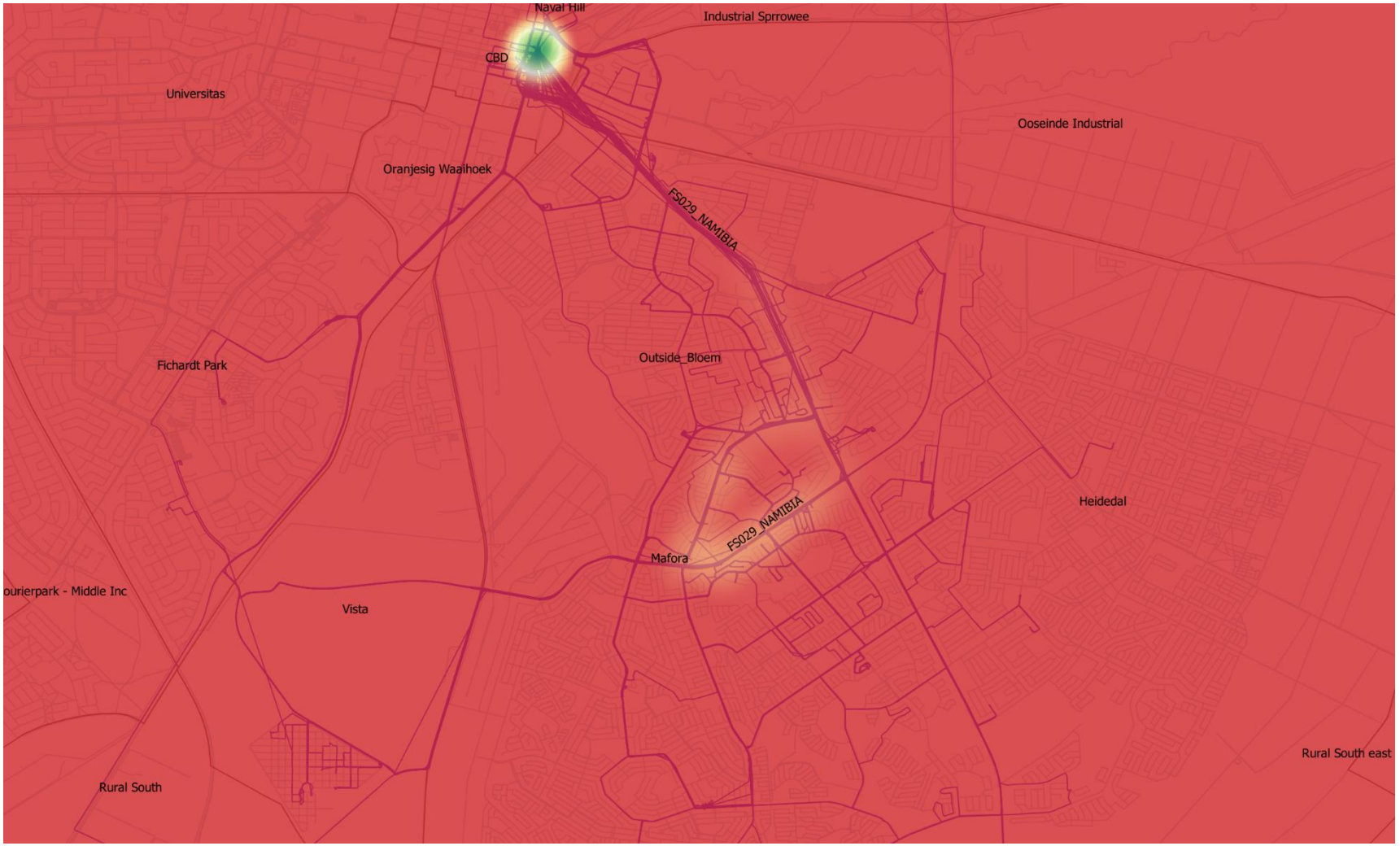
The following maps demonstrate the volume of passengers in each area.

- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

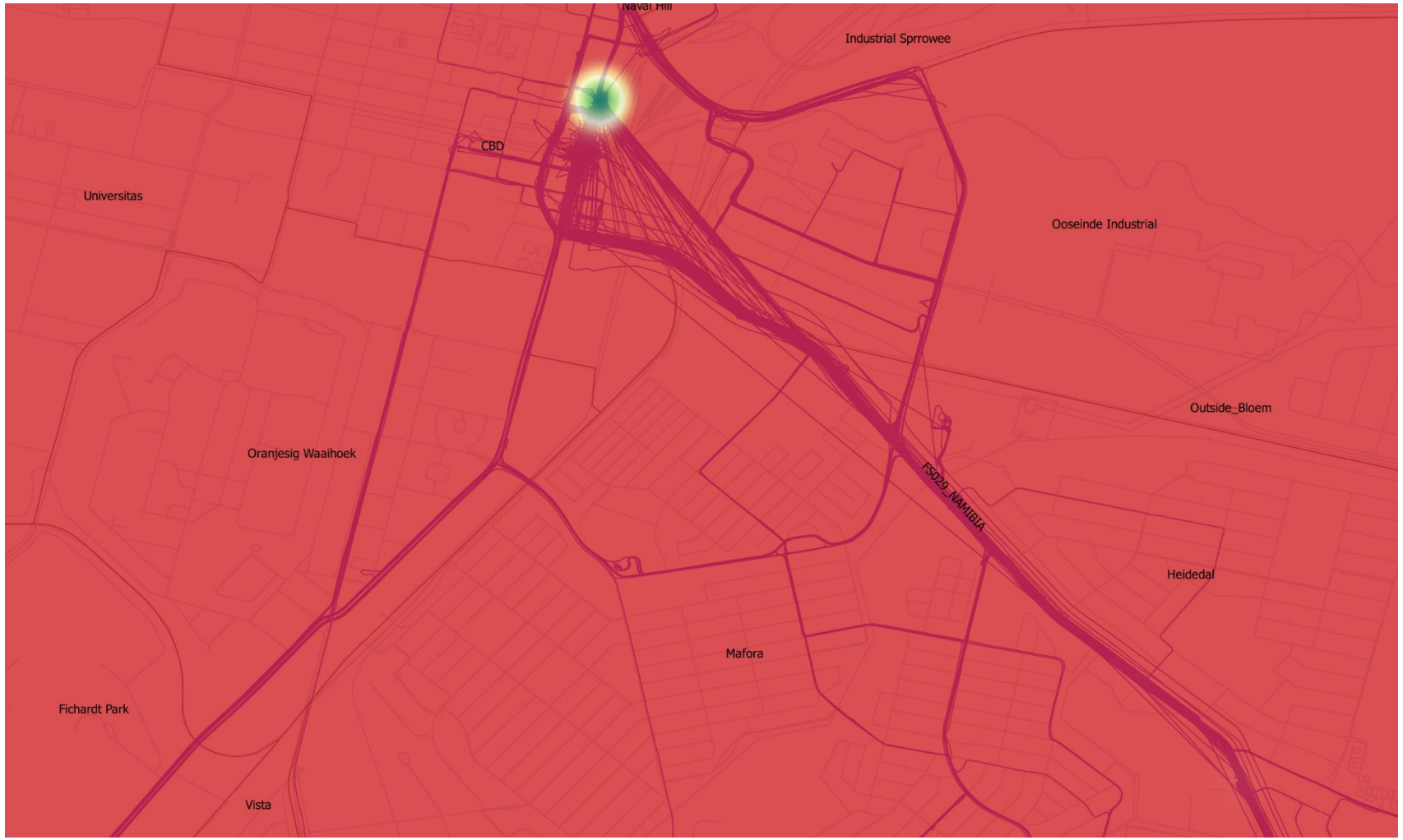
Heatmap of total surveyed area.



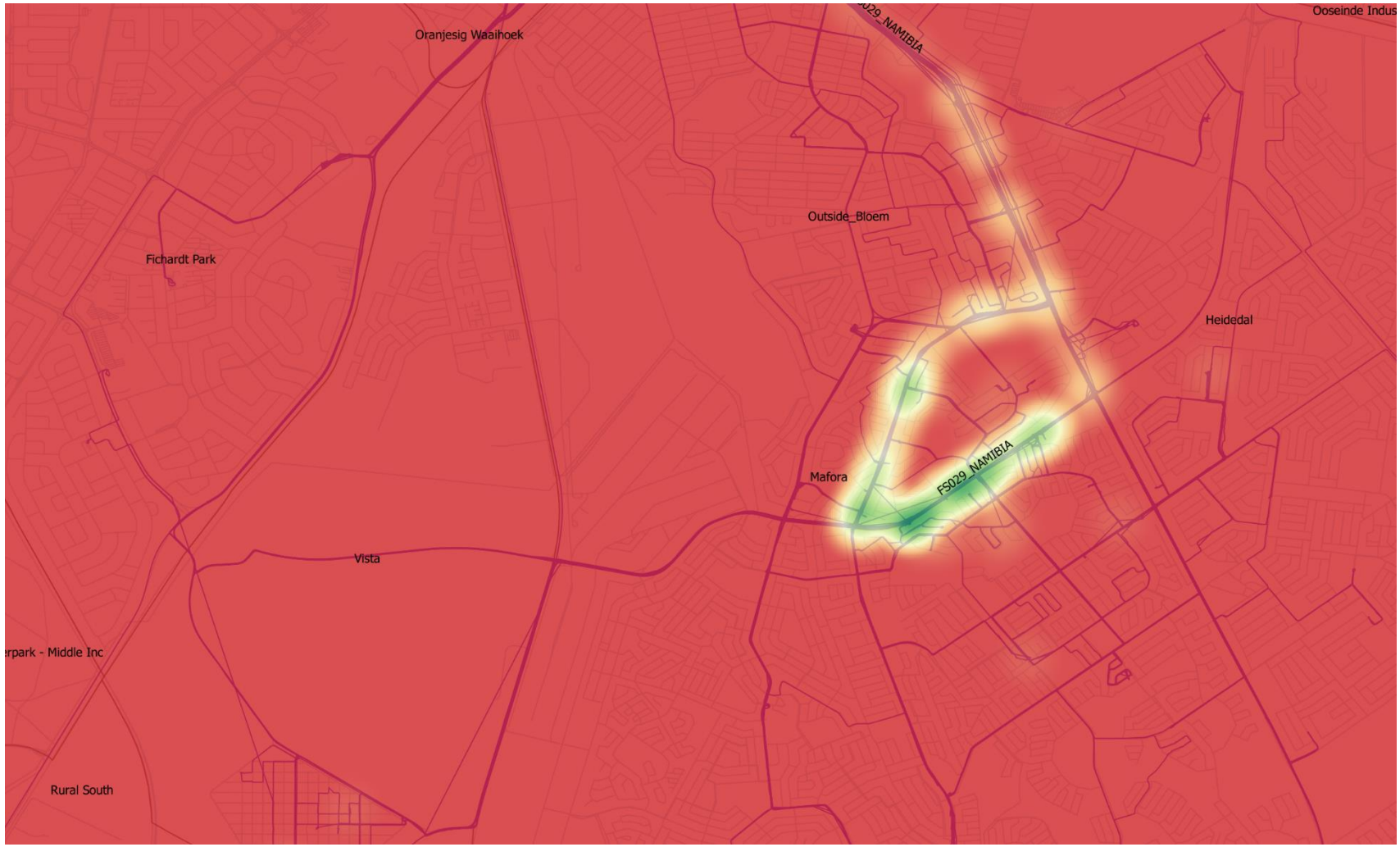
Heatmap of total surveyed area – Focused on the NAMIBIA route



Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on NAMIBIA



ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – TURFLAAGTE

iSAHA

Table of Contents

ROUTE: **TURFLAAGTE**
REPORT DATE: **13 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Turflaagte Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Turflaagte Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

		Option A		
Average operating income per month	**R**	**48 407.33**		
Average operating income per day			R	1 597.07
Cost of operations per month	**R**	**23 853.38**		
Cost of operations per day			R	783.36
Operational cost - Fuel & Oil	*R*	*12 231.82*	*R*	*401.70*
Operational cost - Maintenance	*R*	*4 442.23*	*R*	*145.89*
Fixed cost	*R*	*6 721.00*	*R*	*220.72*
Overhead cost	*R*	*458.33*	*R*	*15.05*
Average monthly operating profit*	**R**	**24 553.95**		
Average daily operating profit *			R	813.71
** Excluding driver salary*				
Excluding payments to owner				

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1		
Driver Salary	**R**	**5 000.00**
Average monthly operating profit	**R**	**24 553.95**
Driver Salary	**R**	**5 000.00**
Monthly profit to Owner	**R**	**19 553.95**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:		
Total usage fee paid to owner per month	**R**	**17 617.50**
Average operating income per month	**R**	**48 407.33**
Monthly usage fee to Owner	**R**	**17 617.50**
Usage cost per month (fuel, oil)	**R**	**12 231.82**
Monthly profit to Driver	**R**	**18 558.01**
Monthly usage fee to Owner	**R**	**17 617.50**
Maintenance cost per month	R	4 442.23
Fixed cost per month	R	6 721.00
Overhead cost per month	R	458.33
Monthly profit to Owner (scenario 2)	**R**	**5 995.94**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income			
	Option A	*Option B*	*Option C*
	Average income per day	Average income per day	Average income per day
Monday	R 1 729.58	R -	R -
Tuesday	R 1 668.26	R -	R -
Wednesday	R 1 595.91	R -	R -
Thursday	R 1 598.08	R -	R -
Friday	R 1 880.00	R -	R -
Saturday	R 1 521.92	R -	R -
Sunday	R 1 185.77	R -	R -
Total weekly income	**R 11 179.52**	**R -**	**R -**
Average daily income	**R 1 597.07**	**R -**	**R -**

4. COST CALCULATIONS

4.1. General information

	Option A
General information	
Vehicle type	Quantum 15 Seater
Average km driven per day	248 km
Cost of fuel	R 14.00 per litre
Cost of oil	R 60.00 per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil			
	Operational cost		
Usage cost assumptions			
	Scenario 2		
Fuel consumption		10	km / litre
Oil consumption: one 500ml can of oil every		2	days
Fuel and Oil usage per day	**R**	**401.70**	
Fuel and Oil usage per month	**R**	**12 231.82**	

Maintenance cost assumptions			
	These expenses are always for the owner's account		
Main service cost	R	3 500.00	
Number of main services		2	per year
Minor service cost	R	1 400.00	
Number of minor services		6	per year
Wheel maintenance cost	R	2 000.00	
(brake pads, wheel cylinder, etc)			
Number of wheel maintenances		4	per year
Wheel alignment cost	R	360.00	
Number of wheel alignments		12	per year
Price of tyres	R	1 350.00	per tyre
Tyre lifespan		30 000.00	km
Upholstery, cost of replacement	R	2 200.00	
Number of times upholstery is replaced		2	per year
Unforeseen cost (average per event)	R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)			
Number of times of unforeseen expenses		1	per year
Cost of cleaning, per event	R	50.00	
Number of times cleaning is done		52	per year
Maintenance: average cost per day	**R**	**145.89**	
Maintenance: average cost per month	**R**	**4 442.23**	

4.3. Fixed cost

Fixed cost	
	operations of the vehicle

Insurance installment	R	18 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year
Vehicle licence fees cost	R	1 500.00	per year
Roadworthy test cost	R	480.00	per year
Operating licence cost, once every 5 years	R	12.00	
Monthly association fee	R	100.00	per year
Fixed cost: average cost per day	**R**	**220.72**	
Fixed cost: average cost per month	**R**	**6 721.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*			
Number of taxis in fleet			3	
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year
Security	*(security, parking fees)*	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**	

ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Long term survey results for

Taxi Route – TURFLAAGTE

iSAHA

Table of Contents

ROUTE: **TURFLAAGTE (Long Term)**
REPORT DATE: **20 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Turflaagte Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Turflaagte Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

		Option A		
Average operating income per month	**R**	**44 499.82**		
Average operating income per day			R	1 468.16
Cost of operations per month	**R**	**22 176.98**		
Cost of operations per day			R	728.31
Operational cost - Fuel & Oil	*R*	*10 722.85*	*R*	*352.15*
Operational cost - Maintenance	*R*	*4 274.80*	*R*	*140.39*
Fixed cost	*R*	*6 721.00*	*R*	*220.72*
Overhead cost	*R*	*458.33*	*R*	*15.05*
Average monthly operating profit*	**R**	**22 322.84**		
Average daily operating profit *			R	739.85
** Excluding driver salary*				
Excluding payments to owner				

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1		
Driver Salary	**R**	**5 000.00**
Average monthly operating profit	**R**	**22 322.84**
Driver Salary	**R**	**5 000.00**
Monthly profit to Owner	**R**	**17 322.84**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:		
Total usage fee paid to owner per month	**R**	**17 617.50**
Average operating income per month	**R**	**44 499.82**
Monthly usage fee to Owner	**R**	**17 617.50**
Usage cost per month (fuel, oil)	**R**	**10 722.85**
Monthly profit to Driver	**R**	**16 159.47**
Monthly usage fee to Owner	**R**	**17 617.50**
Maintenance cost per month	R	4 274.80
Fixed cost per month	R	6 721.00
Overhead cost per month	R	458.33
Monthly profit to Owner (scenario 2)	**R**	**6 163.37**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income			
	Option A	*Option B*	*Option C*
	Average income per day	Average income per day	Average income per day
Monday	R 1 678.24	R -	R -
Tuesday	R 1 583.53	R -	R -
Wednesday	R 1 581.18	R -	R -
Thursday	R 1 414.12	R -	R -
Friday	R 1 439.41	R -	R -
Saturday	R 1 508.13	R -	R -
Sunday	R 1 072.50	R -	R -
Total weekly income	**R 10 277.10**	**R -**	**R -**
Average daily income	**R 1 468.16**	**R -**	**R -**

4. COST CALCULATIONS

4.1. General information

	Option A
General information	
Vehicle type	Quantum 15 Seater
Average km driven per day	217 km
Cost of fuel	R 14.00 per litre
Cost of oil	R 60.00 per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil
Operational cost

Usage cost assumptions			
Scenario 2			
Fuel consumption		10	km / litre
Oil consumption: one 500ml can of oil every		2	days
Fuel and Oil usage per day	**R**	**352.15**	
Fuel and Oil usage per month	**R**	**10 722.85**	

Maintenance cost assumptions			
These expenses are always for the owner's account			
Main service cost	R	3 500.00	
Number of main services		2	per year
Minor service cost	R	1 400.00	
Number of minor services		6	per year
Wheel maintenance cost	R	2 000.00	
(brake pads, wheel cylinder, etc)			
Number of wheel maintenances		4	per year
Wheel alignment cost	R	360.00	
Number of wheel alignments		12	per year
Price of tyres	R	1 350.00	per tyre
Tyre lifespan		30 000.00	km
Upholstery, cost of replacement	R	2 200.00	
Number of times upholstery is replaced		2	per year
Unforeseen cost (average per event)	R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)			
Number of times of unforeseen expenses		1	per year
Cost of cleaning, per event	R	50.00	
Number of times cleaning is done		52	per year
Maintenance: average cost per day	**R**	**140.39**	
Maintenance: average cost per month	**R**	**4 274.80**	

4.3. Fixed cost

Fixed cost			
	operations of the vehicle		
Insurance installment	R	18 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year
Vehicle licence fees cost	R	1 500.00	per year
Roadworthy test cost	R	480.00	per year
Operating licence cost, once every 5 years	R	12.00	
Monthly association fee	R	100.00	per year
Fixed cost: average cost per day	**R**	**220.72**	
Fixed cost: average cost per month	**R**	**6 721.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*			
Number of taxis in fleet			3	
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year
Security	*(security, parking fees)*	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**	

ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Long term survey results for

Taxi Route – TURFLAAGTE

iSAHA

Table of Contents

ROUTE: **TURFLAAGTE (Long Term)**
REPORT DATE: **20 December 2017**

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

1 taxis and 117 days were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 10: 15 August 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

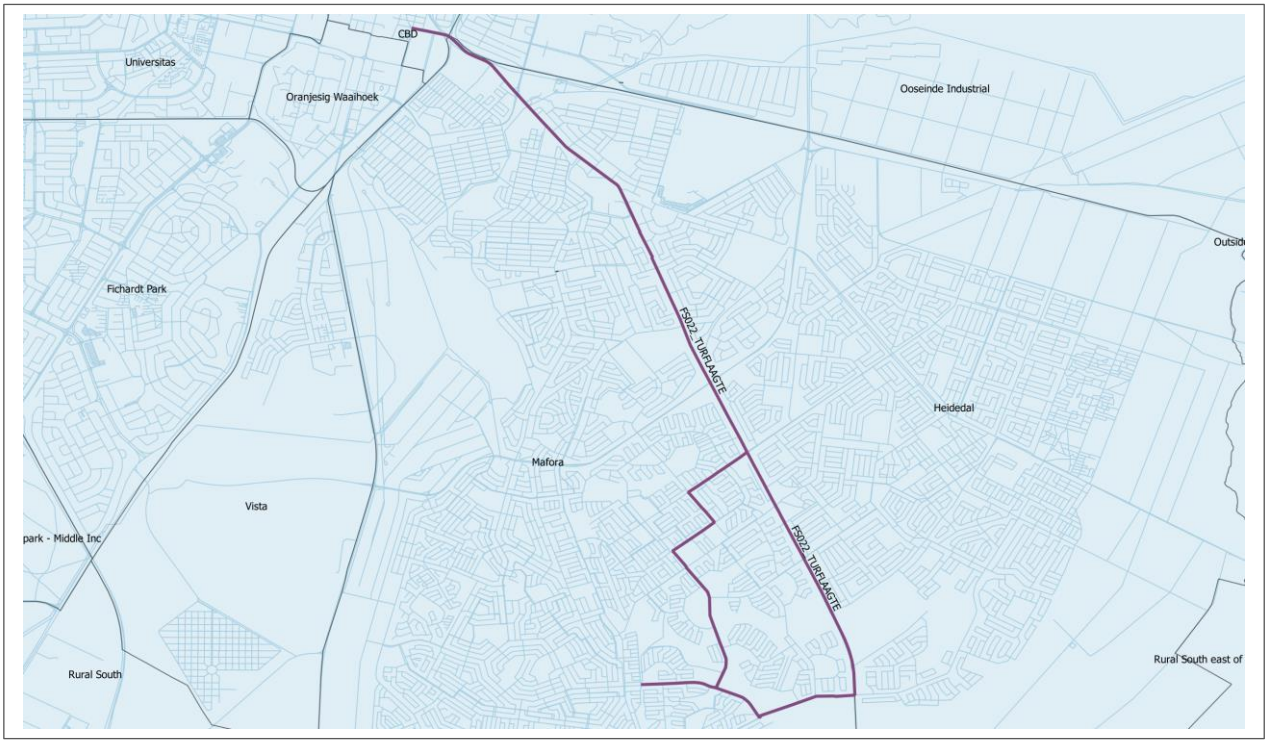
1 long term vehicle was surveyed for 117 days between cycle 1 and cycle 11.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 1 468.16	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 10 277.10	Per week As determined from survey
Average monthly income	R 44 499.82	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R498 439.14	Calculated from weekly result Formula: 48.5 x weekly average

