

ACCURATE TRADING (PTY) LTD

*Proposed Filling Station Development
on a Erf 425 & 426, Pienaarsrivier
Limpopo Province*

**Traffic Feasibility Assessment
Report No T2021/058**

May 2021



TRAFFTRANS (PTY) LTD
TRAFFIC-LAB

Prepared by:
Trafftrans (Pty) Ltd
181 Zambesi Drive
Sinoville
PRETORIA

☎ +27 (0)12 543 1379 Fax +27 (0)12 543 0915

Team: FH van Heerden, PC Labuschagne & LA Haigh

Accurate Trading (Pty) Ltd

Contact Person: Mr Rory Mc Guirk



Verkeersopnames en Analiese

80/03663/07

Traffic Surveys and Analysis

Direkteure/Directors

F H VAN HEERDEN (Beslurend/Managing)

Pretoria

Zambesiylaan 181 Zambesi Drive
SINOVILLE 0182

U verw/Your ref

☒ Posbus 13900 / PO Box 13900
SINOVILLE 0129

☎ 012 543 1379

Fax 086 576 8611

E-mail traffic@trafftrans.co.za

Ons verw/Our ref Traffrans T2021/058

7 June 2021

Accurate Trading (Pty) Ltd
Postnet Suite 86
Private Bag X4
WIERDA PARK
0149

Attention: Mr Rory Mc Guirk

Dear Sirs

**PROPOSED ESTABLISHMENT OF A FILLING STATION ON ERF 425 AND 426,
PIENAARSIVIER, LIMPOPO PROVINCE: TRAFFIC FEASIBILITY ASSESSMENT**

We are pleased to submit our report on the assessment the feasibility of the proposed establishment of a filling station on Erf 425 & 426, Pienaarsrivier in Limpopo Province, from a traffic point of view.

We trust this report meets with your requirements, however, should you require any further information, please do not hesitate to contact us.

Yours faithfully

FH VAN HEERDEN Pr Eng (860575)
M Eng Transportation (Pretoria)
TRAFFTRANS (PTY) LTD

ACCURATE TRADING (PTY) LTD

Proposed filling station on Erf 425 & 426, Pienaarsrivier

REPORT NUMBER T2021/058

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1. INTRODUCTION

1.1 Appointment / Terms of Reference

The following report relates to the appointment of Trafftrans (Pty) Ltd by Accurate Trading (Pty) Ltd to undertake a Traffic Feasibility Assessment for the establishment of a filling station and truck stop. The location of the site and other relevant information are shown in **Figure 1**.

1.2 Background and Objectives

Background

It is intended to develop a filling station with a truck stop on Erf 425 and 426, Pienaarsrivier in Limpopo Province, located adjacent to the D626. Other facilities to be provided, are those typically associated with a filling station and truck stop, such as a convenient store, fast food outlet, ablution facilities as well as ATM facilities.

The property is located to the south of the D626, approximately midway between the R101 and the N1. The development is to gain access from the D626 and the local road network to the south of the property.

Objectives

The objective of this study is to assess the feasibility of the proposed development from a traffic point of view.



PROJECT

ERF 425 & 426,
PIENAARSRIVIER

LOCALITY PLAN

KEY

SITE



TRAFFTRANS (PTY) LTD

Proj. T2021/058 Fig. 1

2. STUDY CONSIDERATIONS

2.1 Proposed development

The proposed development will consist of a **filling station and truck stop and associated facilities**. Provision is being made to accommodate the following:

- | | |
|------------------------------------|-----------------------|
| • Convenient store | 250m ² |
| • 2 x Fast food outlets | 2 x 250m ² |
| • Ablution facilities for truckers | 50m ² |
| • ATM facilities | 2 |

It is anticipated that the bulk of the development will be done in a single phase, once started.

2.2 Road Infrastructure

The D626 is a two-lane municipal road functioning as Class R4 route (collector road). Currently, the D626 has a 40m road reserve. The available road reserve is more than the requirement in terms of the TRH 26 of 25m for this type of road to accommodate a single carriageway road with a surfaced roadway width of 7,4m with a gravel shoulder. Class R4 roads also allows access to individual properties.

There are three existing intersections in the vicinity of the site, which are that of Catanho Street, adjacent to and west of the property, the R101, approximately 400m to the west and the western terminal of the N1, approximately 250m to the east of the property.

The property is located adjacent to, and to the south of the D626 with access to the property anticipated from the D626, Catanho Street and Marcelle Street. This part of the D626 forms a short and convenient link between the N1 and the R101.

2.3 Study Area

The study area applicable to this site, falls mainly in the area between the N1 and the R101. According to the Draft Petroleum Products Act 8 of 2020, the extent of the study area should be as follows:

- 5km radius in urban areas
- 25km radius in rural areas

This site, although currently seems to have a rural location, falls in the Pienaarsrivier development area, and with the urban (and other) development taking place in the immediate vicinity of the site, qualifies as an urban filling station (5km radius study area).

2.4 Competitor locations

The existing filling stations falling within a 5km radius from the proposed site, are the following:

- Malebye Business Enterprises t/a SAS Fuels - 1,1km to the south on the R101 (mainly northbound traffic)
- VKB Fuels (Pty) Ltd under the Total trade mark - 1,2km to the south on the R101 (mainly northbound traffic)

These two sites are directly adjacent to each other and in direct competition to one another.

2.4.1 Malebye filling station

This filling station is the closest to the proposed site - 1,1km from the site by road. It is located south of the site on the western side of the R101, and therefore catering more conveniently for the northbound traffic along the R101. Northbound traffic along the R101 will therefore first encounter this site before the proposed site. Although southbound traffic along the R101 could be exposed to the proposed filling station before encountering the Malebye filling station, the proposed development is located 400m from the R101, and therefore less convenient to visit than the Malebye filling station.

2.4.2 VKB filling station

This filling station is also close to the proposed site - 1,2km from the site by road. It is located south of the site on the western side of the R101, and therefore catering more conveniently for the northbound traffic along the R101. Northbound traffic along the R101 will therefore also first encounter this site before the proposed site. Although southbound traffic along the R101 could be exposed to the proposed filling station before encountering the VKB filling station, the proposed development is located 400m from the R101, and therefore less convenient to visit than the VKB filling station.

3. DATA / INFORMATION

3.1 Data collection

Traffic data was acquired from SANRAL of four counting stations in the vicinity on the R101 as well as the N1. The data acquired from the counting stations all consisted of continuous traffic surveys undertaken. The location of the counting stations from which data is available, is depicted in **Table 1**.

TABLE 1: COUNTING STATION INFORMATION

Station	Road	Location	Data year
1133	R101	5,5km south of Pienaarsrivier (D626) - both directions	2017 - 2020
1626	N1	600m south of D626 overpass	2017 - 2021
3083	N1	300m south of Mantsole weighbridge - northbound	2017 - 2021
3084	N1	300m north of Mantsole weighbridge - southbound	2017 - 2021
3085	R101	350m south of Mantsole access road - both directions	2017 - 2021
-	D626	600m west of R101	2018

Based on the data from the above counting stations, it has been found that the annual growth in general traffic before 2020 was found to be $\pm 3\%$ on the R101 and $\pm 0,5\%$ on the N1. However, due to the impact of the Covid-19 in 2020 and beyond, the growth in traffic between 2017 and 2021, has been found to be approximately -1% on the R101 and -3% on the N1.

Similarly, it has been found that the annual growth in heavy vehicle traffic before 2020 was found to be $\pm 4\%$ on the R101 and $\pm 0\%$ on the N1. However, due to the impact of the Covid-19 in 2020 and beyond, the growth in traffic between 2017 and 2021, has been found to be approximately -1% on the R101 and -4% on the N1.

The negative impact on heavy vehicle traffic was found to be more severe than on the general traffic and could take longer to recover.