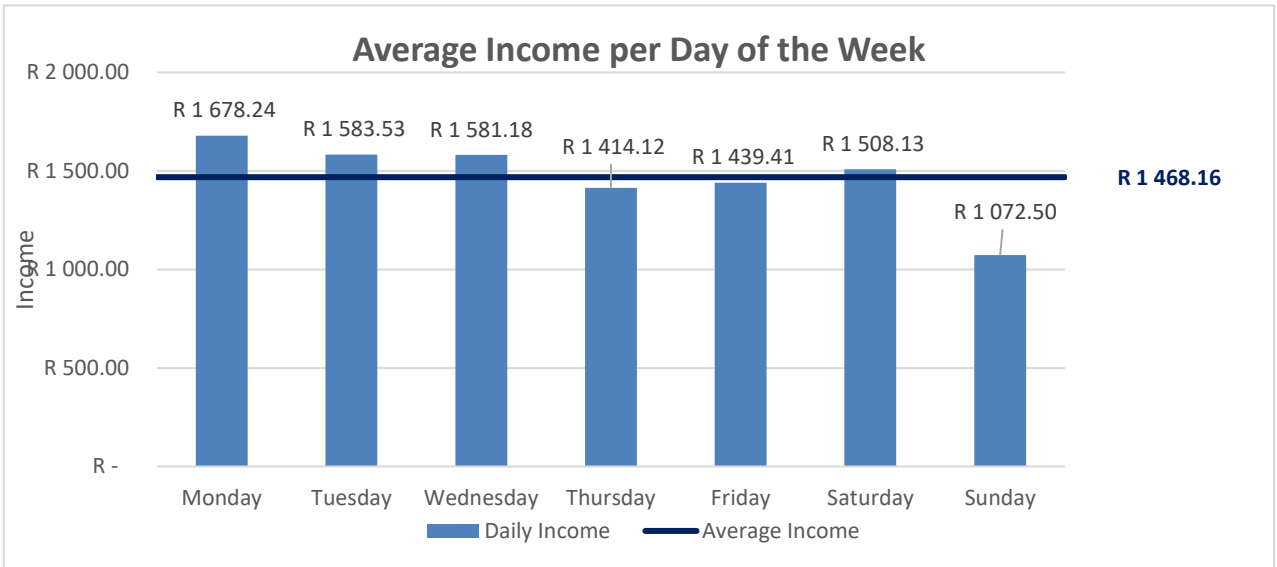


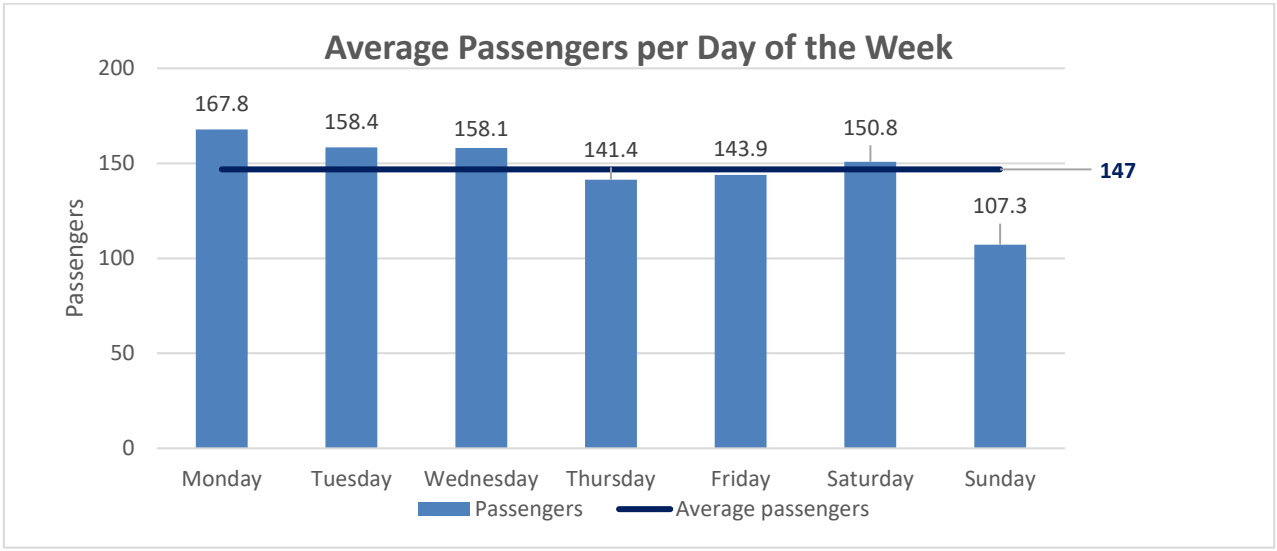
Corridor served by TURFLAAGTE Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	168	R 10.00	R 1 678.24
Tuesday	158	R 10.00	R 1 583.53
Wednesday	158	R 10.00	R 1 581.18
Thursday	141	R 10.00	R 1 414.12
Friday	144	R 10.00	R 1 439.41
Saturday	151	R 10.00	R 1 508.13
Sunday	107	R 10.00	R 1 072.50
Weekly total	1028		R 10 277.10
Average	147	R 10.00	R 1 468.16
Weekday Avg	154	R 10.00	R 1 539.29

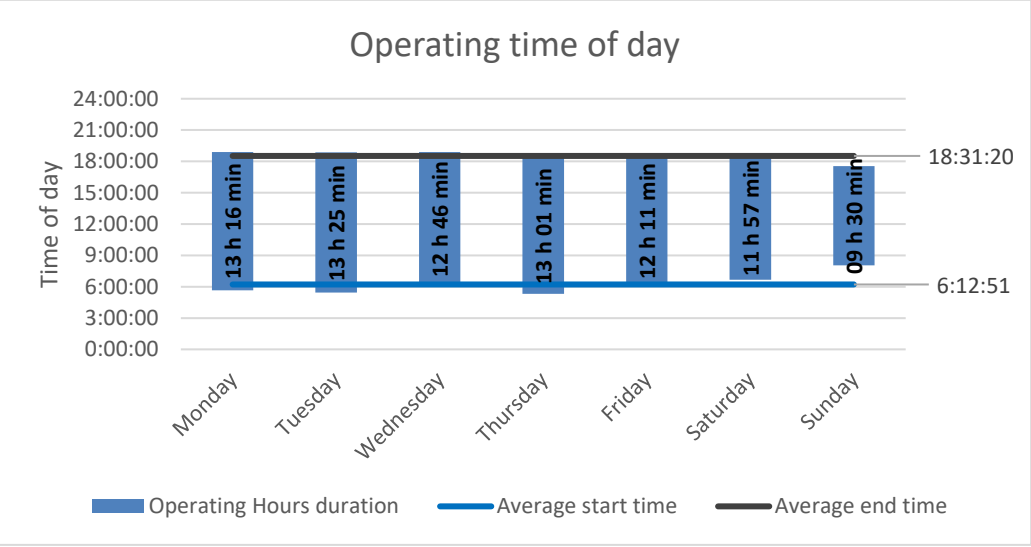



Average Passengers per Day of the Week
Passengers
200
150
100
50
0
167.8
158.4
158.1
141.4
143.9
150.8
107.3
147
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.4. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	6:12:51	18:31:20	12:18:29
Weekday (Mon-Fri) avg	5:45:30	18:41:48	12:56:18
Monday	5:38:32	18:54:38	13:16:06
Tuesday	5:26:27	18:51:34	13:25:07
Wednesday	6:08:00	18:54:37	12:46:37
Thursday	5:19:23	18:21:11	13:01:48
Friday	6:15:06	18:26:59	12:11:53
Saturday	6:40:26	18:37:26	11:57:00
Sunday	8:02:02	17:32:54	9:30:52



3.5. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	217	211	R	6.97	46%
Weekday (Mon-Fri) avg	223	223	R	6.89	46%
Monday	236	236	R	7.10	47%
Tuesday	233	233	R	6.79	46%
Wednesday	219	219	R	7.23	47%
Thursday	217	217	R	6.51	45%
Friday	211	211	R	6.83	46%
Saturday	261	216	R	6.99	45%
Sunday	142	142	R	7.55	45%

3.6. Operational analysis

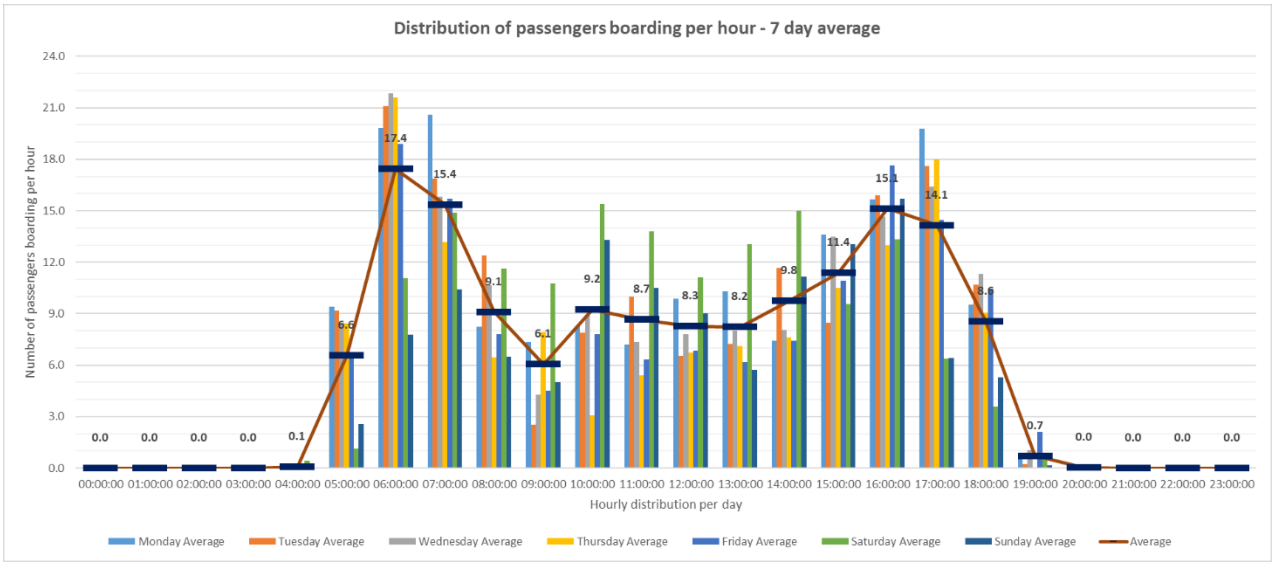
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	210.6	147	1.43	00:05:36	17.0	1583.4	3448.9	46%
Weekday (Mon-Fri) avg	223.3	154	1.45	00:05:42	17.7	1610.5	3484.5	46%
Monday	236.3	168	1.41	00:05:23	17.8	1701.0	3594.9	47%
Tuesday	233.3	158	1.47	00:05:46	17.3	1651.0	3604.4	46%
Wednesday	218.8	158	1.38	00:05:23	17.9	1633.7	3468.0	47%
Thursday	217.2	141	1.54	00:06:09	17.1	1512.4	3352.6	45%
Friday	210.8	144	1.46	00:05:48	18.2	1541.1	3381.2	46%
Saturday	215.7	151	1.42	00:04:54	18.1	1643.3	3678.3	45%
Sunday	142.1	107	1.33	00:05:49	12.5	1279.7	2820.9	45%

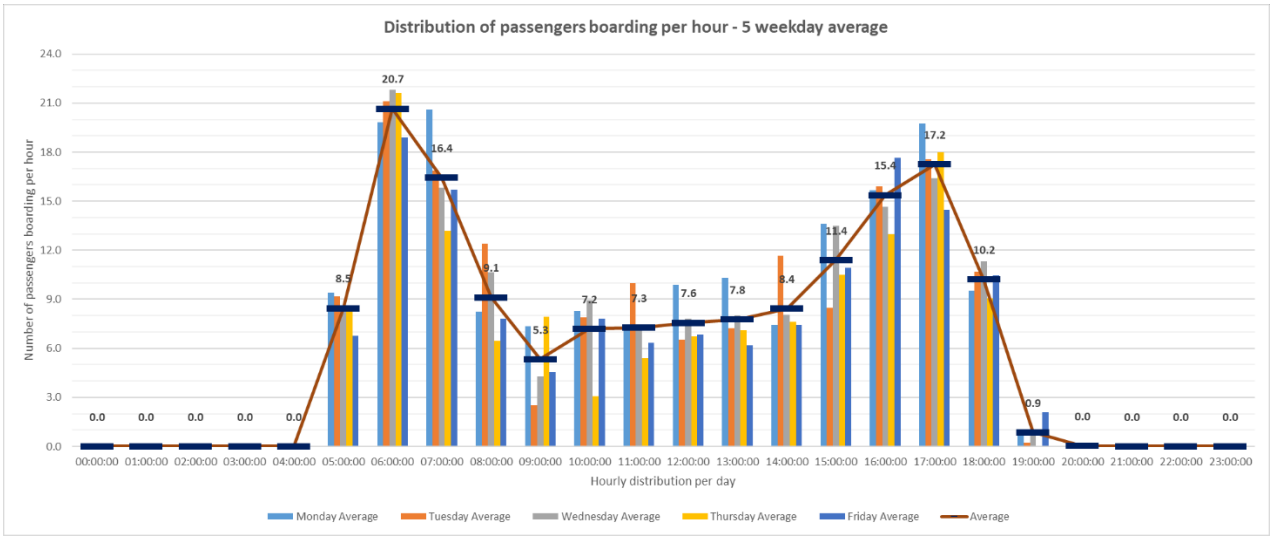
3.7. Fluctuations

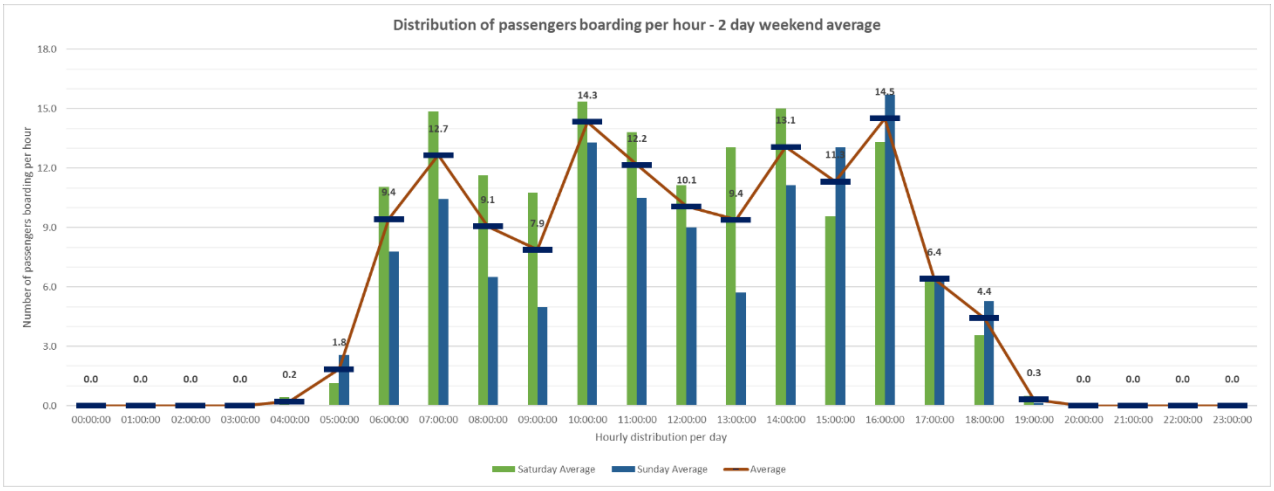
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.0	R -	0%
01:00	01:59	0.0	R -	0%
02:00	02:59	0.0	R -	0%
03:00	03:59	0.0	R -	0%
04:00	04:59	0.1	R 0.63	0%
05:00	05:59	6.6	R 65.66	13%
06:00	06:59	17.4	R 174.44	35%
07:00	07:59	15.4	R 153.53	39%
08:00	08:59	9.1	R 90.98	42%
09:00	09:59	6.1	R 60.57	28%
10:00	10:59	9.2	R 92.37	37%
11:00	11:59	8.7	R 86.55	41%
12:00	12:59	8.3	R 82.72	38%
13:00	13:59	8.2	R 82.28	41%
14:00	14:59	9.8	R 97.55	45%
15:00	15:59	11.4	R 113.72	45%
16:00	16:59	15.1	R 151.21	59%
17:00	17:59	14.1	R 141.48	46%
18:00	18:59	8.6	R 85.58	30%
19:00	19:59	0.7	R 7.05	4%
20:00	20:59	0.0	R 0.24	0%
21:00	21:59	0.0	R -	0%
22:00	22:59	0.0	R -	0%
23:00	23:59	0.0	R -	0%

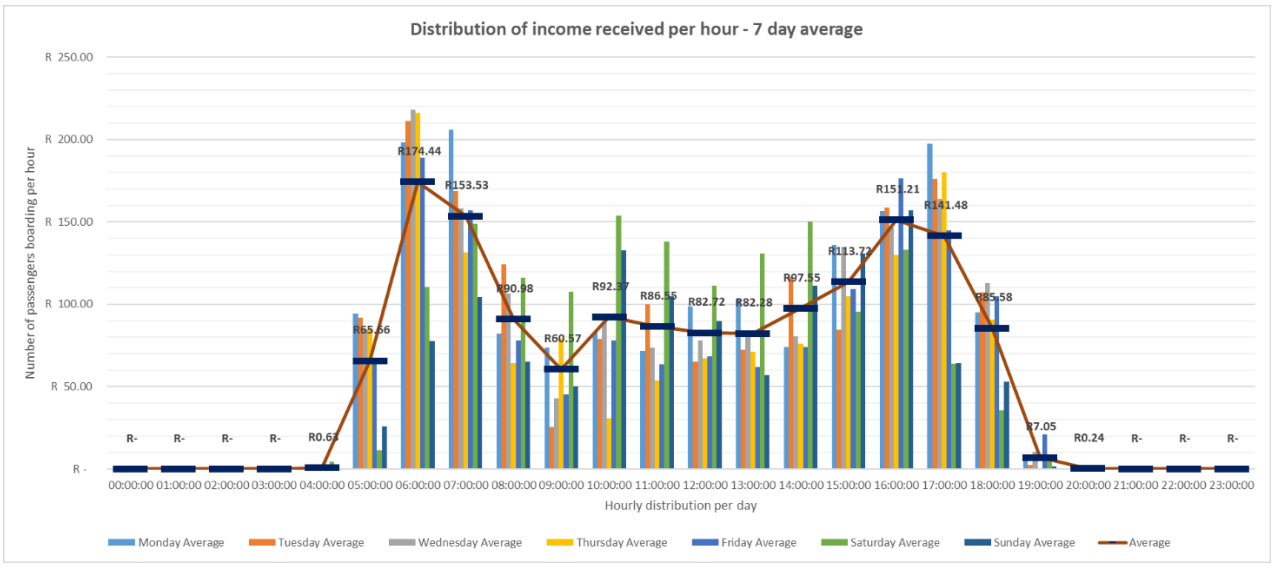
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

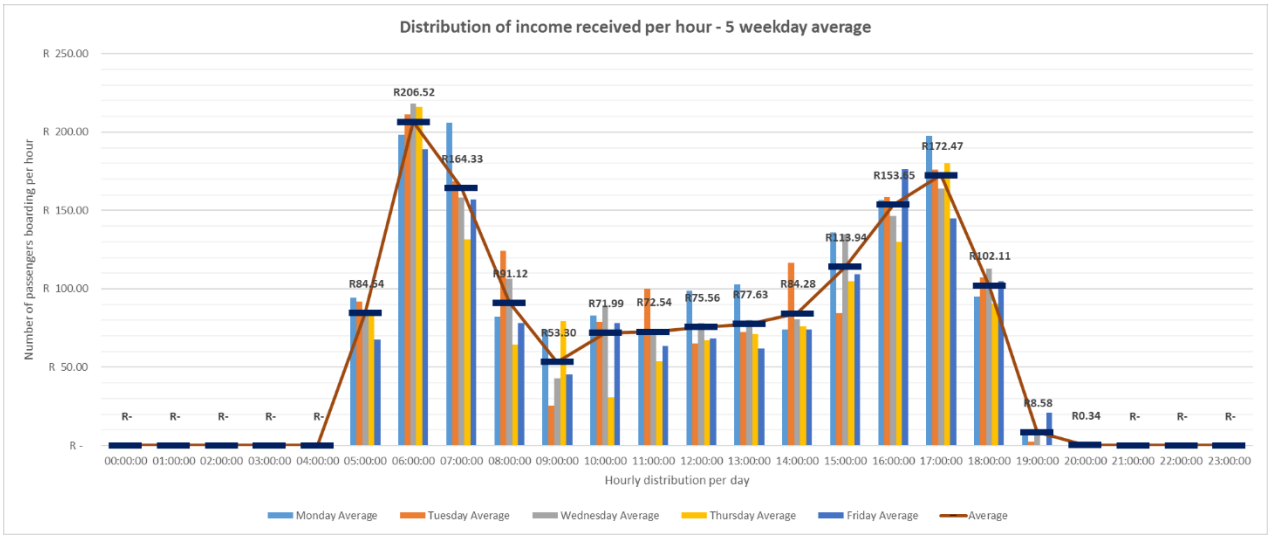


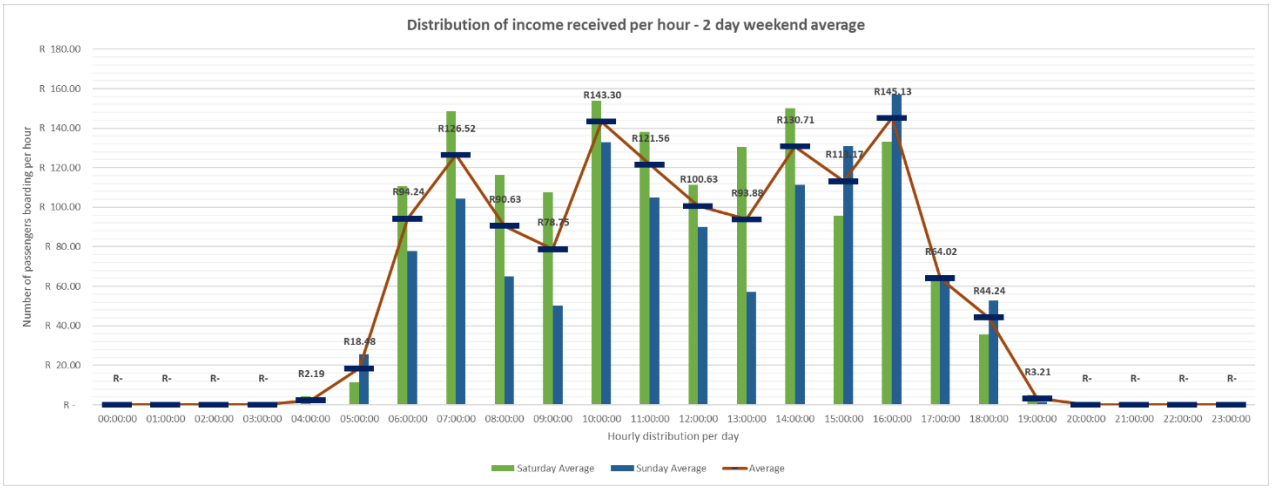




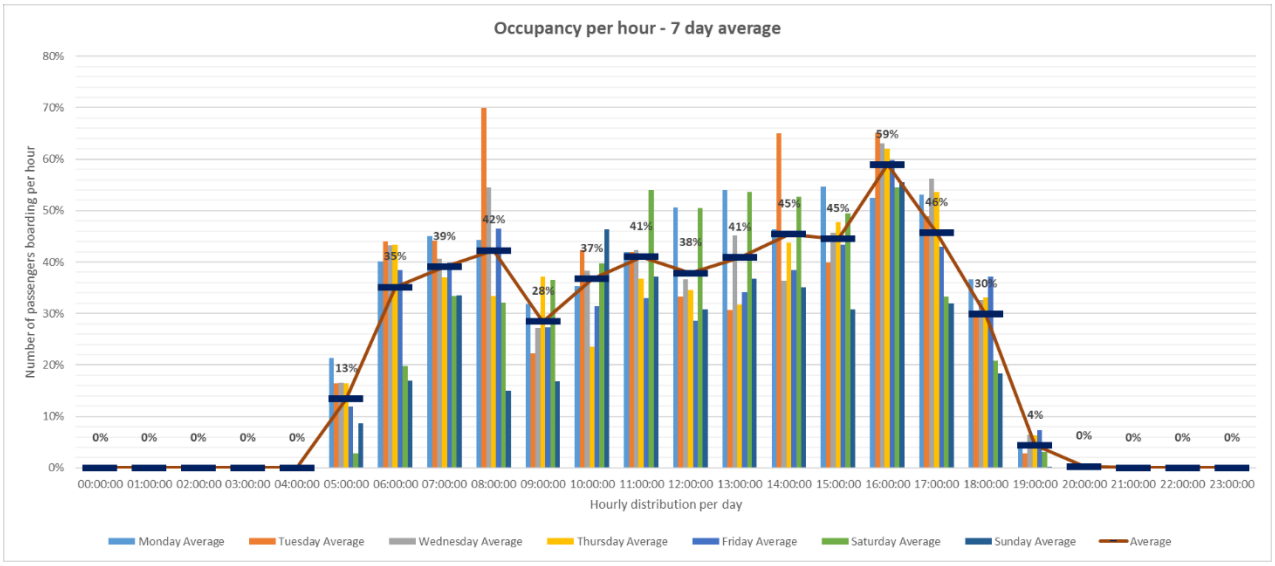
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