3.2 Other Information

A residential area consisting of erven has been developed south of the site between the R101 and the N1. Immediately to the south of the proposed development, another residential area has been established, consisting of 120 erven. Both these developments get access to the D626 via Catanho Sreet which borders the proposed filling station/truck stop site.

4. FEASIBILITY ASSESSMENT

4.1 General

It is generally accepted in the industry to use an empiric formula to calculate the expected monthly fuel sales, which is as follows:

$L_{tot} = L_{lv} + L_{hv}$
$L_{lv} = ADT \times f \times p \times d$
$L_{hv} = ADTT \times f \times p \times d$

- L_{tot} - total litres per month (l/mth)
- L_{lv} - light vehicle litres per month (l/mth)
- L_{hv} - heavy vehicle litres per month (l/mth)
- ADT - Average Daily Traffic (veh/day)
- ADTT - Average Daily Truck Traffic (veh/day)
- f - average fill per relevant vehicle class (l/veh)
- p - percentage of pass-by relevant traffic class intercepted by the filling station (%)
- d - trading days per month (days)

The variables above, used to calculate the expected monthly fuel pumping figures, are clarified individually below.

4.2 Traffic Flows

Due to the location of the site, potential traffic to visit the proposed filling station and truck stop, is sourced from a number of roads passing the site in the vicinity. The D626 (running east-west) is passing the site immediately to the north, while the N1 (access via the Pienaarsrivier Interchange) is passing the site ± 450 m to the east and the R101 at ± 450 m to the west of the site, both running north-south. The relevant traffic volumes (2021) are as follows:

	<u>ADT</u>	<u>ADTT</u>	
N1 (northbound)	9147	1664	
N1 (southbound)	9872	1574	
R101 (northbound)	3105*	328*	* estimated from 2020 volumes
R101 (southbound)	2212	233	
D626 (eastbound)	2105**	281**	** estimated from 2018 volumes
D626 (westbound)	2057***	252***	*** estimated from 2018 volumes
Catanho Street	757#	-	# daily trips from residential area (TMH17)

Where 2021 volumes were not available, the required traffic volumes were estimated applying the relevant average growth rate experienced on the surrounding roads for the applicable years.

4.3 Average Fill

The estimated monthly sales (fuel pumping figures), were calculated taking the following into account:

- Location of the site (urban, rural)
- Applicable market (local, long distance)
- Average fills recorded at filling stations in the area (*Source: Route 2 Feasibility Report, April 2018*)

Based on the above, the typical filling has been found to be between 20 - 25 litres for light vehicles and between 200 - 250 litres for passer-by heavy vehicles. It was found in other studies that the average fill for vehicles stopping at truck stops is 330 litres per vehicle.

Due to the negative impact on the economy due to a number of factors (i.e. Covid-19, etc.), these fill figures are not being achieved at the moment and will only be applicable again, once the economy has largely recovered. For the purpose of this study, the following typical average fills per vehicle, have been accepted:

- Light vehicles 15 litres/fill
- Heavy vehicles 150 litres/fill
- Truck stop clients 300 litres/fill

4.4 Traffic Interception rates

A number of factors play a very important role in the magnitude of the traffic interception rate. These are as follows:

- **Visibility** - the higher the visibility, the higher the chance of attracting driver's attention
- **Location** - along long-distant routes or commuter routes
- **Accessibility** - easy and safety of entering or leaving the facility
- **Competition** - the positioning relative to other competitors
- **Appearance** - a clean, open and modern facility will attract more attention
- **Site layout** - ease of manoeuvring and circulation on-site
- **Facilities** - more, cleaner and variety of facilities (convenient store, ATM, fast food store, etc.)
- **Service** - prompt and friendly service from staff
- **Fuel price** - the fuel price in South Africa could differ per area (especially diesel)

Although all of the above factors play a major role to increase the actual utilisation rate, a general capture rate of the pass-by traffic (adjacent road), of between 2% and 6%, has been recommended by the Department of Transport and accepted in the industry as a good estimate for a standard filling station setup.