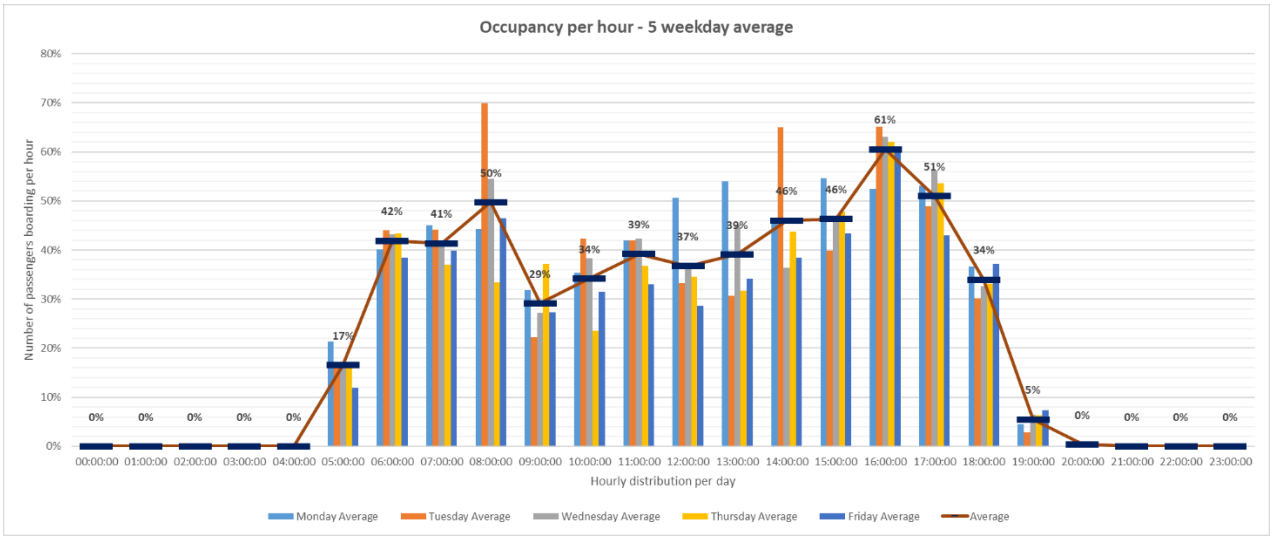


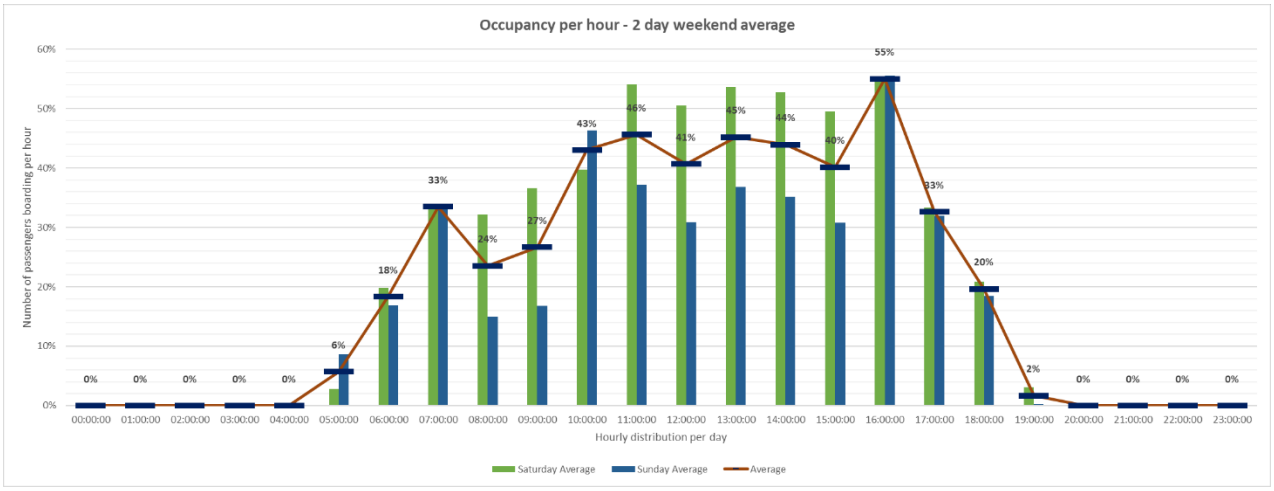

Distribution of income received per hour - 5 weekday average
Number of passengers boarding per hour
R 250.00
R 200.00
R 150.00
R 100.00
R 50.00
R -
R206.52
R164.33
R172.47
R153.85
R113.94
R102.11
R91.12
R84.54
R84.28
R77.63
R75.56
R72.54
R71.99
R53.30
R8.58
R0.34
R-
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 180.00
R 160.00
R 140.00
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R143.30
R145.13
R130.71
R126.52
R121.56
R111.17
R100.63
R94.24
R93.88
R90.63
R78.75
R64.02
R44.24
R18.48
R3.21
R2.19
R-
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

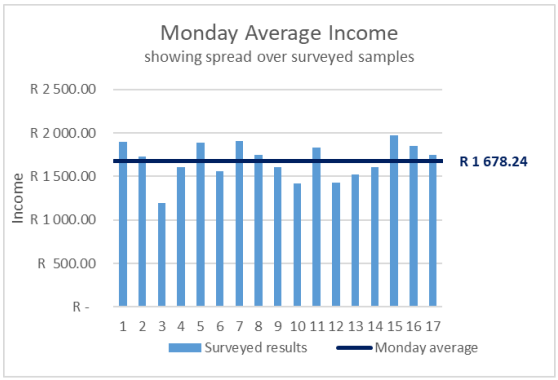


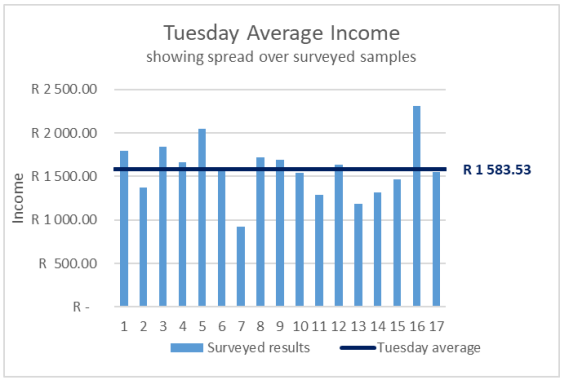


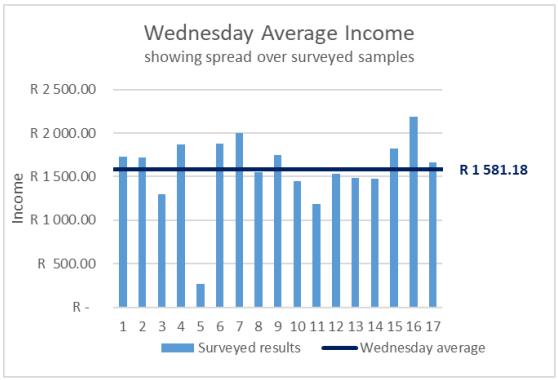

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
60%
50%
40%
30%
20%
10%
0%
0% 0% 0% 0% 0% 6% 18% 33% 24% 27% 43% 46% 41% 45% 44% 40% 55% 33% 20% 2% 0% 0% 0% 0%
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

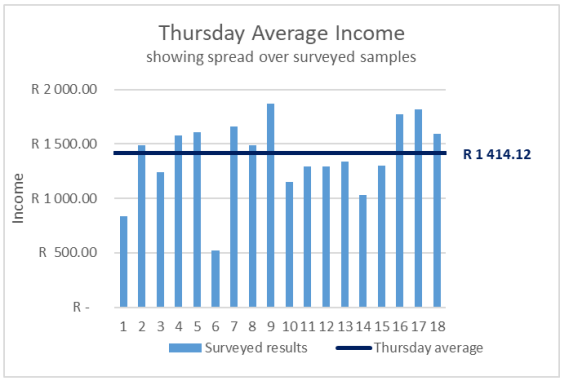
4. DETAILED SURVEY RESULTS

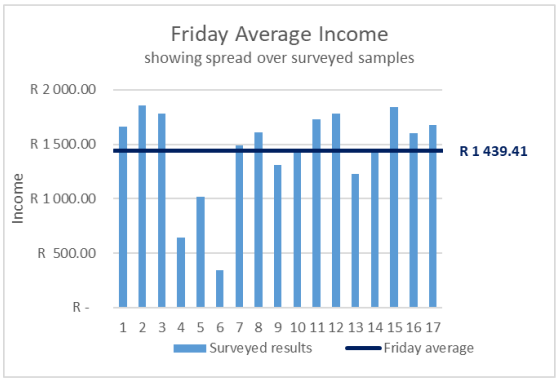
4.1. Income distribution

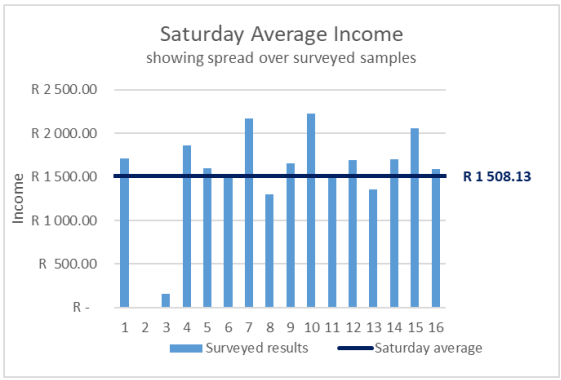


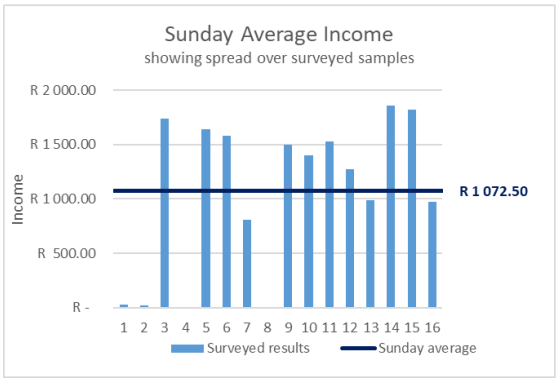




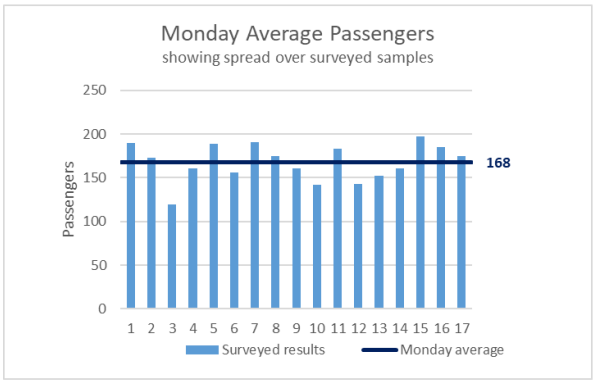


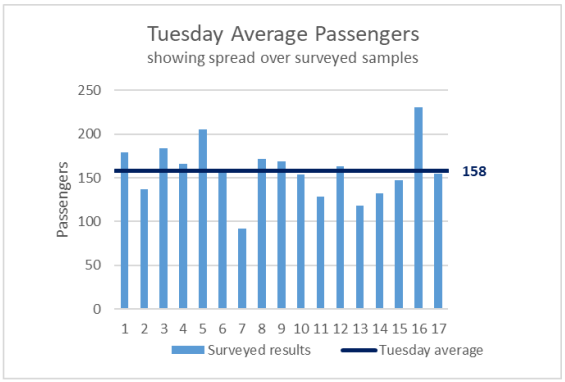


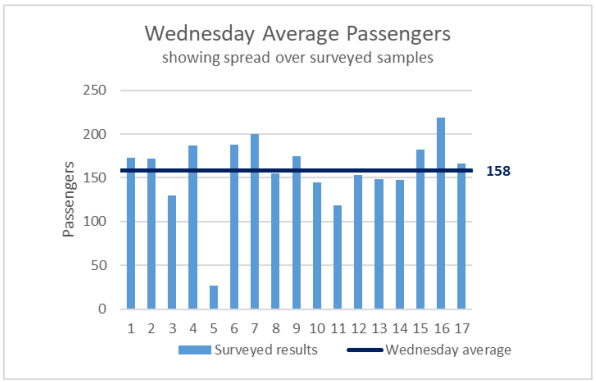


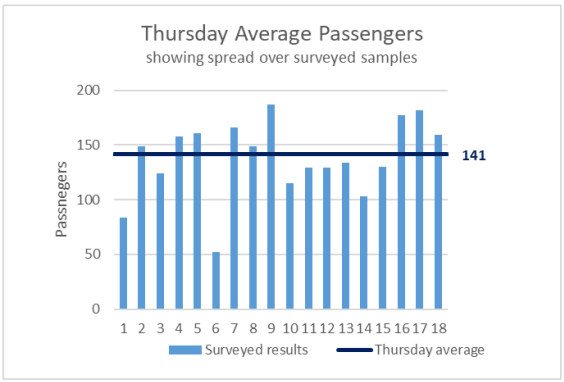


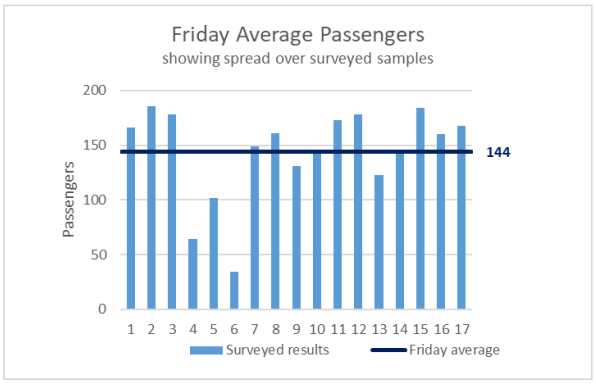
4.2. Passenger number distribution

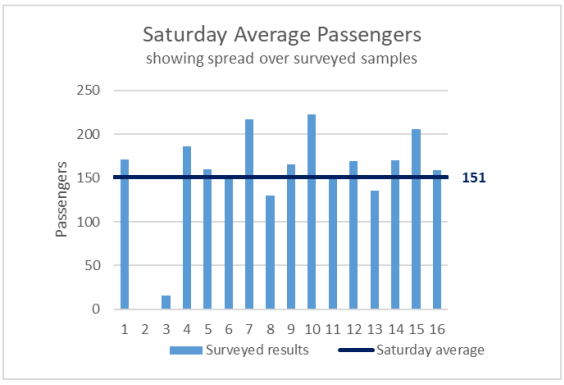


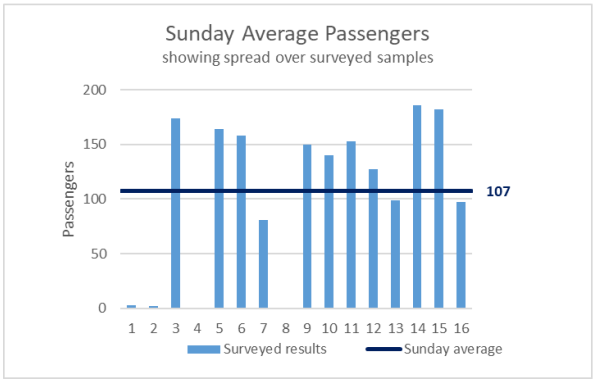










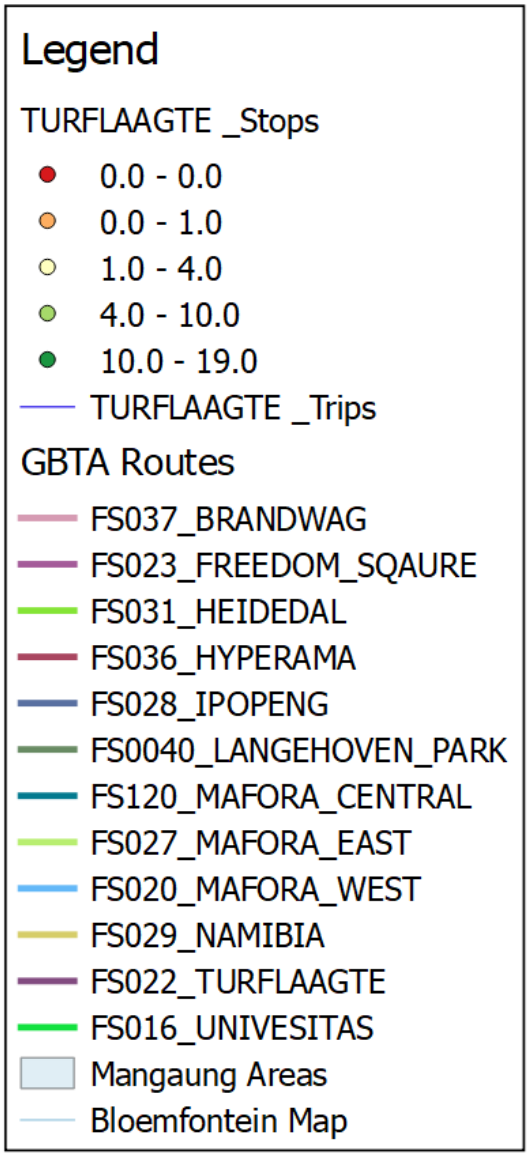


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps

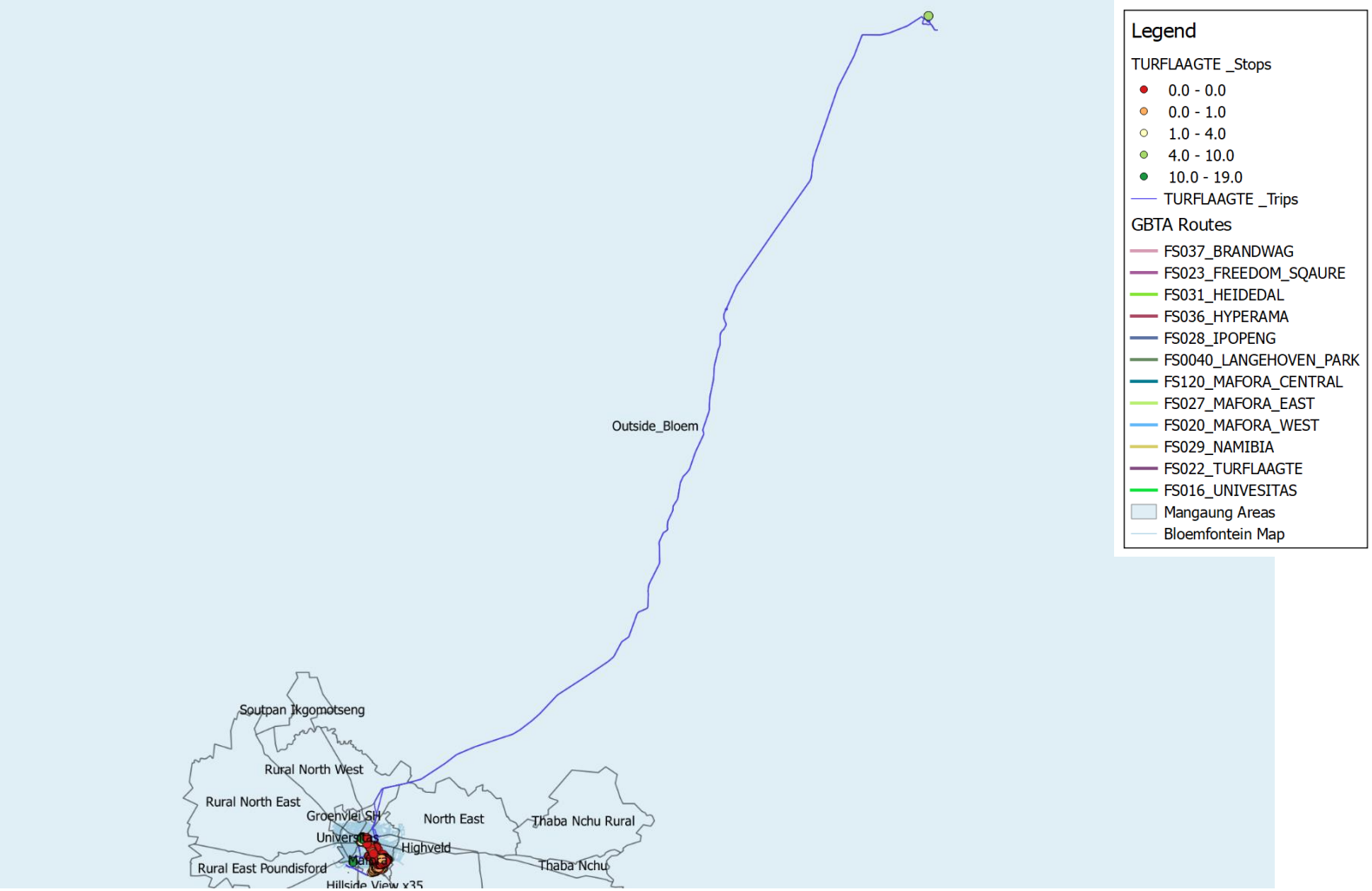


5.1. All surveyed operations

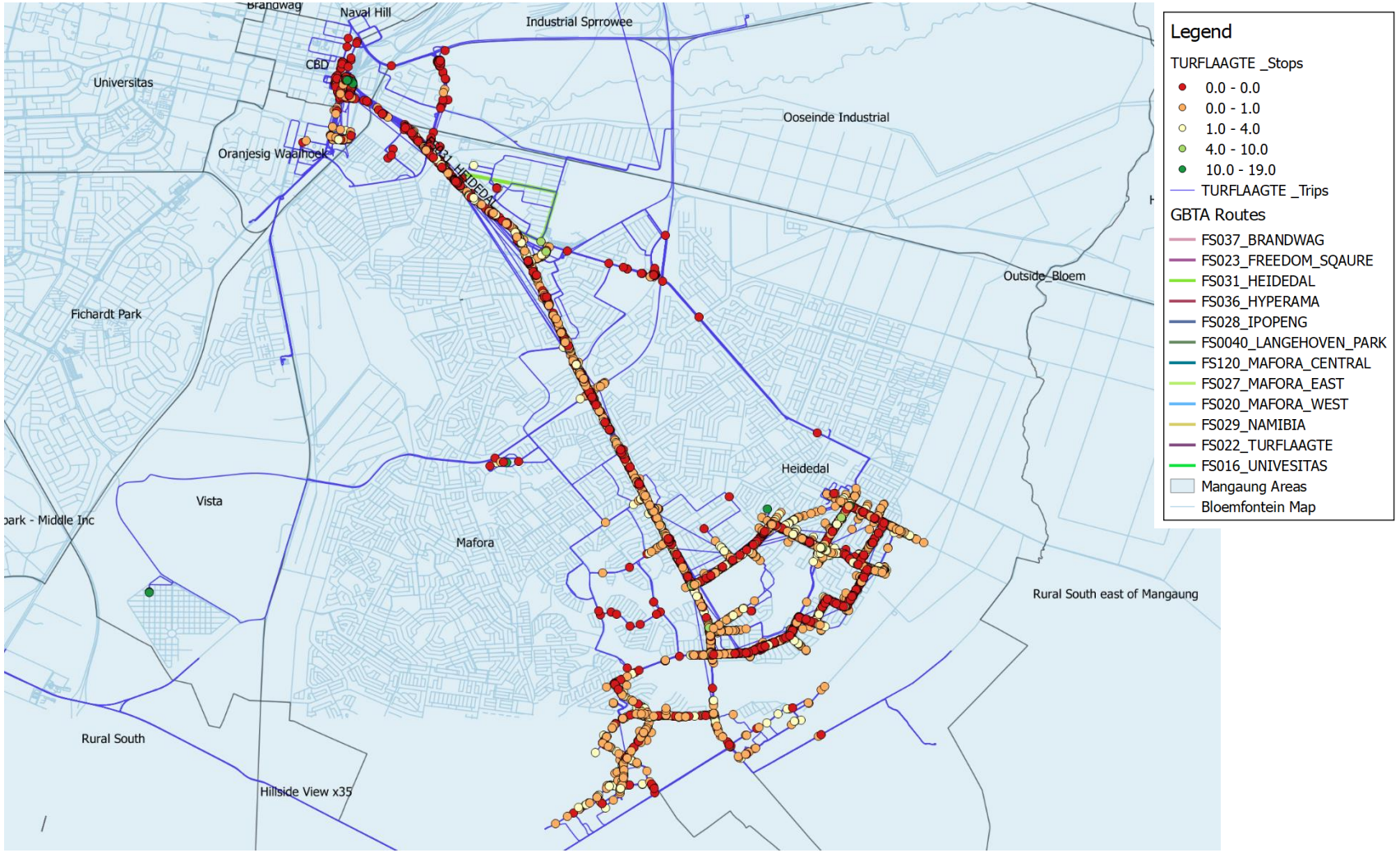
The tracks in blue illustrates the operations of all the surveyed taxis.

All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

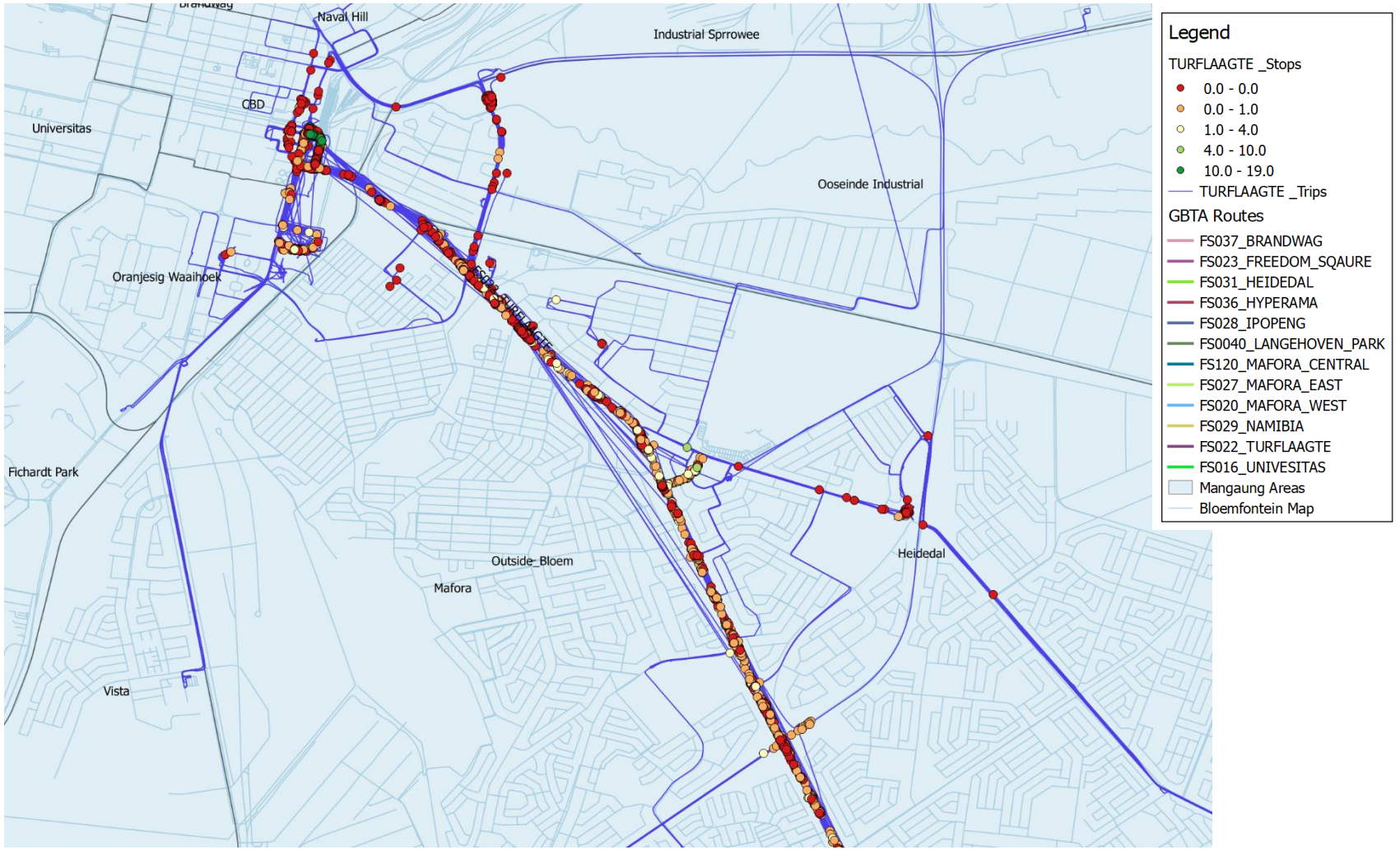
Operations of all surveyed taxis including stops



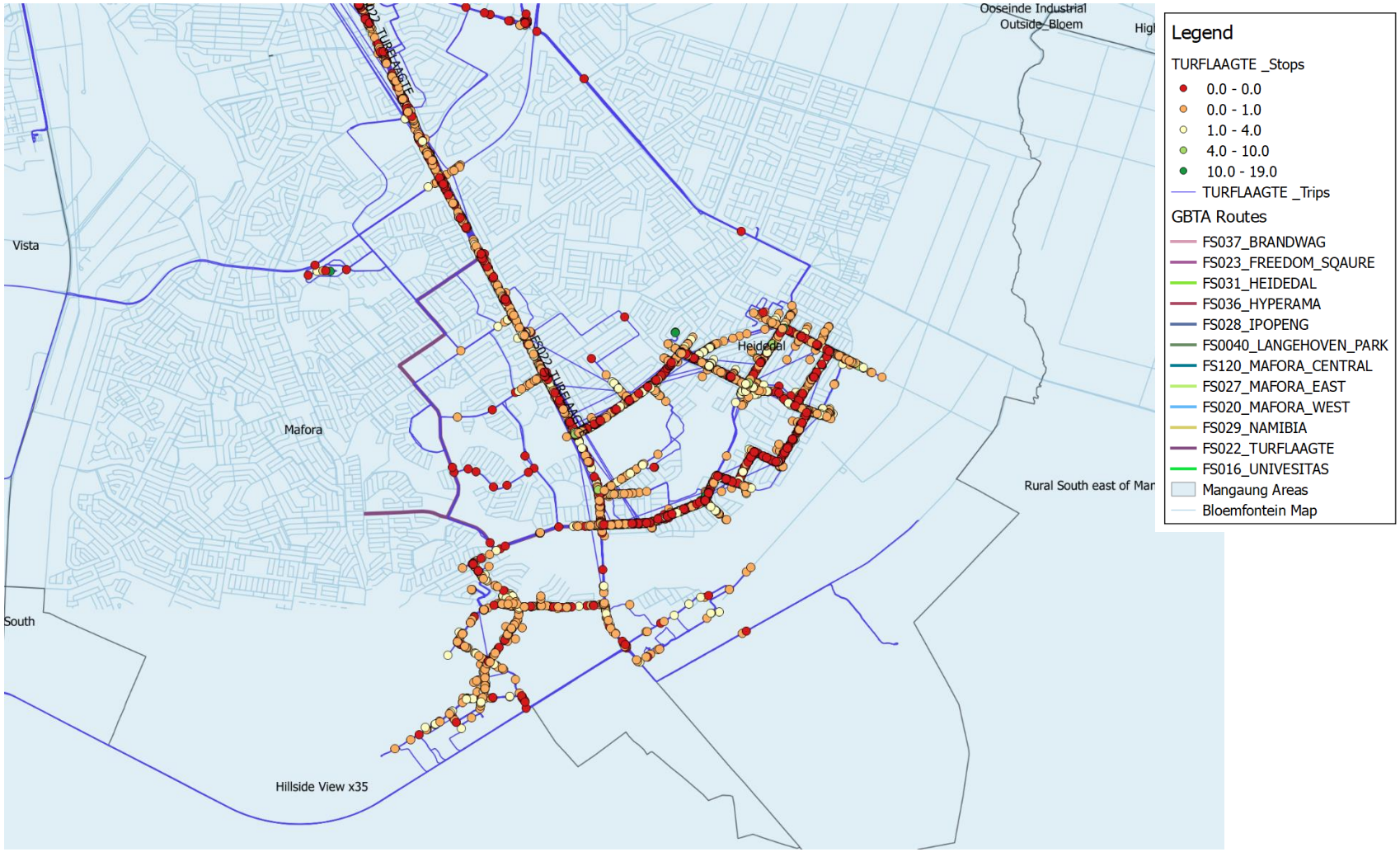
Operations of all surveyed taxis including stops – Focused on the TURFLAAGTE route



Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on the TURFLAAGTE area

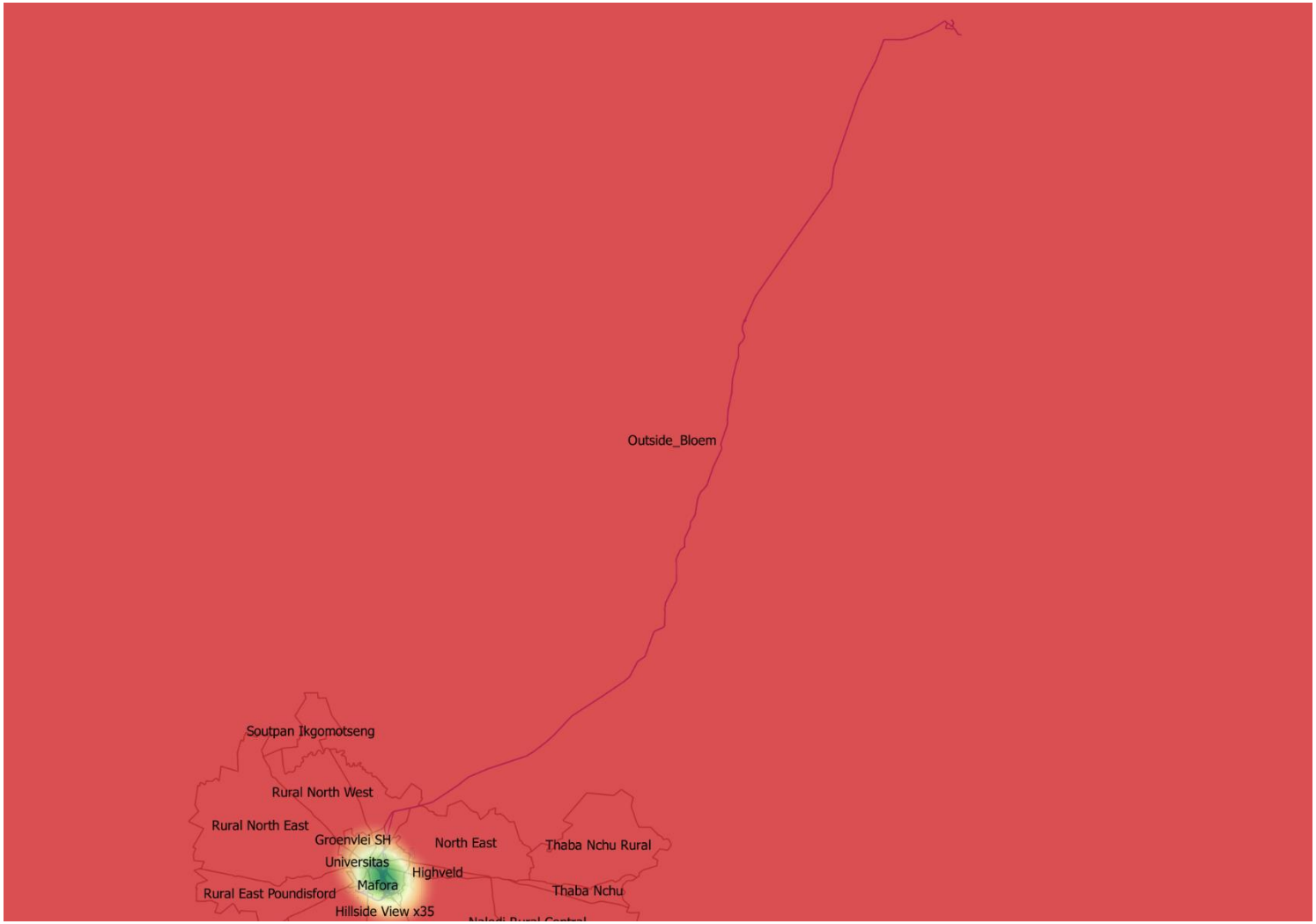


5.2. Heatmaps of taxi operations

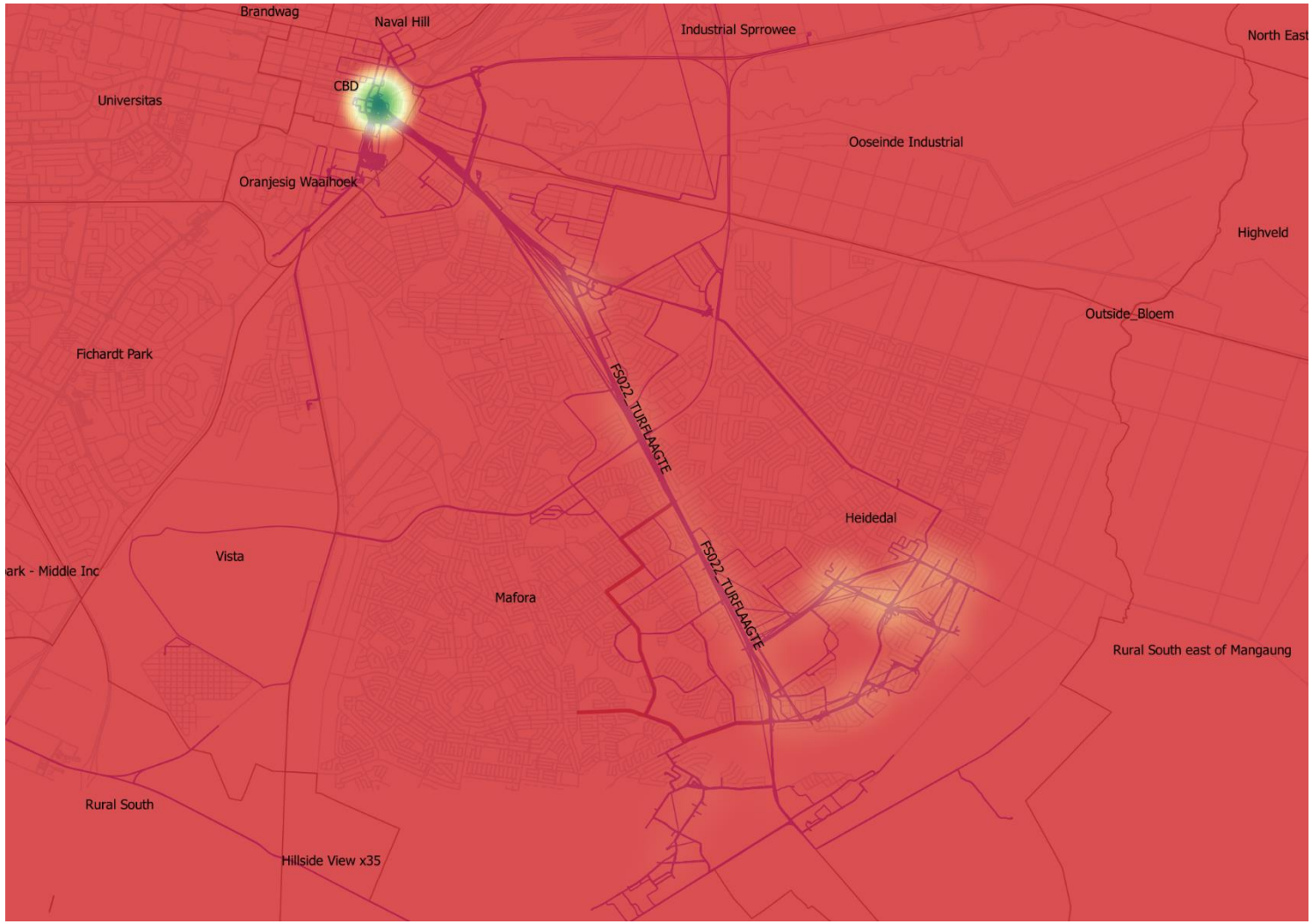
The following maps demonstrate the volume of passengers in each area.

- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

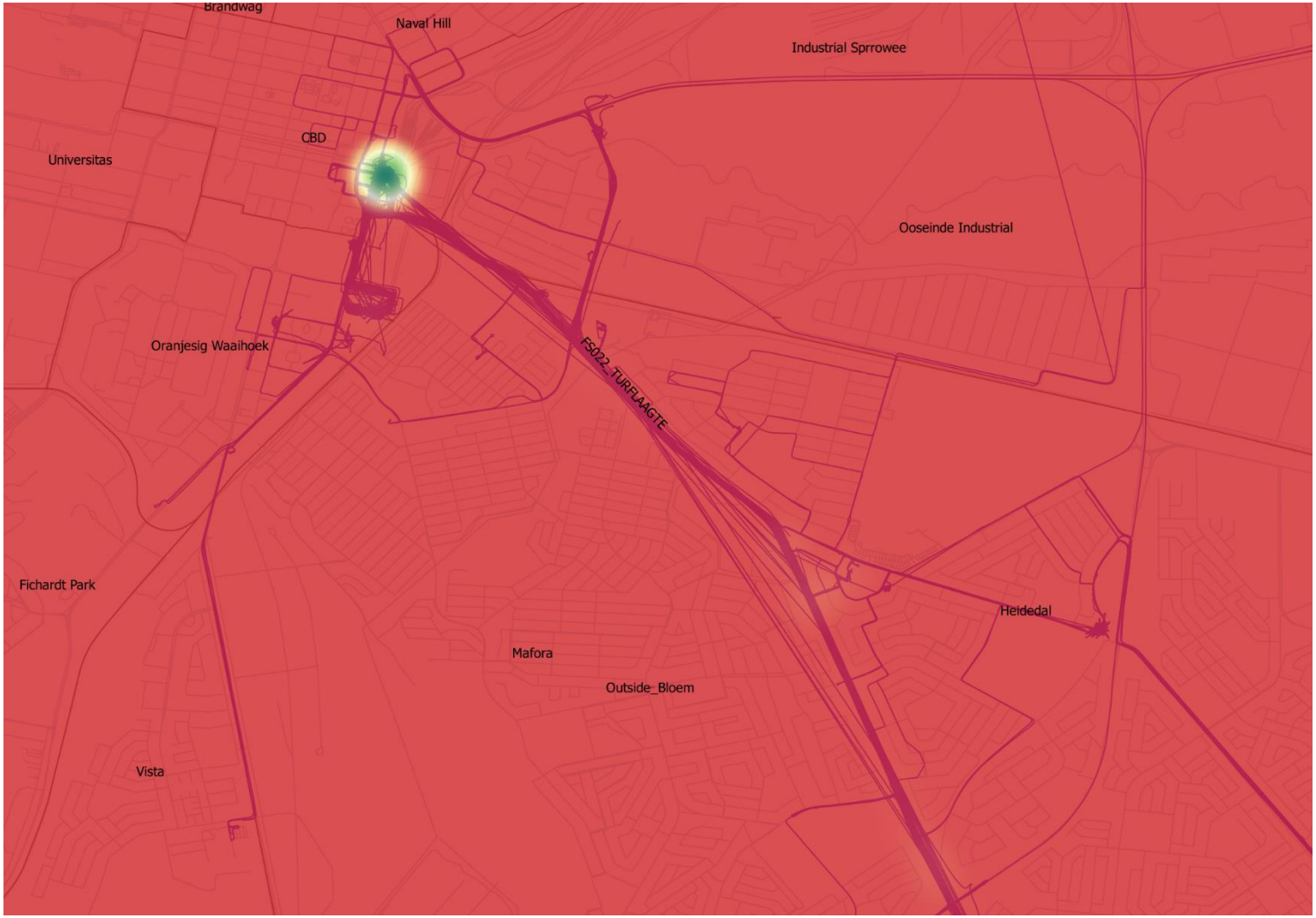
Heatmap of total surveyed area.



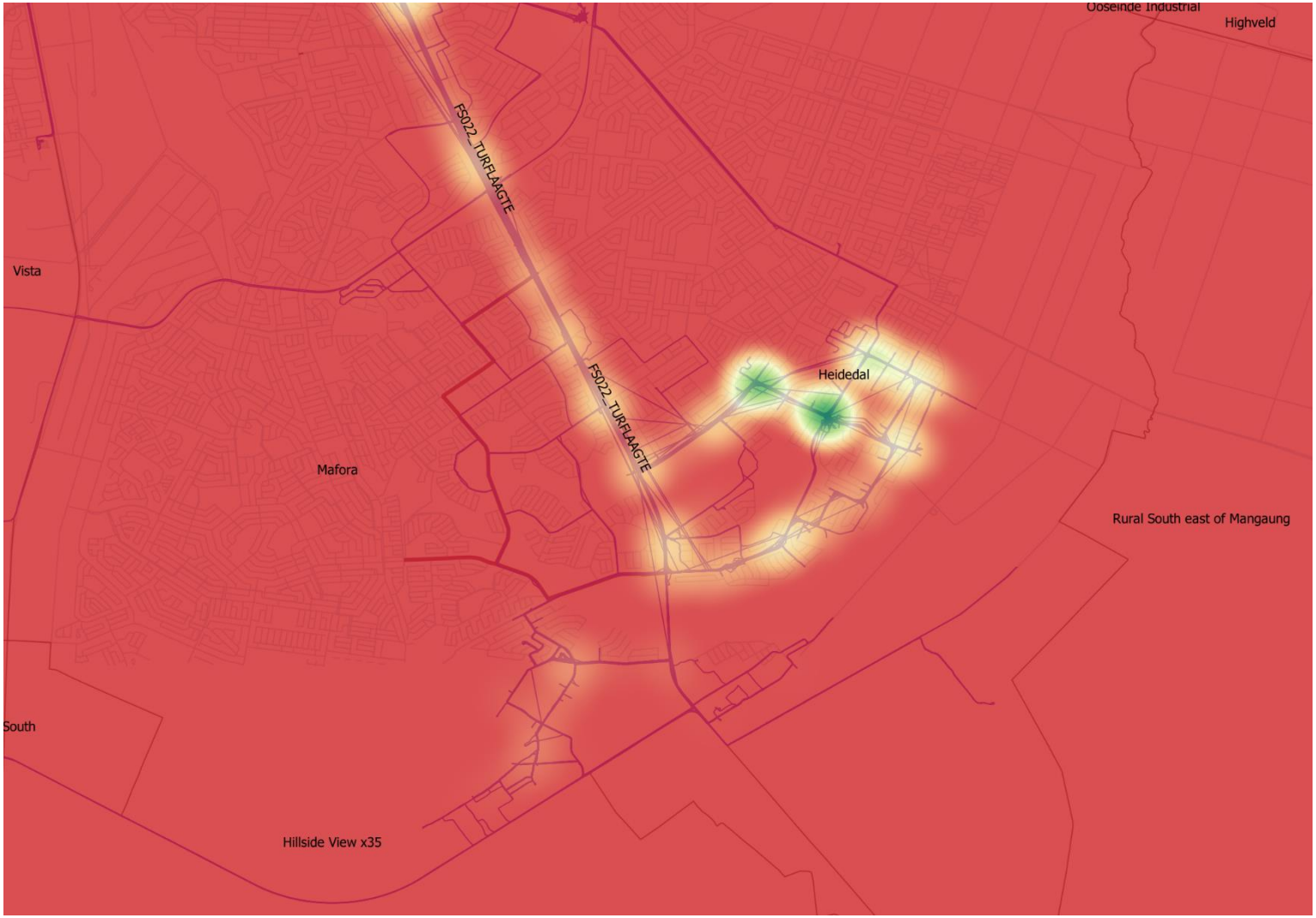
Heatmap of total surveyed area – Focused on the TURFLAAGTE route



Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on TURFLAAGTE



ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – TURFLAAGTE

iSAHA

Table of Contents

ROUTE: **TURFLAAGTE**
REPORT DATE: **13 December 2017**

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

34 taxis were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 10: 20 July 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

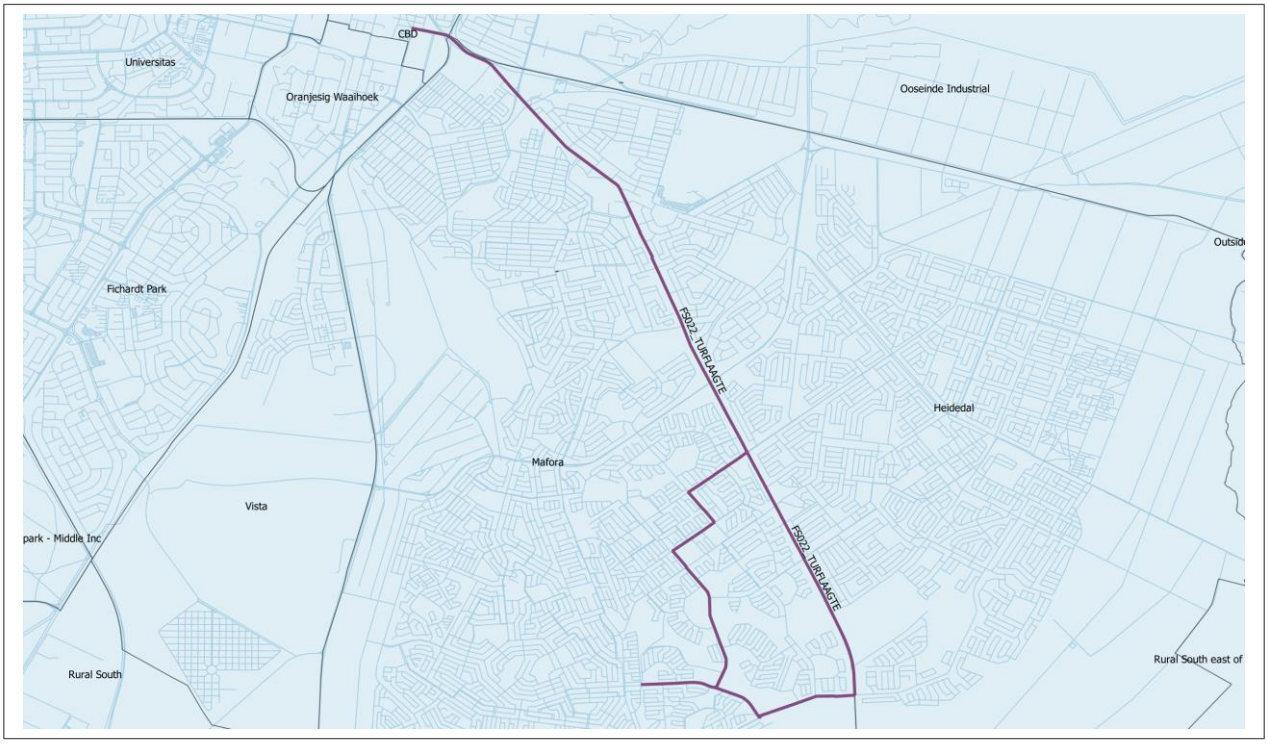
A total of 34 vehicles were surveyed between cycle 1 and cycle 10. 23 vehicles had 6 or more consecutive days of data and 11 vehicles did not have sufficient data.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 1 597.07	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 11 179.52	Per week As determined from survey
Average monthly income	R 48 407.33	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R542 206.84	Calculated from weekly result Formula: 48.5 x weekly average