The first four factors listed above, plays a major role in the interception rates for this site. The site will be highly visible from the D626 and the N1 southbound, but poorly from the N1 northbound and the R101. The location is very good i.t.o. the D626 for pass-by and local traffic and also well-positioned for long-distant traffic on the N1 (heavy vehicles), since the closest filling stations north and south of

the site, are Palm Plaza Caltex (33km north) and Total Petro Port (45km south). The site will be easily assessable from the D626, the N1 (through the Pienaarsrivier Interchange) and the R101.

Based on the above, the following interception rates have been accepted for the purpose of this assessment:

	<u>Rate</u>	<u>Negative factor</u>
• N1 northbound	1,0%	Poor visibility
• N1 southbound	1,0%	Visibility could be problematic
• R101 northbound	0,5%	Poor visibility and competition
• R101 southbound	1,0%	Poor visibility
• D626 eastbound	4,0%	Site accessibility more difficult
• D626 westbound	4,0%	-
• Catanho Street	4,0%	

4.5 Trading Days

Since all of the above variables, for the calculation of the monthly fuel sales, are based on average values for fills per vehicle and interception rates, and that filling stations operate on a 24/7 basis, it can be comfortably assumed that these activities are spread over 30 trading days per month.

4.6 Expected Fuel Sales

The estimated fuel sales have been calculated for petrol and diesel separately, using the empirical formula mentioned in Section 4.1 above.

A breakdown of the estimated current fuel sales for this site is presented in **Table 2**.

TABLE 2: ESTIMATED MONTHLY FUEL SALES POTENTIAL

FUEL TYPE	N1		R101		D626	
	NB	SB	NB	SB	EB	WB
Petrol	20581	44424	7017	9954	37898	46274
Diesel	46800	88538	9287	13106	63274	70736
Sub-total	67381	132962	16304	23060	101172	117010
TOTAL ESTIMATED CURRENT MONTHLY FUEL SALES POTENTIAL						457889

Experience has shown that filling stations do not perform to its full potential from the start, and that it takes approximately three years to achieve its full potential to gain popularity and establishing its footprint on its potential market. The first year of operation can be as low as 75% of the full potential fuel sales. The projected annual forecast of the monthly fuel sales potential, is depicted in **Table 3**.

TABLE 3: ANNUAL FORECAST - MONTHLY FUEL SALES POTENTIAL

YEAR	POTENTIAL GROWTH		ESTIMATED FUEL		TOTAL
	Percentage of Potential**	Traffic Growth Rate	Petrol	Diesel	Litres per Month
1	75%	5%	134816	235977	370793
2	85%	5%	159853	280813	440666
3	100%	2%	191551	336975	528526
5	100%	2%	199290	350589	549879
10	100%	2%	220032	387079	607111

** The estimated potential as per Table 2 plus Catanho Street potential

It is generally accepted by most oil/fuel companies that new filling stations proof feasible with a monthly fuel sale of more than 250 000 litre per month. It can therefore be assumed that this site has potential to attract enough clients to already be a feasible site after opening (Year 1).

4.7 Other Considerations

4.7.1 Access

The feasibility as portrayed in this report, is based on the assumption that full access to the site will be available on the D626. To accommodate heavy vehicles for both the filling station as well as the truck stop, it would be preferable to also have full access on the side street (Catahno Street). Since the residential development to the south of the site is growing, it should be considered to also provide an access to the site from the south (Marcelle Street) in the future. Care should be taken that such an access is not to be abused by residents to take short-cut through the filling station to or from the D626.

The accesses are to be designed in line with the requirements of the relevant road authorities.

4.7.2 Parking

The parking requirement for this development as prescribed in the guidelines contained in the "Parking Standards, PG 3/85 (second edition)" published by the Department of Transport, are to be provided on site. According to these, on-site parking needs to be provided as summarised in Table 4 below:

TABLE 4: MINIMUM PARKING REQUIREMENTS

Facility	Area / No	Rate	Minimum Proposed
Convenient store	250m ²	2 / 100m ²	5
ATM facility	2	3 / ATM	6
Fast food outlet	500m ²	2 / 100m ²	10
Total			21

A minimum of 21 parking bays are required for the proposed development. According to the site layout plan, a total of 32 parking bays are to be provided on site, which surpass the required minimum number of on-site parking bays.

Open parking facilities, which are to be provided on site, are to be located no less than 20m from the centre line of the D626. However, no structure or part of it, will be allowed closer than 45m from any provincial road.

4.7.3 Vehicle Swept Path

The vehicle swept path analysis has been undertaken using the proposed site layout plan (see **Appendix D**). It provides the required proof that a WB-15 type vehicle can be accommodated on-site where required and through the access points.

5. CONCLUSIONS

The following conclusions can be drawn from the above, regarding the proposed filling station/truck stop development on Erf 425 and 426, Pienaarsrivier:

- The expected fuel sales for the proposed development, which are summarised in **Table 2** and **Table 3**, indicate that the site could produce an estimated fuel sales of **528 526 litres per month** in the third year of operation.
- It is generally accepted by oil/fuel companies that a minimum of 250 000 litres per month could prove feasible for new filling station sites, provided that the factors listed in Section 4.4 are considered and properly applied.
- It can therefore be concluded that the proposed filling station/truck stop development will indeed be **feasible** from the first year of operation.

APPENDIX A
LOCATION OF IMMEDIATE COMPETITORS



R51

Kalkheuvel

5 km Radius

Proposed Site

VBK - Malebye

Pienaarsrivier

(Foll road)