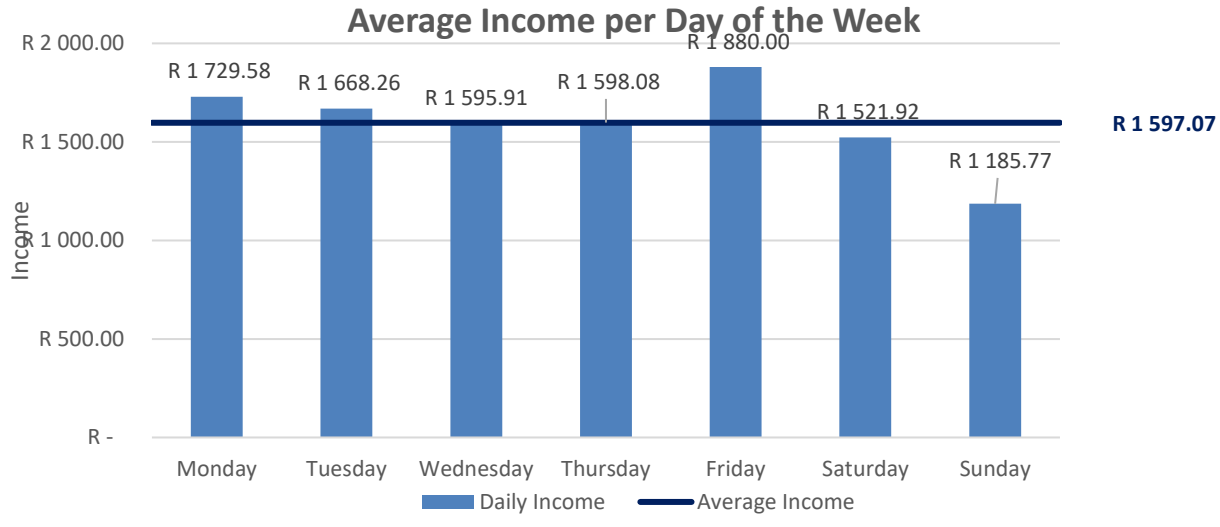


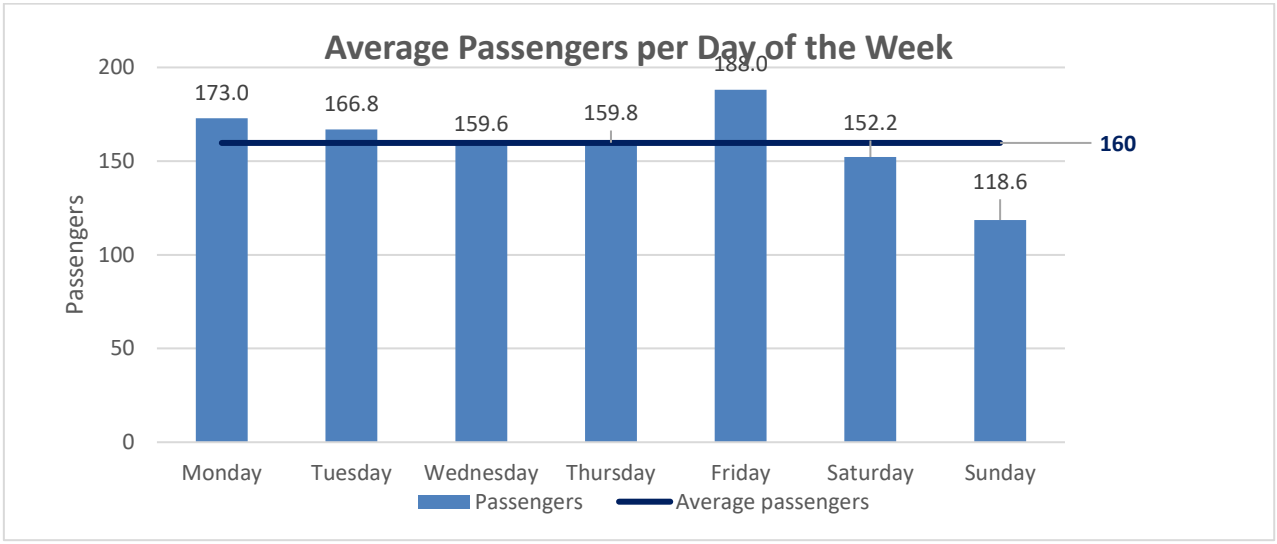
Corridor served by TURFLAAGTE Route

3.2. Daily average income

The average income per day over a spread of seven days are supplied in the table below:

	Average number of fare-paying passengers per day	Average Fare	Average daily income
Monday	173	R 10.00	R 1 729.58
Tuesday	167	R 10.00	R 1 668.26
Wednesday	160	R 10.00	R 1 595.91
Thursday	160	R 10.00	R 1 598.08
Friday	188	R 10.00	R 1 880.00
Saturday	152	R 10.00	R 1 521.92
Sunday	119	R 10.00	R 1 185.77
Weekly total	1118		R 11 179.52
Average	160	R 10.00	R 1 597.07
Weekday Avg	169	R 10.00	R 1 694.37

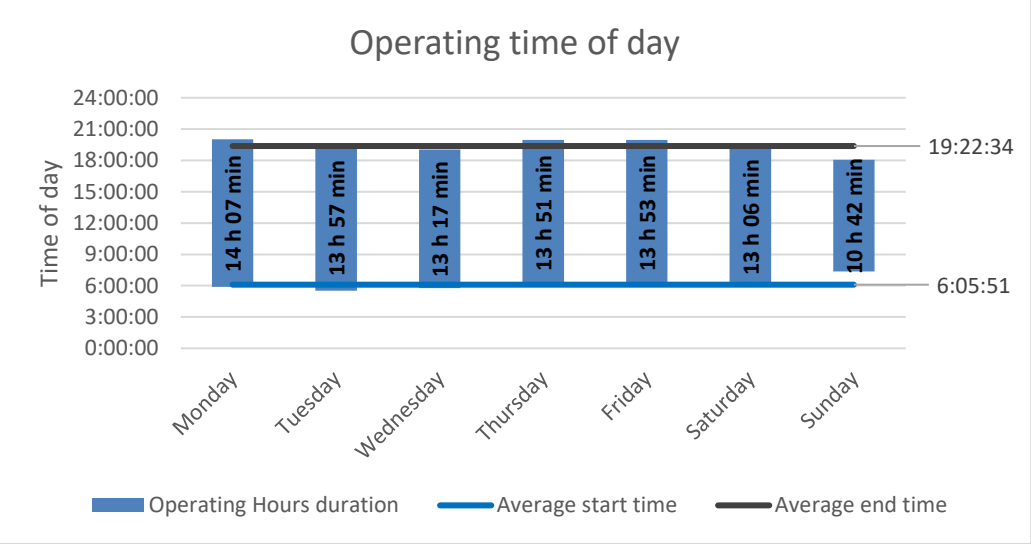



Average Passengers per Day of the Week
Passengers
200
150
100
50
0
173.0
166.8
159.6
159.8
188.0
152.2
118.6
160
Monday
Tuesday
Wednesday
Thursday
Friday
Saturday
Sunday
Passengers
Average passengers

3.3. Daily operating times

The following table and graph show the starting and ending times of the taxis surveyed.

Operating time			
	Average start time	**Average end time**	**Operating Hours duration**
Daily (Mon - Sun) avg	6:05:51	19:22:34	13:16:43
Weekday (Mon-Fri) avg	5:51:46	19:41:20	13:49:34
Monday	5:52:48	20:00:43	14:07:55
Tuesday	5:30:36	19:28:04	13:57:28
Wednesday	5:45:47	19:02:50	13:17:02
Thursday	6:05:39	19:57:23	13:51:44
Friday	6:04:00	19:57:41	13:53:41
Saturday	6:00:36	19:07:27	13:06:51
Sunday	7:21:30	18:03:50	10:42:20



3.4. Distances travelled

The average distances travelled during operations are illustrated in the table below, together with the average vehicle occupancy per km.

Distances travelled and vehicle occupancy					
	Average of total km travelled	Average of operating km on Mangaung network	Average revenue per km		Vehicle Occupancy
Daily (Mon - Sun) avg	248	241	R	6.63	44%
Weekday (Mon-Fri) avg	258	258	R	6.58	44%
Monday	264	264	R	6.55	44%
Tuesday	252	252	R	6.62	44%
Wednesday	250	250	R	6.38	43%
Thursday	247	247	R	6.46	44%
Friday	276	275	R	6.85	45%
Saturday	255	233	R	6.53	42%
Sunday	189	165	R	7.21	43%

3.5. Operational analysis

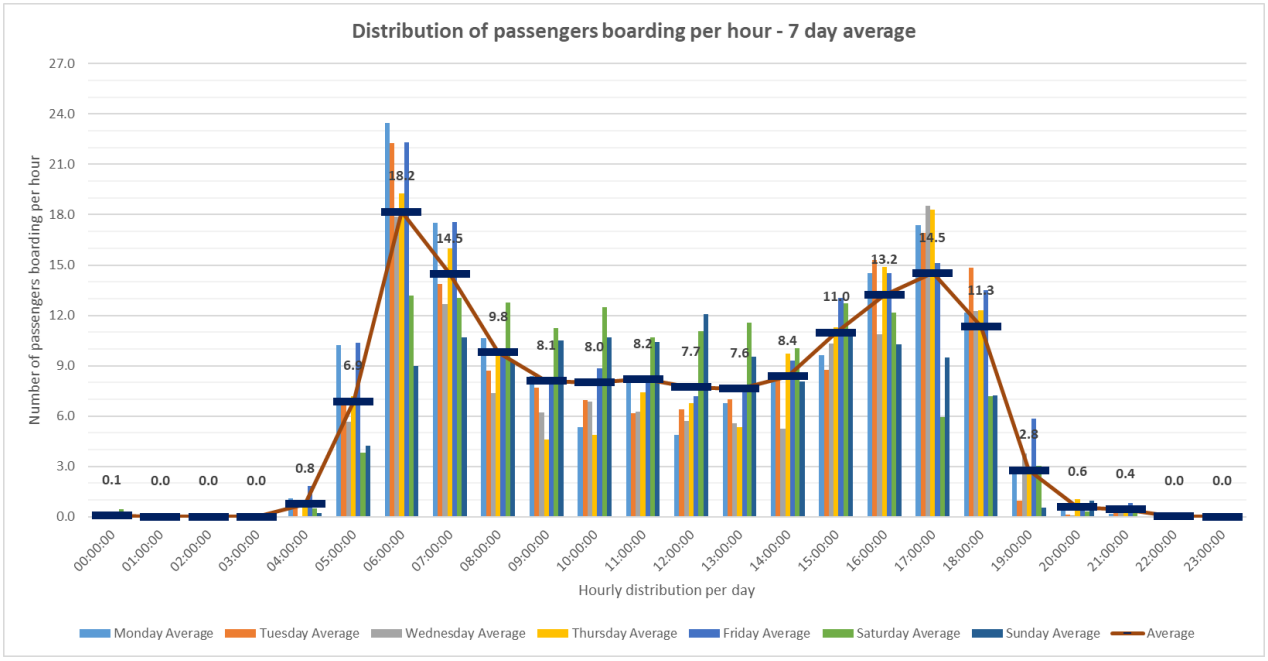
Operational analysis								
	Average of operating km on Mangaung network	Average number of paying passengers per day	Kms / Passenger	Service Frequency	Operating Speed	Passenger km	Seat kms	Vehicle Occupancy
Daily (Mon - Sun) avg	240.8	160	1.50	00:05:21	17.5	1675.4	3851.4	44%
Weekday (Mon-Fri) avg	257.6	169	1.52	00:05:24	18.4	1695.7	3860.6	44%
Monday	263.9	173	1.53	00:05:25	18.7	1752.3	3957.0	44%
Tuesday	252.0	167	1.51	00:05:29	18.1	1641.3	3769.0	44%
Wednesday	250.3	160	1.57	00:05:36	18.7	1578.1	3677.2	43%
Thursday	247.3	160	1.55	00:05:40	17.6	1635.9	3723.5	44%
Friday	274.5	188	1.46	00:04:50	19.3	1852.2	4142.8	45%
Saturday	233.2	152	1.52	00:05:09	17.0	1665.8	3965.7	42%
Sunday	164.6	119	1.38	00:05:21	13.2	1530.1	3616.9	43%

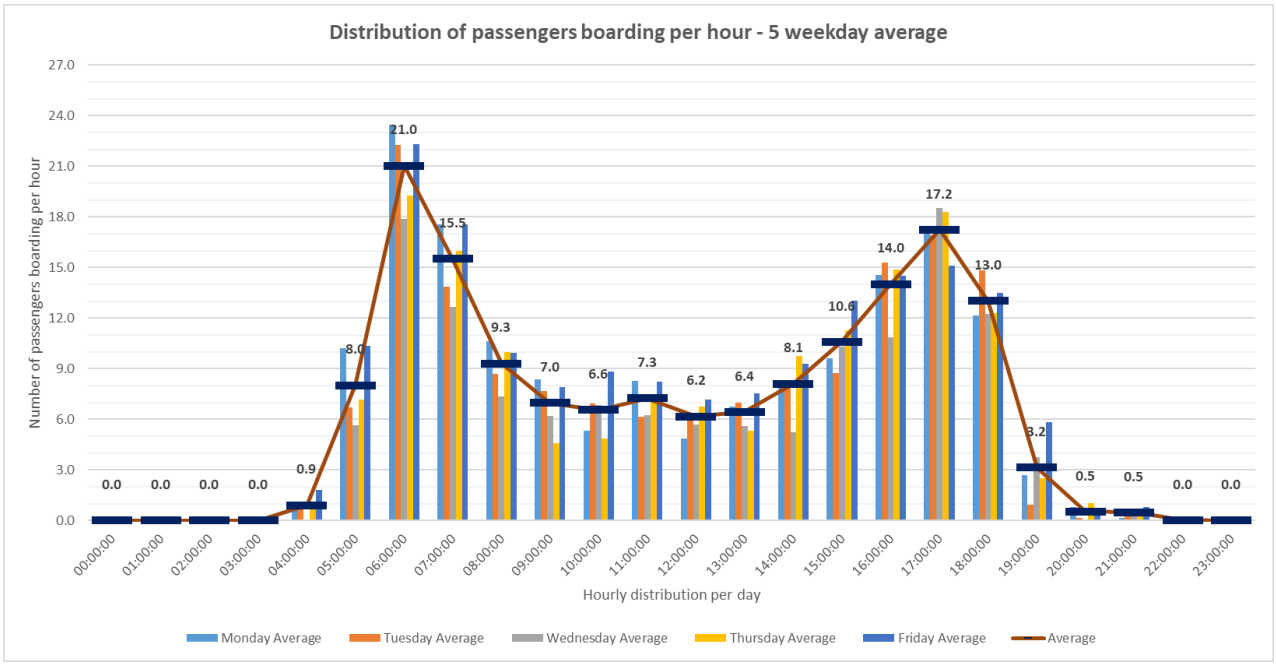
3.6. Fluctuations

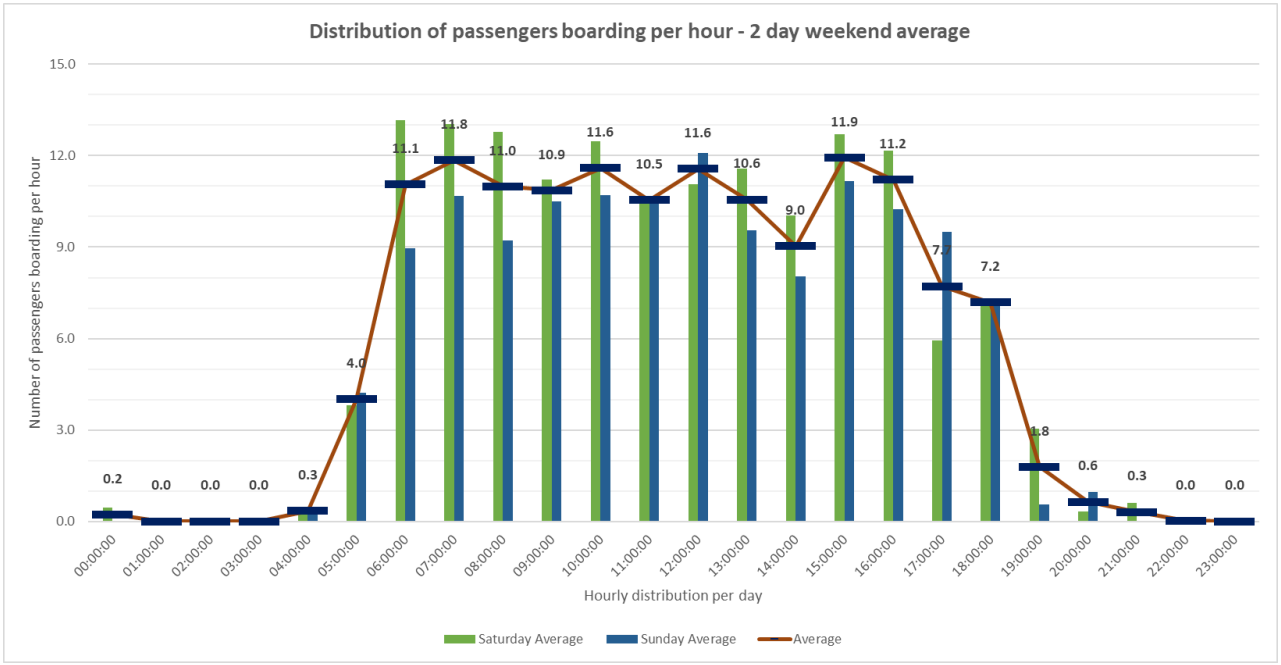
The operational fluctuations during a single day of operation is shown in the table and following graphs.

Operating slot		Number of passengers boarding per hour	Average income per hour	Occupancy per hour
From	To			
00:00	00:59	0.1	R 0.65	0%
01:00	01:59	0.0	R -	0%
02:00	02:59	0.0	R -	0%
03:00	03:59	0.0	R -	0%
04:00	04:59	0.8	R 7.55	3%
05:00	05:59	6.9	R 68.79	15%
06:00	06:59	18.2	R 181.83	35%
07:00	07:59	14.5	R 144.73	34%
08:00	08:59	9.8	R 97.96	29%
09:00	09:59	8.1	R 80.80	25%
10:00	10:59	8.0	R 80.03	28%
11:00	11:59	8.2	R 82.03	31%
12:00	12:59	7.7	R 77.17	32%
13:00	13:59	7.6	R 76.21	33%
14:00	14:59	8.4	R 83.77	37%
15:00	15:59	11.0	R 109.80	46%
16:00	16:59	13.2	R 132.16	46%
17:00	17:59	14.5	R 145.19	43%
18:00	18:59	11.3	R 113.49	35%
19:00	19:59	2.8	R 27.61	17%
20:00	20:59	0.6	R 5.63	4%
21:00	21:59	0.4	R 4.37	3%
22:00	22:59	0.0	R 0.25	1%
23:00	23:59	0.0	R -	0%

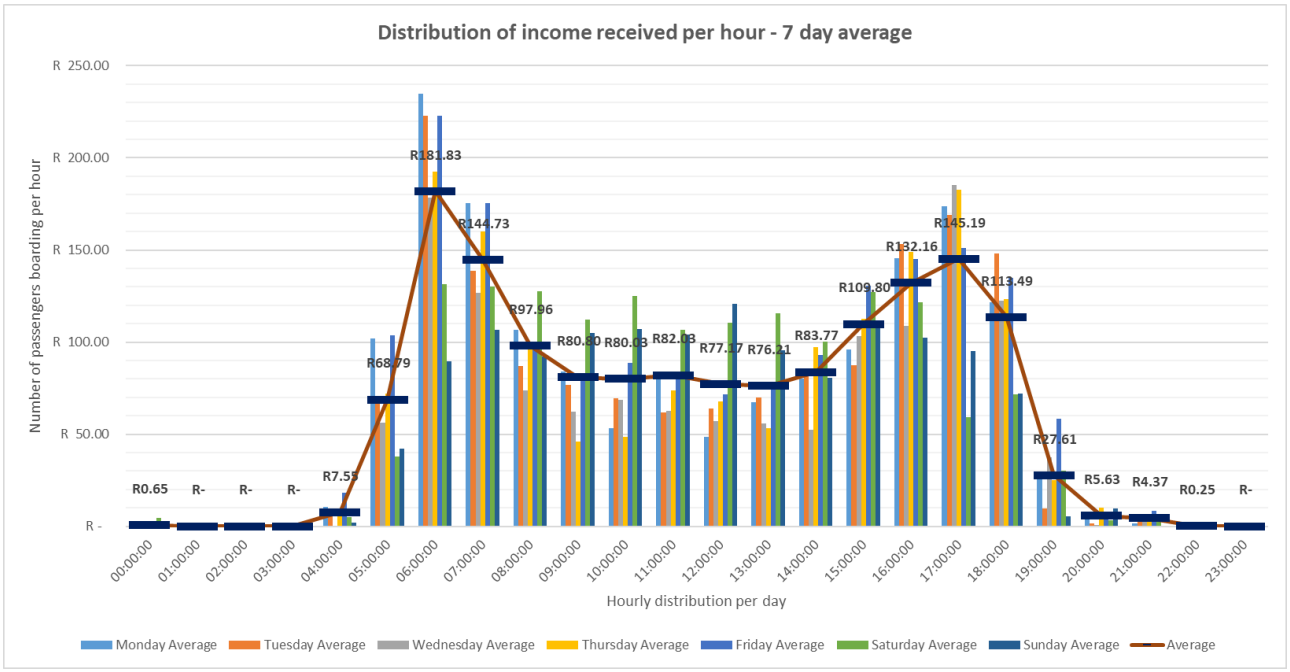
The following graphs show the average number of passengers boarding per hour over a 7-day period, a 5-day week period and 2-day weekend period.