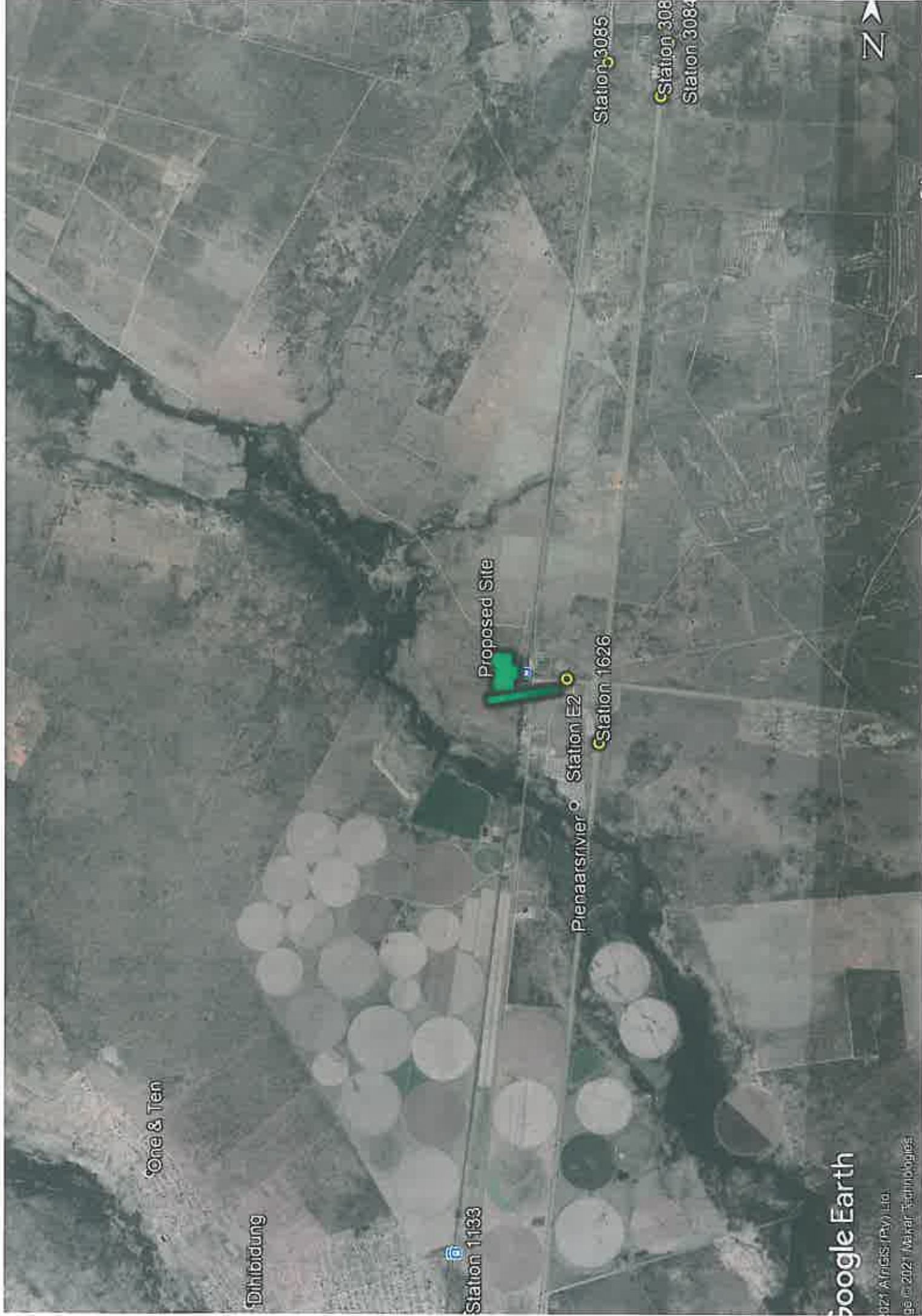
Zaagkalfsdrif Rd

Google Earth

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APPENDIX B

LOCATION OF TRAFFIC COUNTING SITES



One & Ten

Dihlbidung

Station 1133

Proposed Site

Piensaarsrivier

Station E2

Station 1626

Station 3085

Station 308

Station 3082

N

Google Earth

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APPENDIX C

TRAFFIC COUNTING DATA

STATION INFORMATION			
Lane No	1	2	3
Rev.Lane			
Position			
Straddle Set			
Direction	N	N	N
T.Stream			
Rev.TStream			
Vehicle Data			
Arrival Time	At	At	At
Speed	Sp	Sp	Sp
Length	Ln	Ln	Ln
Axle Data	Av	Av	Av
Weight Data	Wt		
Offscale			
S/D Tyre			
IN Lane			
Description	NB Screener Lane	Slow to Polokwane	Fast to Polokwane

Site Identifier : 3083	Site Number : 3083
Site Name : Mantsole NB	
Site Description : Northbound Screener at Mantsole Weigh Bridge (VP1)	
Owner : BAKWENA	Site Type : Permanent WIM
Physical Lanes : 3	Logical Lanes : 3
GPS Longitude : 28.309448E	GPS Latitude : -25.137211S
Installation Date : 2013/12/01	Termination Date :
Speed Limit : 120.0km/hr	Companion Site :
Province : Limpopo	Municipality : (LP) Waterberg
Responsibility : N/A	SANRAL Region : Northern
Route : N001	Road : N001
Section : 23	Distance : 17.600
Road Description : N001-23 KM17.6	

No	Direction Description	Direction
01	NB Screener Lane	North
02	Main Line to Polokwane	North

TRAFFIC HIGHLIGHTS OF SITE 3083				
1.1	Site Identifier	3083		
1.2	Site Name	Mantsole NB		
1.3	Site Description	Northbound Screener at Mantsole Weigh Bridge (VP1)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.6km		
1.5	GPS Position	28.309448E -25.137211S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2017/01/01 - 2017/12/31		
1.9	Length of record requested (hours)	8760		
1.10	Actual First & Last Dates	2017/01/01 - 2017/12/31		
1.11	Actual available good data (hours)	8758		
1.12	Percentage good data available for requested period	100.0		
		Total		
2.1a	Total number of vehicles (counted)	4068203		
2.1b	Total number of vehicles (projected for period)	4068900		
2.2	Average daily traffic (ADT)	11148		
2.3	Average daily truck traffic (ADTT)	1781		
2.4	Percentage of trucks	16.0		
2.5	Truck split % (short:medium:long)	18 : 29 : 53		
2.6	Percentage of night traffic (20:00 - 06:00)	21.6		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	109.3		
3.3	Average speed - light vehicles (km/hr)	123.3		
3.4	Average speed - heavy vehicles (km/hr)	35.2		
3.5	Average night speed (km/hr)	97.0		
3.6	15th centile speed (km/hr)	70.0		
3.7	85th centile speed (km/hr)	139.9		
3.8	Percentage vehicles in excess of speed limit	52.2		
4.1	Percentage vehicles in flows over 600 vehicles/hr	46.5		
4.2	Highest volume on the road (vehicles/hr)	2017/12/22 17:00:00	2932	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2017/12/22 17:00:00	1780	
4.6	15th highest volume on the road (vehicles/hr)	2017/04/13 19:00:00	2454	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2017/06/15 17:00:00	2233	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	13.7		
6.1	Total number of heavy vehicles (projected for period)	650064		
6.2	Estimated average number of axles per truck	5.0		
6.3	Estimated truck mass (Ton/truck)	29.4		
6.4	Estimated average E80/truck	2.1		
6.5	Estimated daily E80 on the road	3680		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.2 : 4.0 : 6.4)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(9.6 : 23.7 : 38.9)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.4 : 1.7 : 2.8)

TRAFFIC HIGHLIGHTS OF SITE 3083				
1.1	Site Identifier			3083
1.2	Site Name			Mantsole NB
1.3	Site Description	Northbound Screener at Mantsole Weigh Bridge (VP1)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.6km		
1.5	GPS Position	28.309448E -25.137211S		
1.6	Number of Lanes			3
1.7	Station Type			Permanent WIM
1.8	Requested Period			2018/01/01 - 2018/12/31
1.9	Length of record requested (hours)			8760
1.10	Actual First & Last Dates			2018/01/01 - 2018/12/31
1.11	Actual available good data (hours)			8760
1.12	Percentage good data available for requested period			100.0
				Total
2.1a	Total number of vehicles (counted)			4105994
2.1b	Total number of vehicles (projected for period)			4105994
2.2	Average daily traffic (ADT)			11249
2.3	Average daily truck traffic (ADTT)			1855
2.4	Percentage of trucks			16.5
2.5	Truck split % (short:medium:long)			17 : 30 : 53
2.6	Percentage of night traffic (20:00 - 06:00)			21.8
3.1	Speed limit (km/hr)			120
3.2	Average speed (km/hr)			109.2
3.3	Average speed - light vehicles (km/hr)			123.8
3.4	Average speed - heavy vehicles (km/hr)			35.0
3.5	Average night speed (km/hr)			96.4
3.6	15th centile speed (km/hr)			70.0
3.7	85th centile speed (km/hr)			139.9
3.8	Percentage vehicles in excess of speed limit			51.9
4.1	Percentage vehicles in flows over 600 vehicles/hr			46.5
4.2	Highest volume on the road (vehicles/hr)		2018/04/27 15:00:00	2972
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)		2018/04/27 15:00:00	1720
4.6	15th highest volume on the road (vehicles/hr)		2018/03/29 23:00:00	2314
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)		2018/12/21 17:00:00	2121
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead			13.6
6.1	Total number of heavy vehicles (projected for period)			677035
6.2	Estimated average number of axles per truck			5.0
6.3	Estimated truck mass (Ton/truck)			29.8
6.4	Estimated average E80/truck			2.2
6.5	Estimated daily E80 on the road			4024
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.2 : 4.2 : 6.4)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(9.9 : 24.5 : 39.2)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.5 : 1.8 : 3.0)