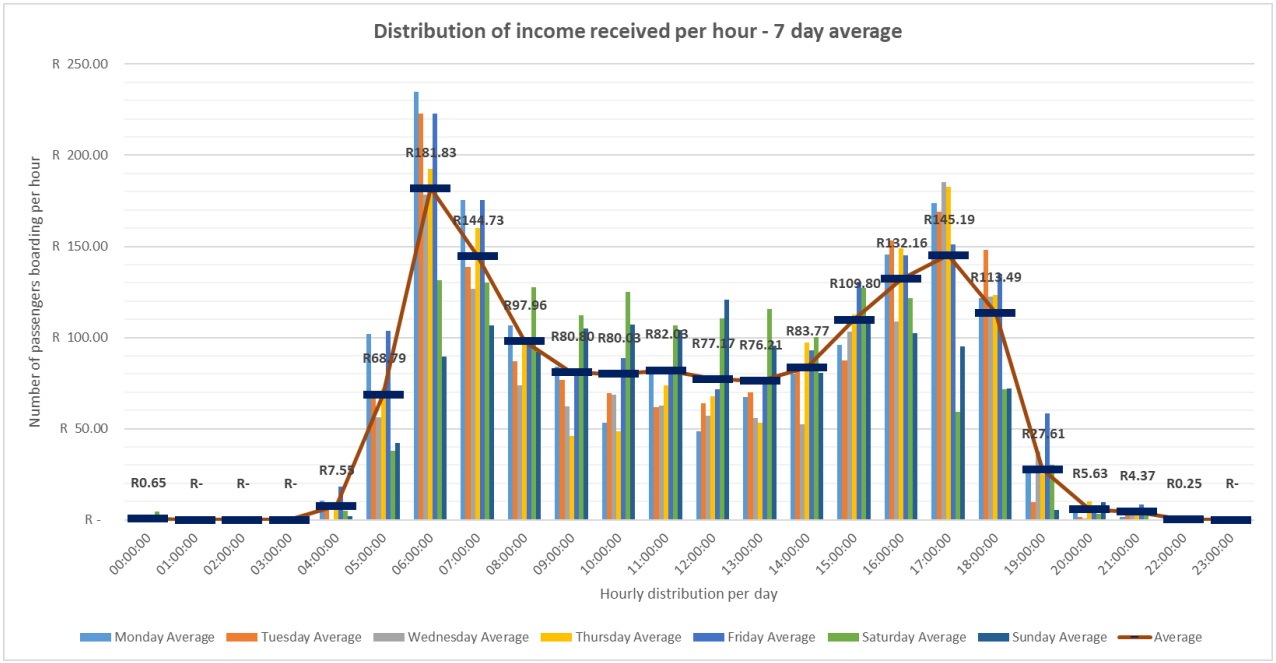


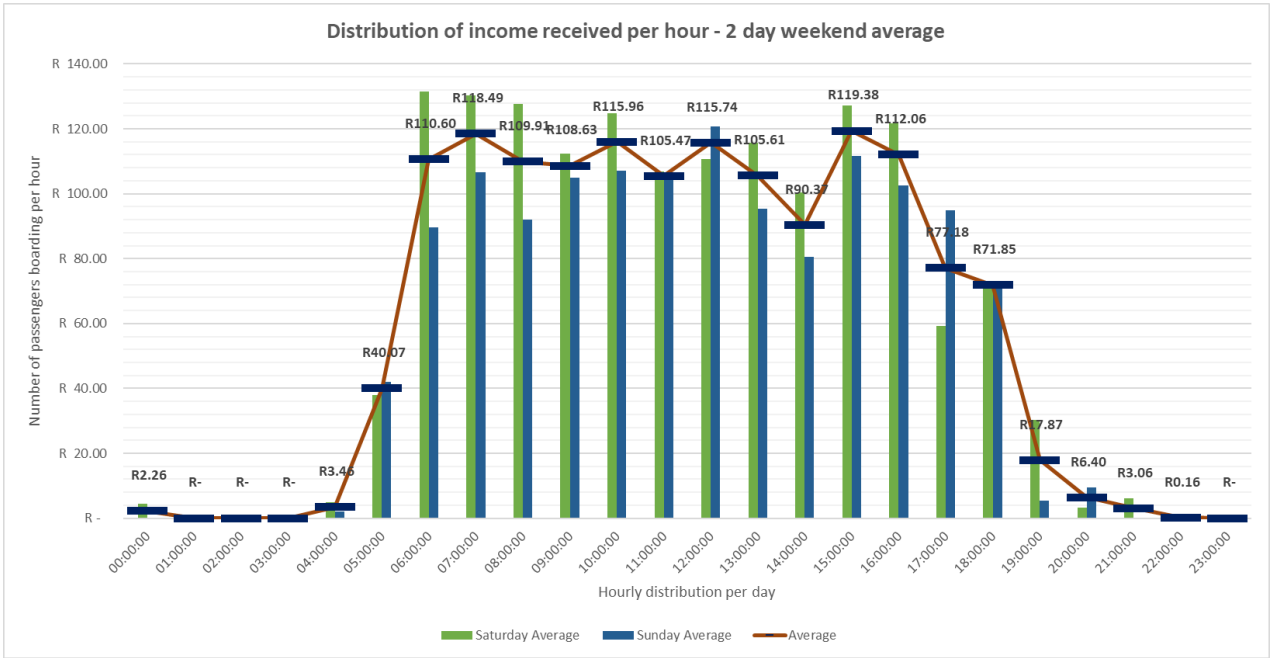




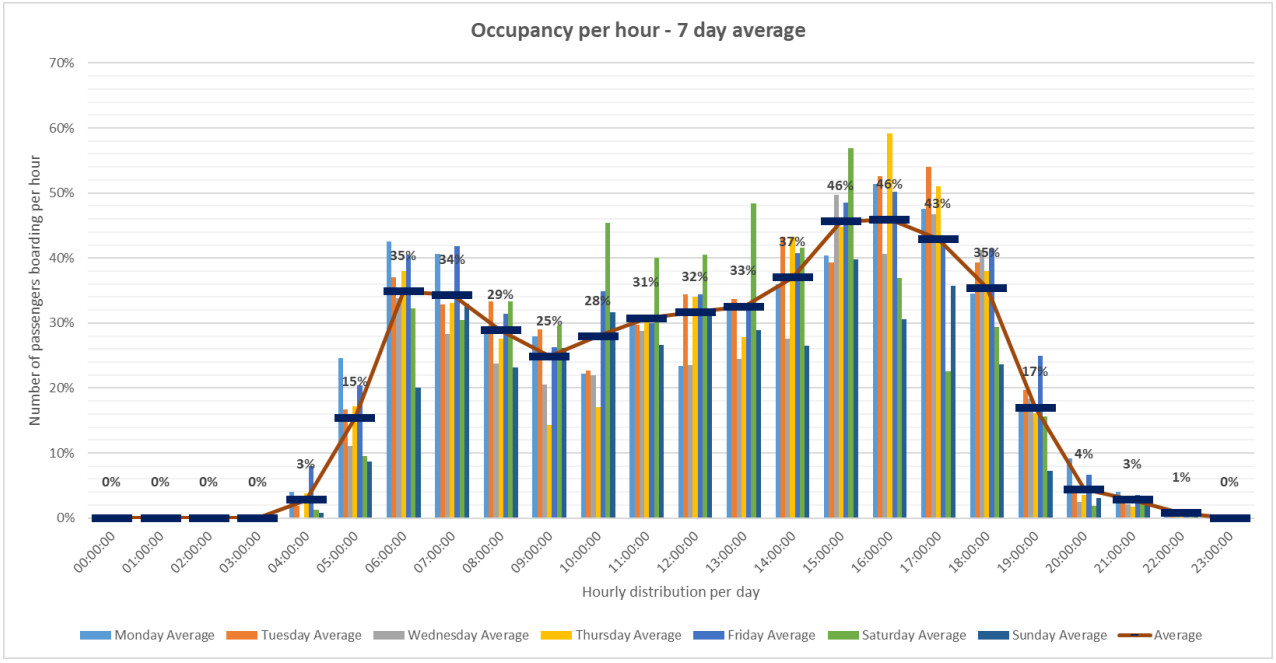
The following graphs show the average income per hour over a 7-day period, a 5-day week period and 2-day weekend period.

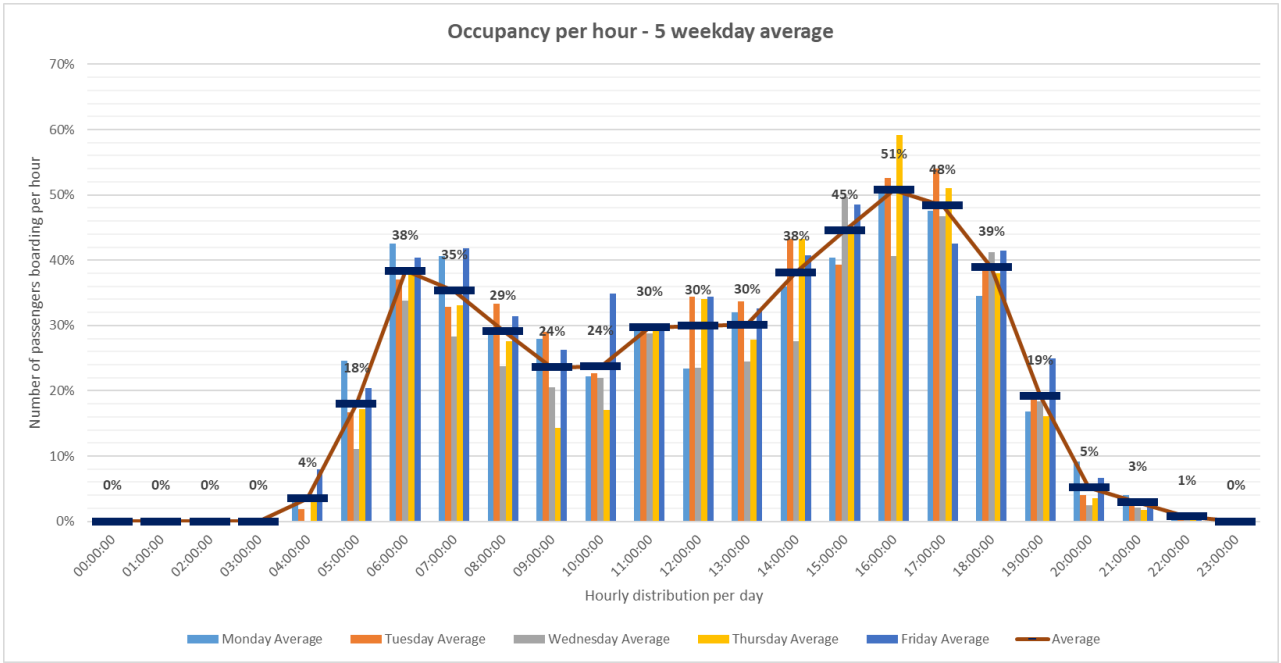


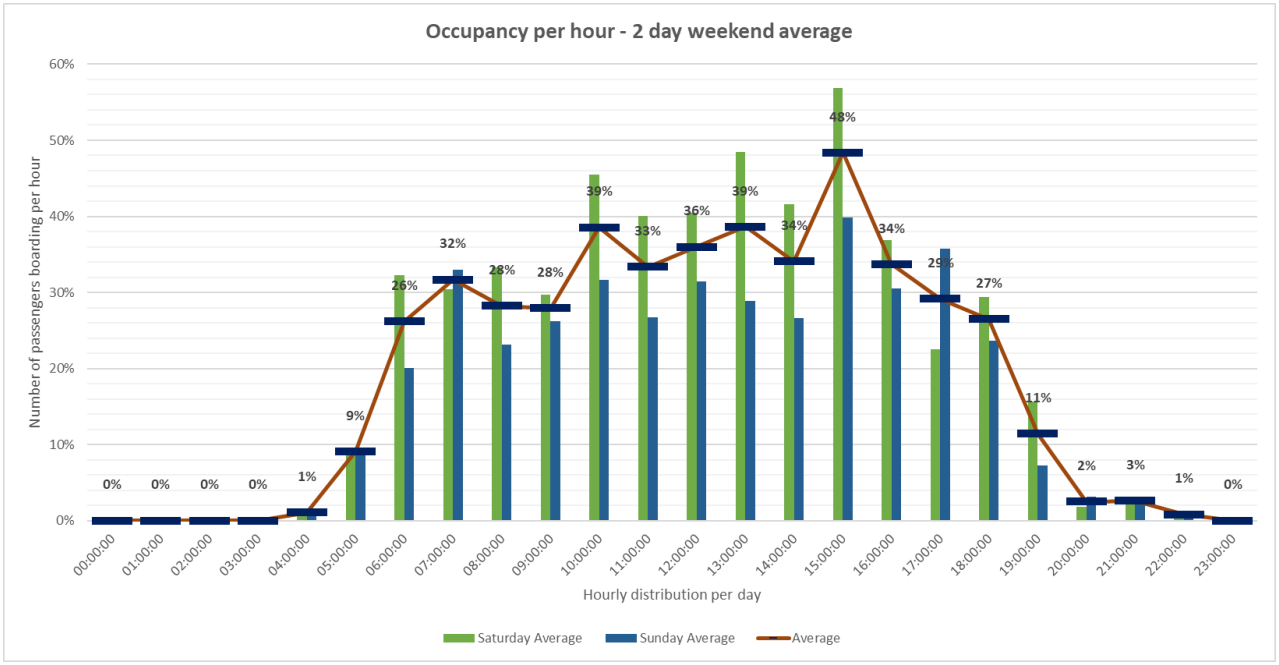

Distribution of income received per hour - 7 day average
Number of passengers boarding per hour
R 250.00
R 200.00
R 150.00
R 100.00
R 50.00
R -
R0.65
R-
R-
R-
R7.55
R68.79
R181.83
R144.73
R97.96
R80.80
R80.63
R82.08
R77.17
R76.21
R83.77
R109.80
R132.16
R145.19
R113.49
R27.61
R5.63
R4.37
R0.25
R-
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Monday Average
Tuesday Average
Wednesday Average
Thursday Average
Friday Average
Saturday Average
Sunday Average
Average


Distribution of income received per hour - 2 day weekend average
Number of passengers boarding per hour
R 140.00
R 120.00
R 100.00
R 80.00
R 60.00
R 40.00
R 20.00
R -
R2.26
R-
R-
R-
R3.46
R40.07
R110.60
R118.49
R109.91
R108.63
R115.96
R105.47
R115.74
R105.61
R90.32
R119.38
R112.06
R77.18
R71.85
R17.87
R6.40
R3.06
R0.16
R-
00:00:00
01:00:00
02:00:00
03:00:00
04:00:00
05:00:00
06:00:00
07:00:00
08:00:00
09:00:00
10:00:00
11:00:00
12:00:00
13:00:00
14:00:00
15:00:00
16:00:00
17:00:00
18:00:00
19:00:00
20:00:00
21:00:00
22:00:00
23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

The following graphs show the average occupancy per hour over a 7-day period, a 5-day week period and 2-day weekend period.

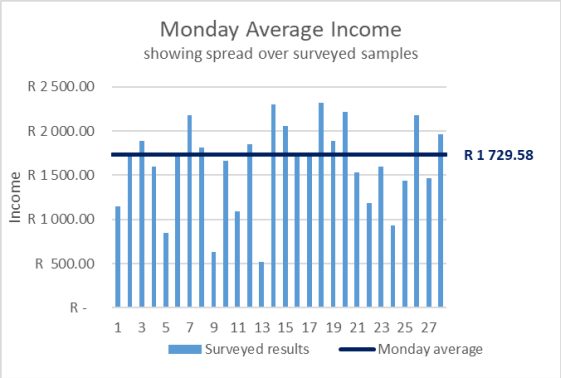


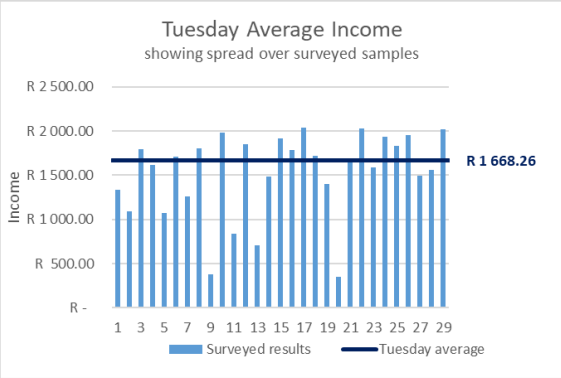


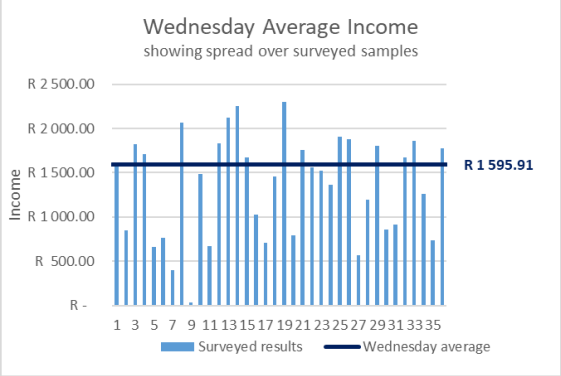

Occupancy per hour - 2 day weekend average
Number of passengers boarding per hour
60%
50%
40%
30%
20%
10%
0%
0% 0% 0% 0% 1% 9% 26% 32% 28% 28% 39% 33% 36% 39% 34% 48% 34% 29% 27% 11% 2% 3% 1% 0%
00:00:00 01:00:00 02:00:00 03:00:00 04:00:00 05:00:00 06:00:00 07:00:00 08:00:00 09:00:00 10:00:00 11:00:00 12:00:00 13:00:00 14:00:00 15:00:00 16:00:00 17:00:00 18:00:00 19:00:00 20:00:00 21:00:00 22:00:00 23:00:00
Hourly distribution per day
Saturday Average
Sunday Average
Average

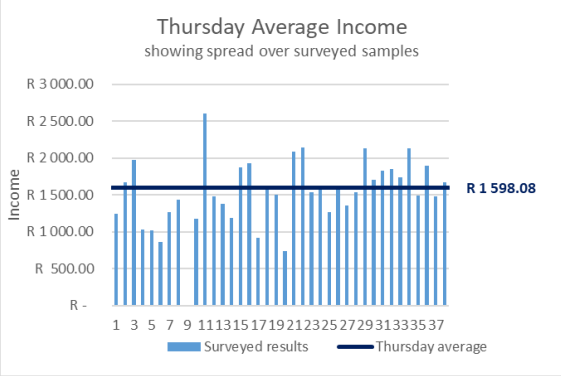
4. DETAILED SURVEY RESULTS

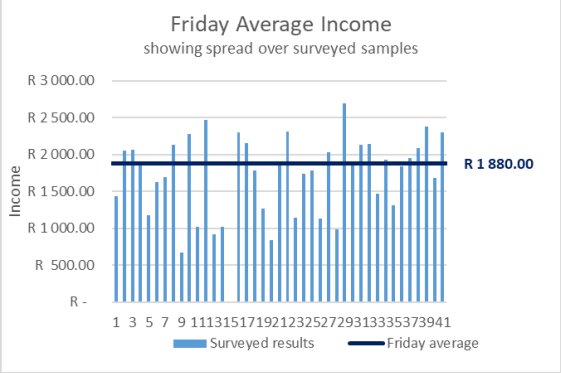
4.1. Income distribution

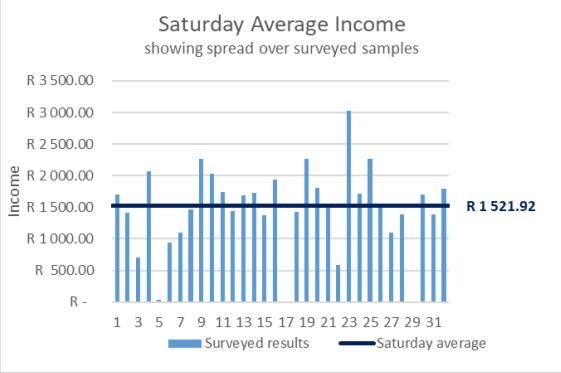


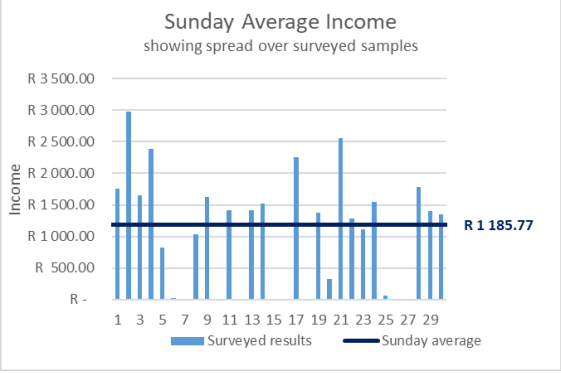




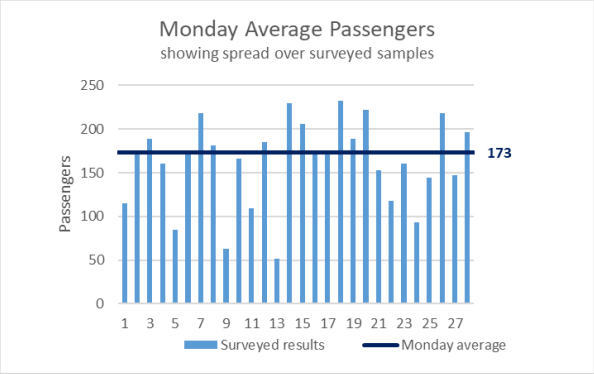


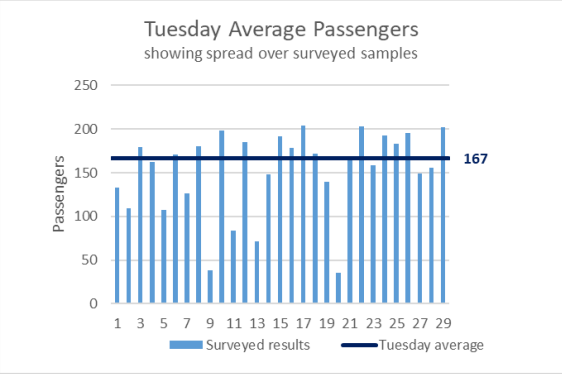


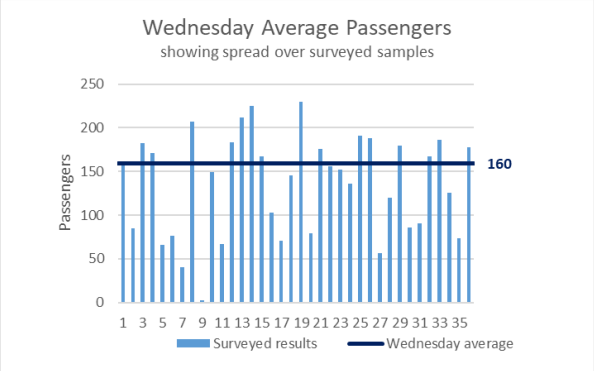


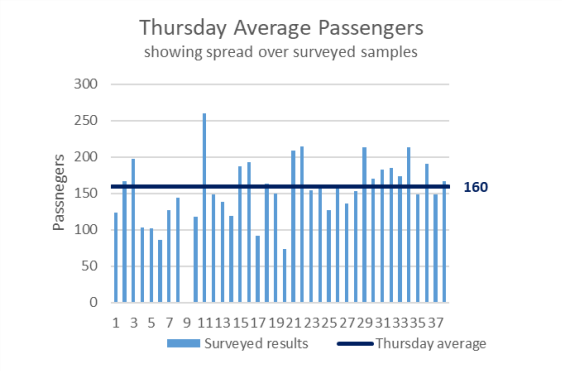


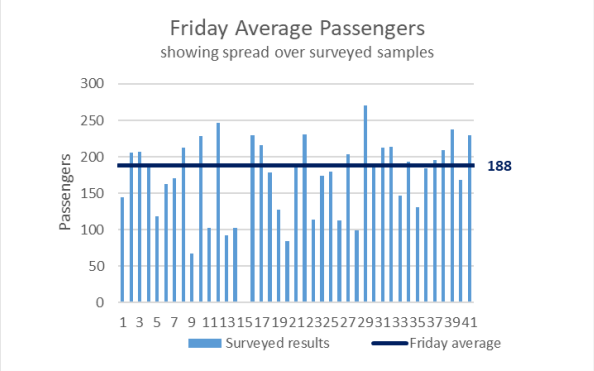
4.2. Passenger number distribution

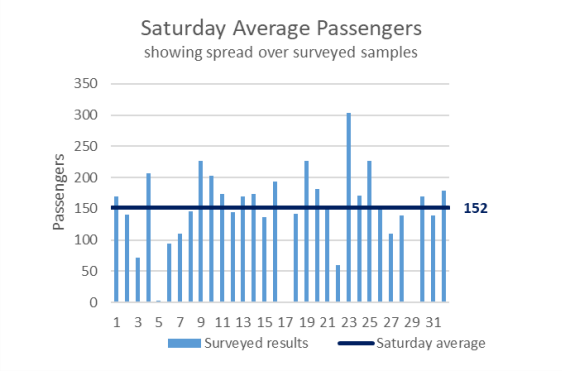


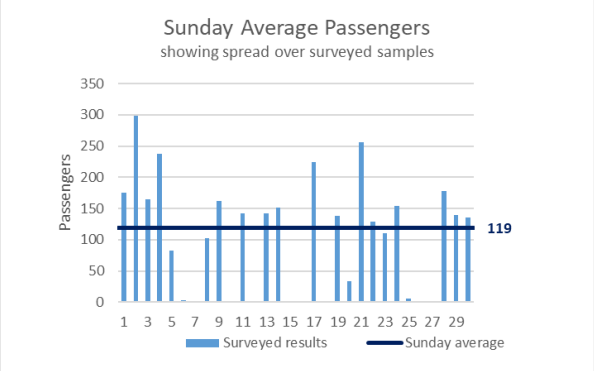










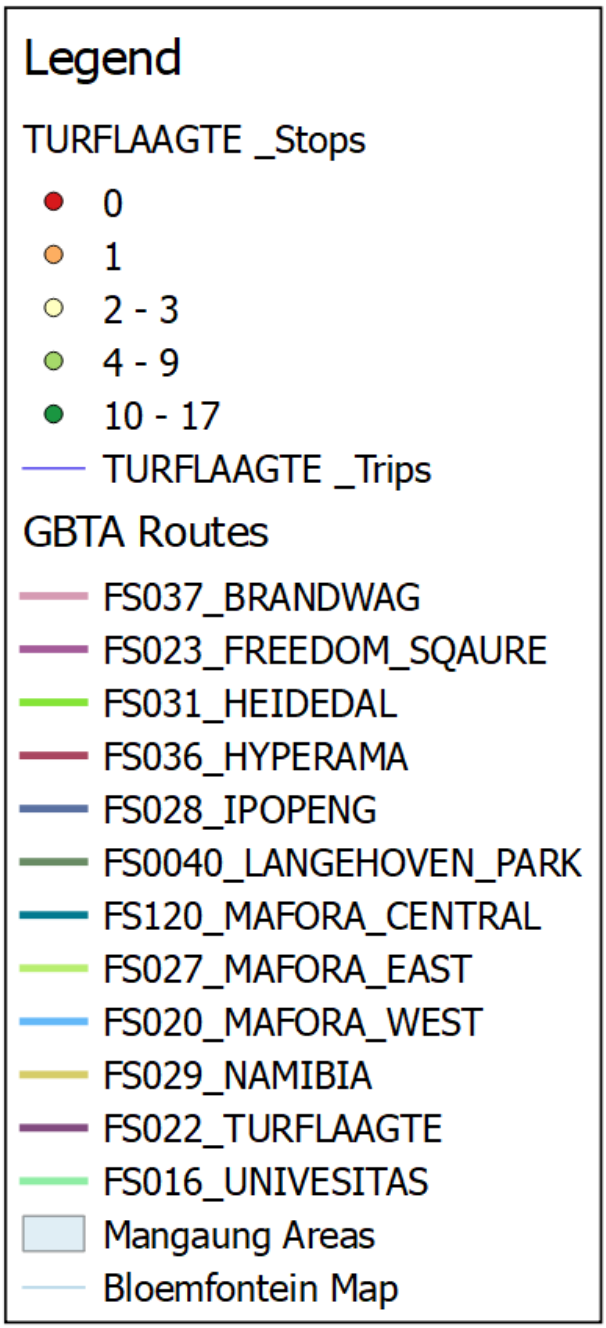


5. MAPS

The first maps show all the surveyed operations of the taxis alongside the Mangaung road network.

The maps following these indicate the a heatmap of the areas surveyed. These heatmaps demonstrate the zones of high volumes of boarding passenger.

Legend utilised for maps

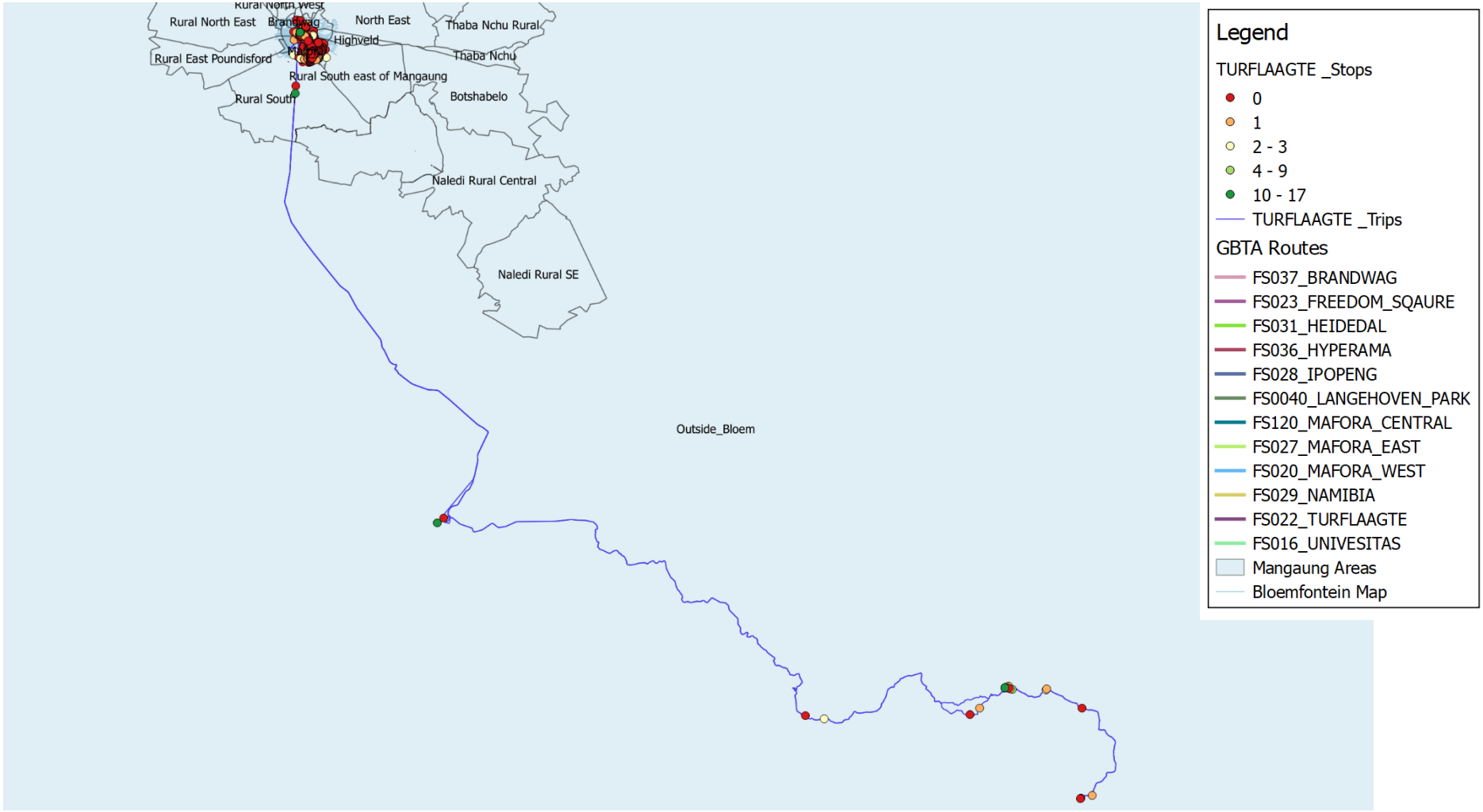


5.1. All surveyed operations

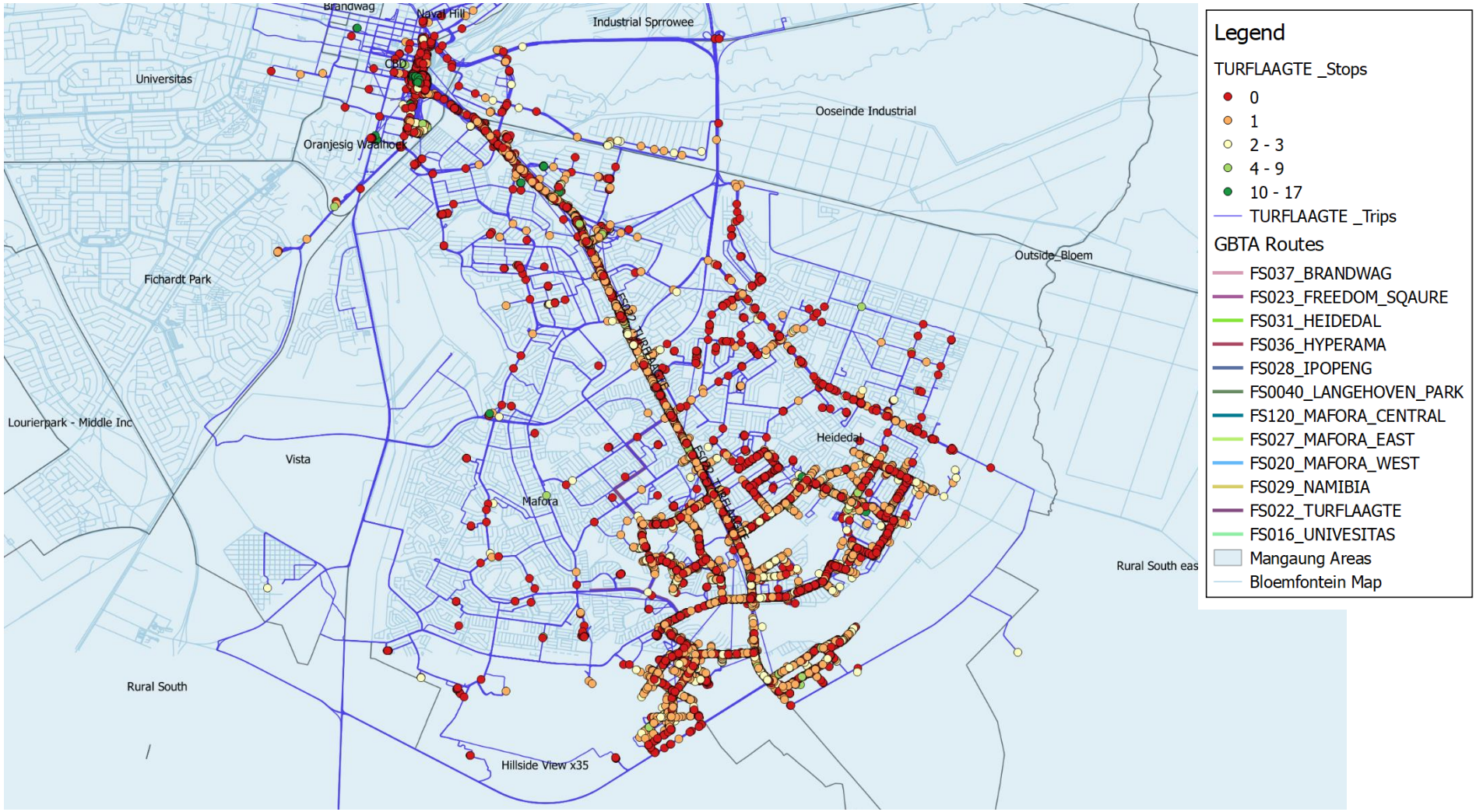
The tracks in blue illustrates the operations of all the surveyed taxis.

All the stops made by all the taxis to either pick up passengers or drop off passengers are indicated.

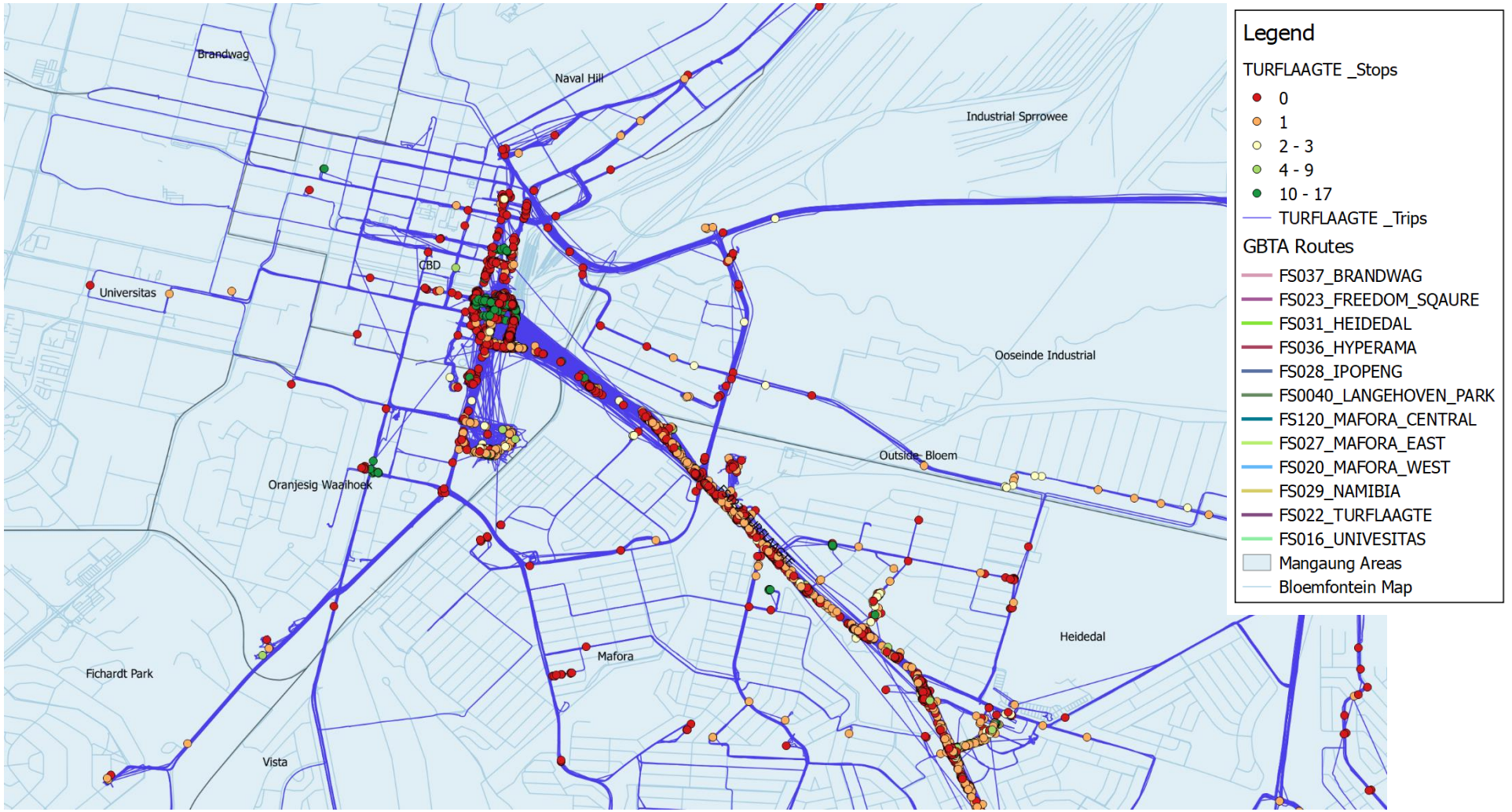
Operations of all surveyed taxis including stops



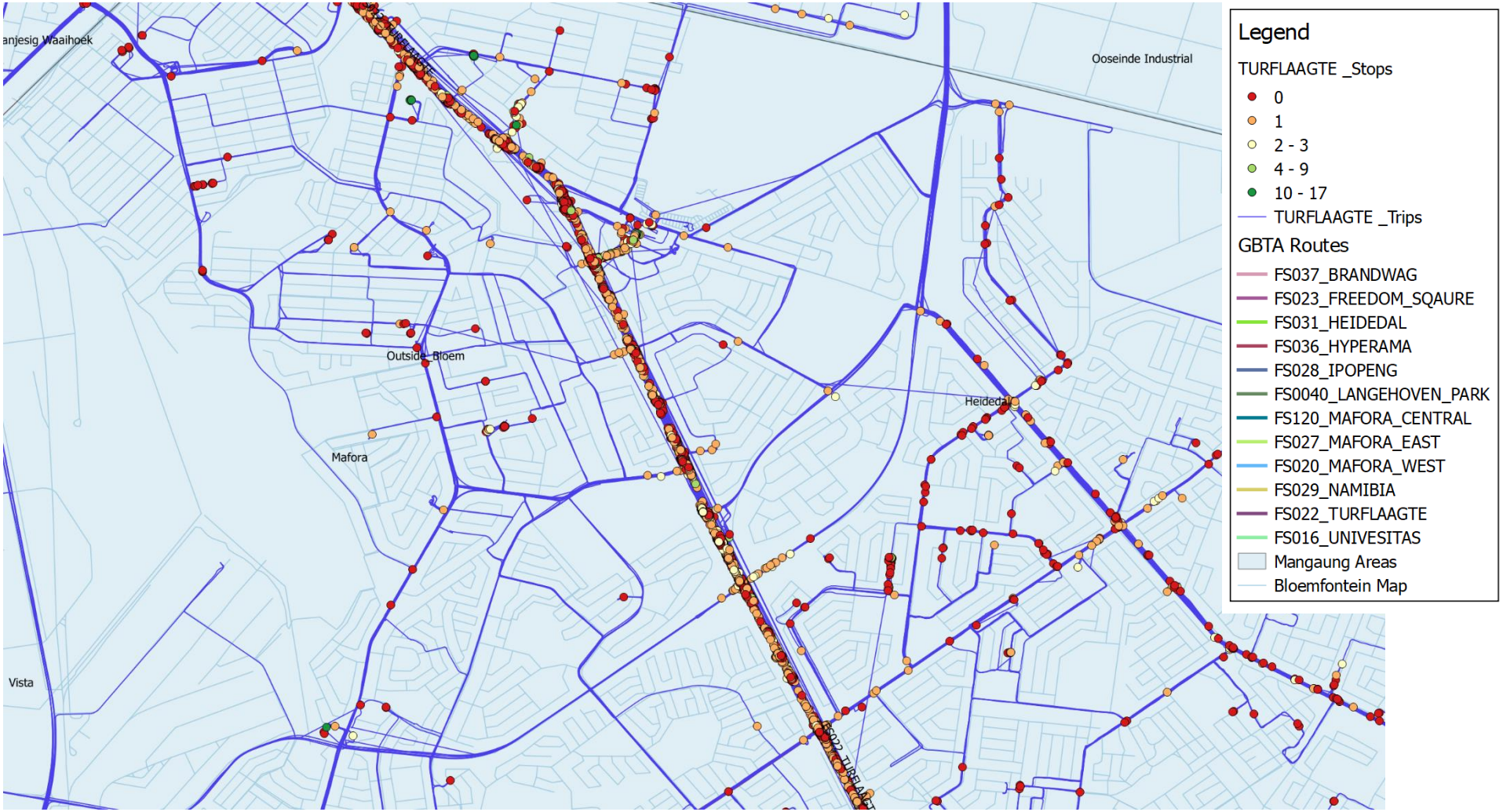
Operations of all surveyed taxis including stops – Focused on the TURFLAAGTE route



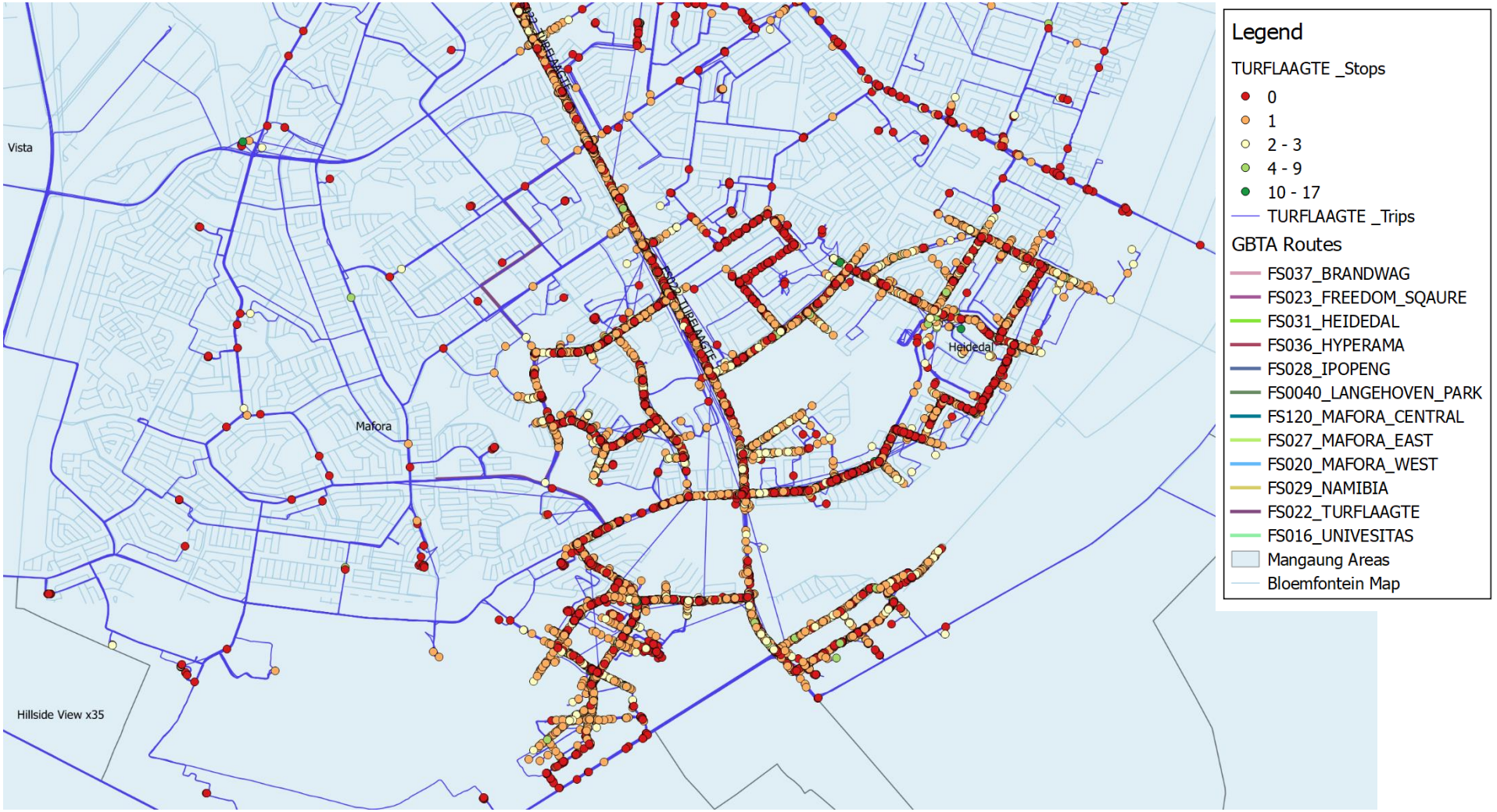
Operations of all surveyed taxis including stops – Focused on the CBD



Operations of all surveyed taxis including stops – Focused on Pelonomi Academic Hospital



Operations of all surveyed taxis including stops – Focused on the TURFLAAGTE area

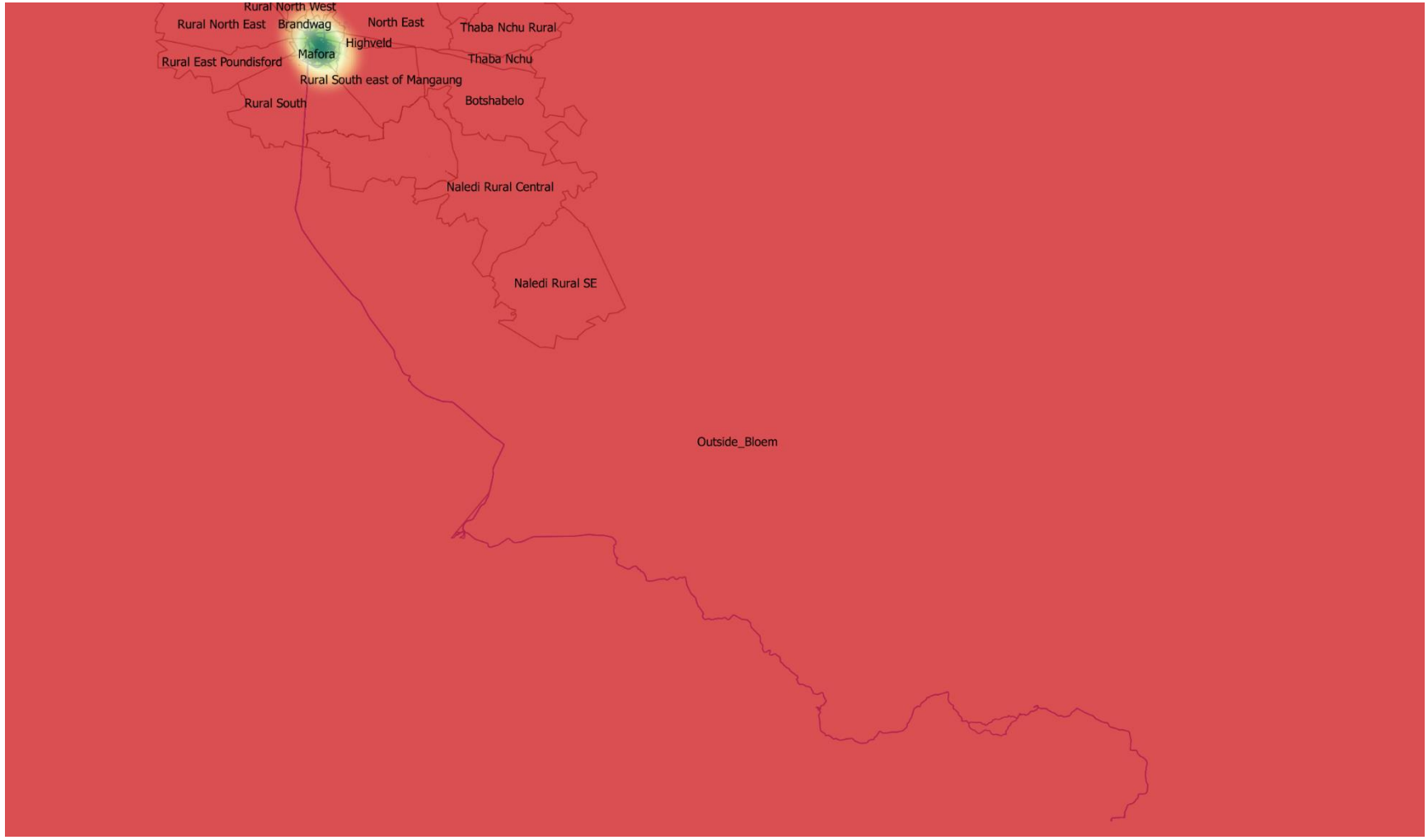


5.2. Heatmaps of taxi operations

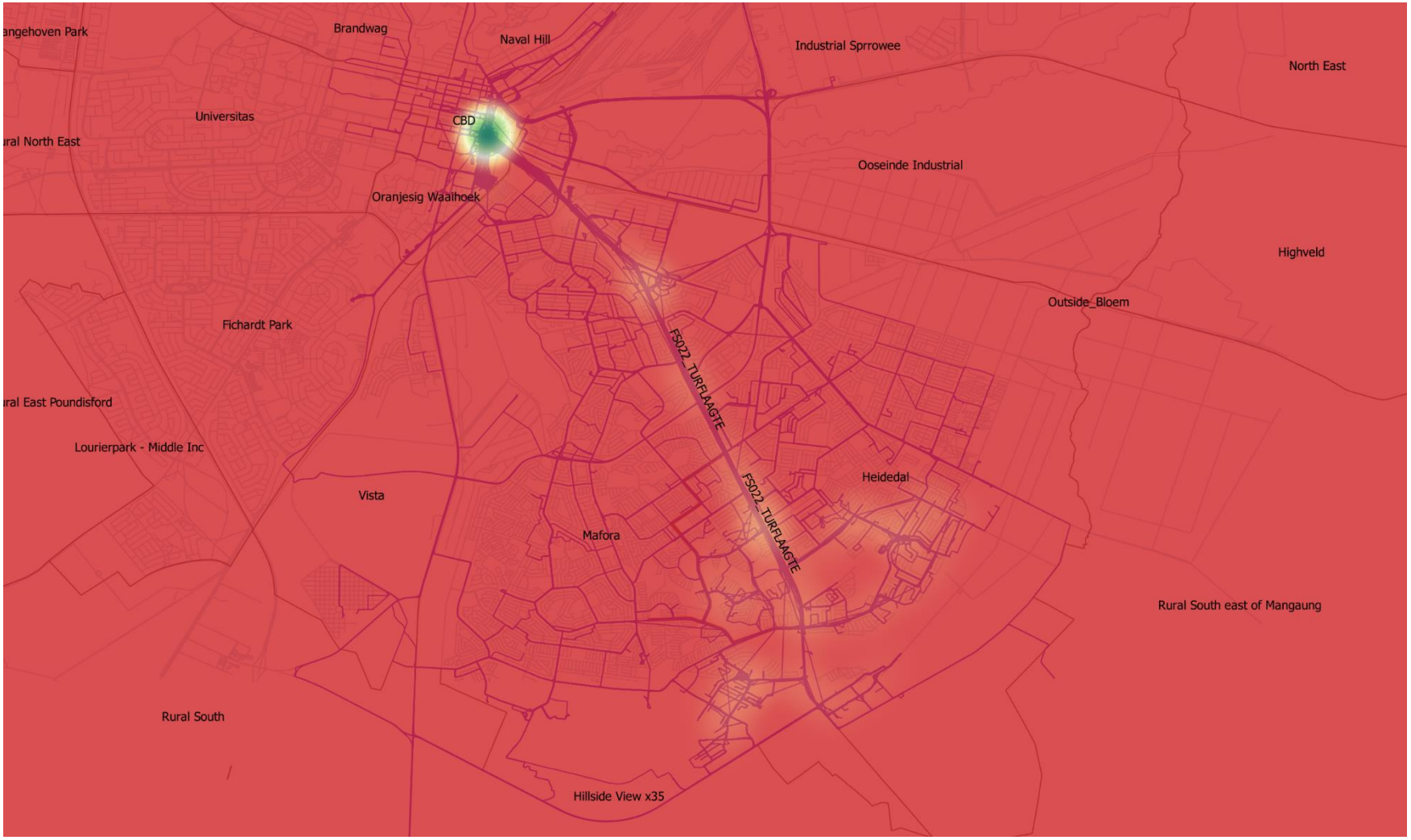
The following maps demonstrate the volume of passengers in each area.

- Red indicates little to no activity compare to the rest of the area.
- Yellow indicates high activity compared to the rest of the area
- Green indicates the highest activity compared to the rest of the area

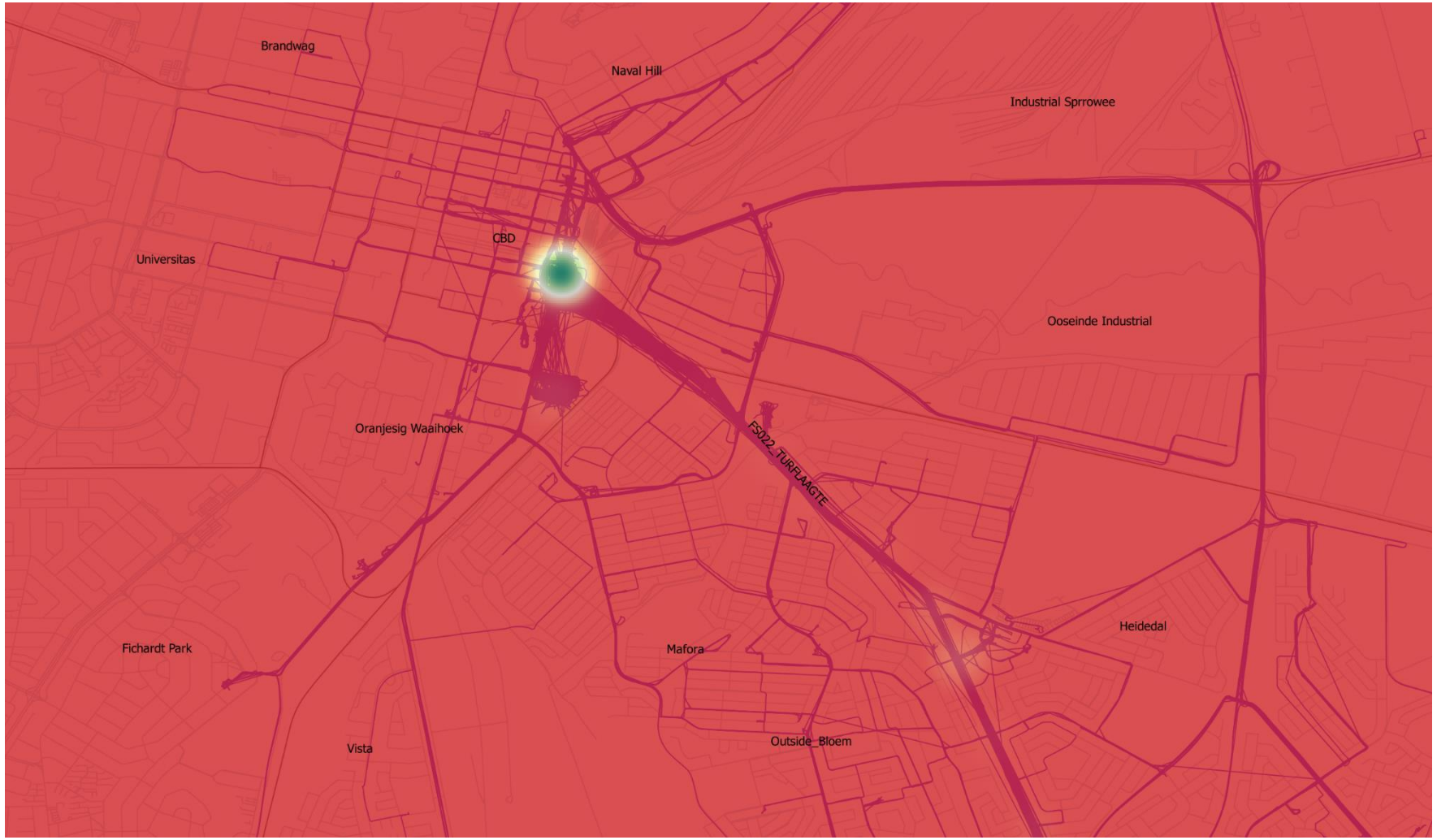
Heatmap of total surveyed area.



Heatmap of total surveyed area – Focused on the TURFLAAGTE route



Heatmap of total surveyed area – Focused on the CBD



Heatmap of total surveyed area – Focused on Pelonomi Academic Hospital

Heatmap of total surveyed area – Focused on TURFLAAGTE

ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Survey results for

Taxi Route – UNIVERSITAS

iSAHA

Table of Contents

ROUTE: **UNIVERSITAS**
REPORT DATE: **15 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Universitas Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Universitas Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

	Option A		*Option B*		*Option C*	
Average operating income per month	**R 37 492.99**		**R 24 932.91**		**R 25 027.40**	
Average operating income per day		R 1 236.98		R 822.60		R 825.71
Cost of operations per month	**R 19 479.80**		**R 14 208.18**		**R 17 693.52**	
Cost of operations per day		R 639.73		R 466.61		R 581.07
Operational cost - Fuel & Oil	*R 8 295.06*	*R 272.42*	*R 7 345.18*	*R 241.22*	*R 3 685.54*	*R 121.04*
Operational cost - Maintenance	*R 4 005.41*	*R 131.54*	*R 2 744.67*	*R 90.14*	*R 4 119.64*	*R 135.29*
Fixed cost	*R 6 721.00*	*R 220.72*	*R 3 660.00*	*R 120.20*	*R 9 430.00*	*R 309.69*
Overhead cost	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*	*R 458.33*	*R 15.05*
Average monthly operating profit*	**R 18 013.19**		**R 10 724.73**		**R 7 333.88**	
Average daily operating profit *		R 597.25		R 355.99		R 244.65
** Excluding driver salary*						
Excluding payments to owner						

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1			
Driver Salary	**R 5 000.00**	**R 5 000.00**	**R 5 000.00**
Average monthly operating profit	**R 18 013.19**	**R 10 724.73**	**R 7 333.88**
Driver Salary	**R 5 000.00**	**R 5 000.00**	**R 5 000.00**
Monthly profit to Owner	**R 13 013.19**	**R 5 724.73**	**R 2 333.88**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2			
Daily usage fee paid by the driver to the owner:			
Total usage fee paid to owner per month	**R 17 617.50**	**R 11 745.00**	**R 21 097.50**
Average operating income per month	**R 37 492.99**	**R 24 932.91**	**R 25 027.40**
Monthly usage fee to Owner	**R 17 617.50**	**R 11 745.00**	**R 21 097.50**
Usage cost per month (fuel, oil)	**R 8 295.06**	**R 7 345.18**	**R 3 685.54**
Monthly profit to Driver	**R 11 580.43**	**R 5 842.73**	**R 244.36**
Monthly usage fee to Owner	**R 17 617.50**	**R 11 745.00**	**R 21 097.50**
Maintenance cost per month	R 4 005.41	R 2 744.67	R 4 119.64
Fixed cost per month	R 6 721.00	R 3 660.00	R 9 430.00
Overhead cost per month	R 458.33	R 458.33	R 458.33
Monthly profit to Owner (scenario 2)	**R 6 432.76**	**R 4 882.00**	**R 7 089.52**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income						
	Option A		*Option B*		*Option C*	
	Average income per day		Average income per day		Average income per day	
Monday	R	1 471.60	R	821.43	R	690.00
Tuesday	R	1 463.75	R	790.00	R	-
Wednesday	R	1 409.09	R	788.00	R	1 830.00
Thursday	R	1 382.80	R	815.00	R	1 580.00
Friday	R	1 468.93	R	1 173.75	R	1 670.00
Saturday	R	899.64	R	920.00	R	10.00
Sunday	R	563.08	R	450.00	R	-
Total weekly income	**R**	**8 658.89**	**R**	**5 758.18**	**R**	**5 780.00**
Average daily income	**R**	**1 236.98**	**R**	**822.60**	**R**	**825.71**

4. COST CALCULATIONS

4.1. General information

	Option A	*Option B*	*Option C*
General information			
Vehicle type	Quantum 15 Seater	Hi-Ace 14 Seater	Sprinter 22 Seater
Average km driven per day	168 km	109 km	75 km
Cost of fuel	R 14.00 per litre	R 14.00 per litre	R 14.00 per litre
Cost of oil	R 60.00 per 500 ml	R 60.00 per 500 ml	R 60.00 per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil
Operational cost

Usage cost assumptions
These expenses are usually for the driver's account under Scenario 2

Fuel consumption	10	km / litre		7	km / litre		10	km / litre
Oil consumption: one 500ml can of oil every	2	days		2	days		2	days
Fuel and Oil usage per day	**R**	**272.42**		**R**	**241.22**		**R**	**121.04**	
Fuel and Oil usage per month	**R**	**8 295.06**		**R**	**7 345.18**		**R**	**3 685.54**	

Maintenance cost assumptions
These expenses are always for the owner's account

Main service cost	R	3 500.00		R	1 200.00		R	6 000.00	
Number of main services		2	per year		2	per year		1	per year
Minor service cost	R	1 400.00		R	700.00		R	4 000.00	
Number of minor services		6	per year		6	per year		2	per year
Wheel maintenance cost	R	2 000.00		R	1 200.00		R	5 000.00	
(brake pads, wheel cylinder, etc)									
Number of wheel maintenances		4	per year		4	per year		3	per year
Wheel alignment cost	R	360.00		R	360.00		R	360.00	
Number of wheel alignments		12	per year		12	per year		12	per year
Price of tyres	R	1 350.00	per tyre	R	700.00	per tyre	R	2 500.00	per tyre
Tyre lifespan		30 000.00	km		11 200.00	km		60 000.00	km
Upholstery, cost of replacement	R	2 200.00		R	1 200.00		R	2 200.00	
Number of times upholstery is replaced		2	per year		2	per year		2	per year
Unforeseen cost (average per event)	R	2 300.00		R	2 300.00		R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)									
Number of times of unforeseen expenses		1	per year		1	per year		1	per year
Cost of cleaning, per event	R	50.00		R	50.00		R	50.00	
Number of times cleaning is done		52	per year		52	per year		52	per year
Maintenance: average cost per day	**R**	**131.54**		**R**	**90.14**		**R**	**135.29**	
Maintenance: average cost per month	**R**	**4 005.41**		**R**	**2 744.67**		**R**	**4 119.64**	

4.3. Fixed cost

Fixed cost								
Fixed costs are related to a vehicle, independent of the operations of the vehicle								
Insurance installment	R	18 000.00	per year	R	9 600.00	per year	R	22 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year	R	5 000.00	per year	R	5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year	R	27 780.00	per year	R	83 340.00	per year
Vehicle licence fees cost	R	1 500.00	per year	R	900.00	per year	R	1 700.00	per year
Roadworthy test cost	R	480.00	per year	R	480.00	per year	R	960.00	per year
Operating licence cost, once every 5 years	R	12.00		R	60.00		R	60.00	
Monthly association fee	R	100.00	per year	R	100.00	per year	R	100.00	per year
Fixed cost: average cost per day	**R**	**220.72**		**R**	**120.20**		**R**	**309.69**	
Fixed cost: average cost per month	**R**	**6 721.00**		**R**	**3 660.00**		**R**	**9 430.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*								
Number of taxis in fleet			3			3			3	
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year	R	2 000.00	per year	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year	R	500.00	per year	R	500.00	per year
Security	*(security, parking fees)*	R	500.00	per year	R	500.00	per year	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year	R	1 000.00	per year	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**		**R**	**15.05**		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**		**R**	**458.33**		**R**	**458.33**	

ANNEXURE A

Taxi Operational Profit Calculations (Estimate)

MANGAUNG

AT THE HEART OF IT ALL

Long term survey results for

Taxi Route – UNIVERSITAS

iSAHA

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ROUTE: **UNIVERSITAS (Long Term)**
REPORT DATE: **21 December 2017**

1. INTRODUCTION

The electronic on-board survey results for Universitas Taxi Route have been used as inputs for the operational profit calculation estimates in this annexure.

At the time of this document the assumptions used in the cost calculations have not been verified by the Universitas Taxi Route members. An Excel spreadsheet is available where these assumption values can be changed which will reflect a more accurate value for operational profits and or losses.

In all the results, there are 3 possible options, Option A, Option B and Option C.

Option A gives the Operational Profit for a Quantum 14 to 15-seater vehicle.

Option B gives the Operational Profit for an older Siyaya / Hi-Ace 13 – 14-seater vehicle.

Option C gives the Operational Profit for a Sprinter or similar 22-seater vehicle.

There are also 2 scenarios for each Option.

Scenario 1: The Owner pays the driver a salary.

Scenario 2: The driver pays the owner a daily usage fee to operate the taxi. The driver pays for fuel and oil and the owner pays for the rest.

2. CALCULATED RESULTS

2.1. Average Monthly Operating Profit

Below demonstrates the Average operating profit for a vehicle.

		Option A		
Average operating income per month	**R**	**50 241.30**		
Average operating income per day			R	1 657.58
Cost of operations per month	**R**	**25 411.75**		
Cost of operations per day			R	834.54
Operational cost - Fuel & Oil	*R*	*13 634.54*	*R*	*447.77*
Operational cost - Maintenance	*R*	*4 597.87*	*R*	*151.00*
Fixed cost	*R*	*6 721.00*	*R*	*220.72*
Overhead cost	*R*	*458.33*	*R*	*15.05*
Average monthly operating profit*	**R**	**24 829.56**		
Average daily operating profit *			R	823.04
** Excluding driver salary*				
Excluding payments to owner				

2.2. Scenario 1 result

Below demonstrates Scenario 1.

Scenario 1

Driver Salary	**R**	**5 000.00**
Average monthly operating profit	**R**	**24 829.56**
Driver Salary	**R**	**5 000.00**
Monthly profit to Owner	**R**	**19 829.56**

2.3. Scenario 2 result

Below demonstrates Scenario 2.

Scenario 2

Daily usage fee paid by the driver to the owner:		
Total usage fee paid to owner per month	**R**	**17 617.50**
Average operating income per month	**R**	**50 241.30**
Monthly usage fee to Owner	**R**	**17 617.50**
Usage cost per month (fuel, oil)	**R**	**13 634.54**
Monthly profit to Driver	**R**	**18 989.27**
Monthly usage fee to Owner	**R**	**17 617.50**
Maintenance cost per month	R	4 597.87
Fixed cost per month	R	6 721.00
Overhead cost per month	R	458.33
Monthly profit to Owner (scenario 2)	**R**	**5 840.29**

3. INCOME SUMMARY

The income average used is based on the results from the electronic on-board survey.

Daily income			
	Option A	*Option B*	*Option C*
	Average income per day	Average income per day	Average income per day
Monday	R 1 813.08	R -	R -
Tuesday	R 1 743.85	R -	R -
Wednesday	R 1 518.57	R -	R -
Thursday	R 1 807.50	R -	R -
Friday	R 1 828.00	R -	R -
Saturday	R 1 676.36	R -	R -
Sunday	R 1 215.71	R -	R -
Total weekly income	**R 11 603.07**	**R -**	**R -**
Average daily income	**R 1 657.58**	**R -**	**R -**

4. COST CALCULATIONS

4.1. General information

	Option A		
General information			
Vehicle type	Quantum 15 Seater		
Average km driven per day		276	km
Cost of fuel	R	14.00	per litre
Cost of oil	R	60.00	per 500 ml

4.2. Operational Cost

Operational cost assumptions - usage cost, fuel and oil
Operational cost

Usage cost assumptions			
Scenario 2			
Fuel consumption		10	km / litre
Oil consumption: one 500ml can of oil every		2	days
Fuel and Oil usage per day	**R**	**447.77**	
Fuel and Oil usage per month	**R**	**13 634.54**	

Maintenance cost assumptions
These expenses are always for the owner's account

Main service cost	R	3 500.00	
Number of main services		2	per year
Minor service cost	R	1 400.00	
Number of minor services		6	per year
Wheel maintenance cost	R	2 000.00	
(brake pads, wheel cylinder, etc)			
Number of wheel maintenances		4	per year
Wheel alignment cost	R	360.00	
Number of wheel alignments		12	per year
Price of tyres	R	1 350.00	per tyre
Tyre lifespan		30 000.00	km
Upholstery, cost of replacement	R	2 200.00	
Number of times upholstery is replaced		2	per year
Unforeseen cost (average per event)	R	2 300.00	
(interior, parts, exhaust, auto-electrical, windows, starter, etc)			
Number of times of unforeseen expenses		1	per year
Cost of cleaning, per event	R	50.00	
Number of times cleaning is done		52	per year
Maintenance: average cost per day	**R**	**151.00**	
Maintenance: average cost per month	**R**	**4 597.87**	

4.3. Fixed cost

Fixed cost			
	operations of the vehicle		
Insurance installment	R	18 000.00	per year
Insurance excess amount in case of a claim	R	5 000.00	per year
Monthly vehicle installments (financing)	R	55 560.00	per year
Vehicle licence fees cost	R	1 500.00	per year
Roadworthy test cost	R	480.00	per year
Operating licence cost, once every 5 years	R	12.00	
Monthly association fee	R	100.00	per year
Fixed cost: average cost per day	**R**	**220.72**	
Fixed cost: average cost per month	**R**	**6 721.00**	

4.4. Overhead Cost

Overhead cost assumptions	*Overhead cost is the ongoing expenses of operating the business*			
Number of taxis in fleet			3	
Equipment and tools	*(computers, software, tools)*	R	2 000.00	per year
Communication	*(landlines, cellphones, internet connections)*	R	2 000.00	per year
Security	*(security, parking fees)*	R	500.00	per year
Bank cost	*(monthly bank account fees, cash deposit fees)*	R	1 000.00	per year
Overhead cost: average cost per day per taxi		**R**	**15.05**	
Overhead cost: average cost per month per taxi		**R**	**458.33**	

ELECTRONIC ON-BOARD SURVEY

Results

MANGAUNG

AT THE HEART OF IT ALL

Long term survey results for

Taxi Route – UNIVERSITAS

iSAHA

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ROUTE: **UNIVERSITAS (Long Term)**
REPORT DATE: **21 December 2017**

1. BACKGROUND

An on-board survey was conducted by means of electronic in-vehicle equipment and back-office processing and analysis.

The data collected from the survey included the routes travelled by the taxis and the passenger numbers boarding and alighting the taxis recorded with time and position information.

The positional information is recorded with an electronic on-board GPS device, which was fitted into the vehicle. The GPS information started recording only when the taxi was switched on.

The aim of the survey is to record the normal daily operations of minibus taxis for a period of 12 days and report on 7 days of operation. Operations for each day of the week was recorded and the average results for each day of the week are portrayed in this report.

2. SURVEY INFORMATION

2.1. Period

1 taxis and 87 days were surveyed between the following dates:
Cycle 1: 21 February 2017
Cycle 10: 15 August 2017

2.2. Assumptions

The following assumptions were made in the analysis and calculations:

1. **A flat fare was paid per passenger per trip**
   a. Bloemfontein uses a flat fare of R10.00 on this route.
2. **Private** passengers were defined as follow:
   a. Private passengers 1: Passengers transported outside of the normal working area or time of the taxi. E.g. friends of the driver travelling late at night to a residence.
   b. Private passengers 2: Passengers traveling on a trip which originates or ends outside the official routes of the relevant association. E.g. passengers on a trip to Johannesburg.
3. **% Private passengers:** The number of passenger on a trip outside the official routes as a percentage of the total number of passengers who boarded the taxi
4. **PasKm:** Passenger Kilometre (PKM) is a measure of movement of passengers by a mode of

transport. It is calculated as: PKM = TPC x TDC. Where, TPC is Total Passengers Carried measured in terms of number of passengers and, TDC is the Total Distance Covered measured in kilometres.

PasKM = Onboard x Operating Km

5. **SeatKms:** Seat kilometres (SK) is a measure of a minibus's passenger carrying capacity. It is equal to the number of seats available multiplied by the number kilometres travelled.

   SeatKms = Capacity of vehicle x Operating Km

6. **Occupancy:** The proportion of seats occupied or used.

   Occ = PasKm / SeatKms

7. **DeadKm:** The number of Kms travelled with no passengers onboard
8. **PrivateKm:** The number of Kms travelled outside of the survey area.
9. **Trip:** The route travelled between one stop to the next stop.

2.3. Remark about the survey

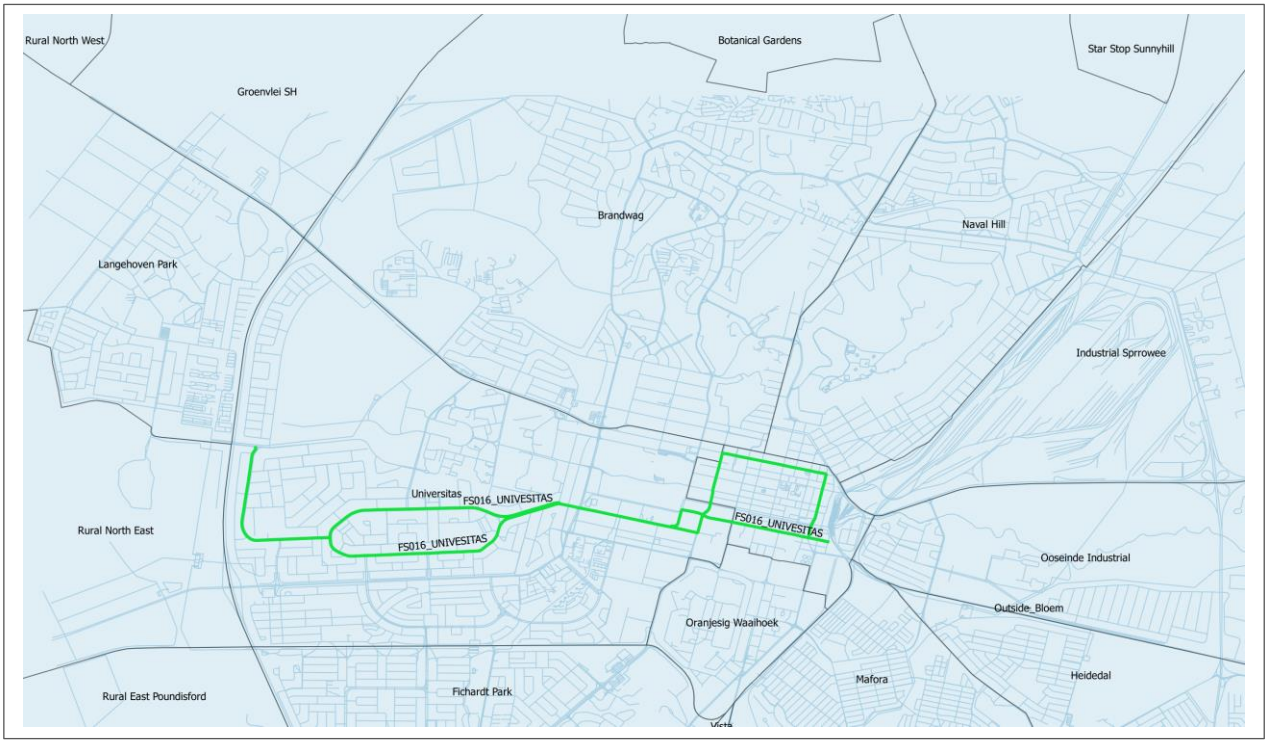
1 long term vehicle was surveyed for 187 days between cycle 1 and cycle 11.

3. RESULTS

3.1. Summary

The following average income from fare-paying passengers is the result from the on-board survey analysis:

Period	Value	Note
Average daily income	R 1 657.58	Per day for 7 days, covering each day of the week As determined from survey
Average weekly income	R 11 603.07	Per week As determined from survey
Average monthly income	R 50 241.30	Calculated from weekly result Formula: 4.33 x weekly average
Average annual turnover	R562 749.01	Calculated from weekly result Formula: 48.5 x weekly average



Corridor served by UNIVERSITAS Route