TRAFFIC HIGHLIGHTS OF SITE 3083				
1.1	Site Identifier			3083
1.2	Site Name			Mantsole NB
1.3	Site Description			Northbound Screener at Mantsole Weigh Bridge (VP1)
1.4	Road Description			Route : N001 Road : N001 Section : 23 Distance : 17.6km
1.5	GPS Position			28.309448E -25.137211S
1.6	Number of Lanes			3
1.7	Station Type			Permanent WIM
1.8	Requested Period			2019/01/01 - 2019/12/31
1.9	Length of record requested (hours)			8760
1.10	Actual First & Last Dates			2019/01/01 - 2019/12/31
1.11	Actual available good data (hours)			8736
1.12	Percentage good data available for requested period			99.7
				Total
2.1a	Total number of vehicles (counted)			4089178
2.1b	Total number of vehicles (projected for period)			4100412
2.2	Average daily traffic (ADT)			11234
2.3	Average daily truck traffic (ADTT)			1835
2.4	Percentage of trucks			16.3
2.5	Truck split % (short:medium:long)			18 : 30 : 52
2.6	Percentage of night traffic (20:00 - 06:00)			21.6
3.1	Speed limit (km/hr)			120
3.2	Average speed (km/hr)			109.5
3.3	Average speed - light vehicles (km/hr)			123.8
3.4	Average speed - heavy vehicles (km/hr)			35.6
3.5	Average night speed (km/hr)			96.4
3.6	15th centile speed (km/hr)			76.0
3.7	85th centile speed (km/hr)			139.9
3.8	Percentage vehicles in excess of speed limit			52.2
4.1	Percentage vehicles in flows over 600 vehicles/hr			47.2
4.2	Highest volume on the road (vehicles/hr)		2019/09/20 17:00:00	2397
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)		2019/09/20 16:00:00	1530
4.6	15th highest volume on the road (vehicles/hr)		2019/04/18 22:00:00	2205
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)		2019/12/24 16:00:00	2065
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead			13.2
6.1	Total number of heavy vehicles (projected for period)			669767
6.2	Estimated average number of axles per truck			5.0
6.3	Estimated truck mass (Ton/truck)			29.6
6.4	Estimated average E80/truck			2.1
6.5	Estimated daily E80 on the road			3886
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.2 : 4.2 : 6.4)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(9.8 : 24.5 : 39.0)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.4 : 1.8 : 2.9)

TRAFFIC HIGHLIGHTS OF SITE 3083				
1.1	Site Identifier	3083		
1.2	Site Name	Mantsole NB		
1.3	Site Description	Northbound Screener at Mantsole Weigh Bridge (VP1)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.6km		
1.5	GPS Position	28.309448E -25.137211S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2020/01/01 - 2020/12/31		
1.9	Length of record requested (hours)	8784		
1.10	Actual First & Last Dates	2020/01/01 - 2020/12/31		
1.11	Actual available good data (hours)	8783		
1.12	Percentage good data available for requested period	100.0		
		Total		
2.1a	Total number of vehicles (counted)	3123704		
2.1b	Total number of vehicles (projected for period)	3123933		
2.2	Average daily traffic (ADT)	8535		
2.3	Average daily truck traffic (ADTT)	1543		
2.4	Percentage of trucks	18.1		
2.5	Truck split % (short:medium:long)	15 : 24 : 61		
2.6	Percentage of night traffic (20:00 - 06:00)	19.6		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	101.8		
3.3	Average speed - light vehicles (km/hr)	117.4		
3.4	Average speed - heavy vehicles (km/hr)	31.2		
3.5	Average night speed (km/hr)	86.7		
3.6	15th centile speed (km/hr)	37.9		
3.7	85th centile speed (km/hr)	135.9		
3.8	Percentage vehicles in excess of speed limit	38.5		
4.1	Percentage vehicles in flows over 600 vehicles/hr	35.3		
4.2	Highest volume on the road (vehicles/hr)	2020/12/24 08:00:00	2413	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2020/12/24 08:00:00	1499	
4.6	15th highest volume on the road (vehicles/hr)	2020/12/23 08:00:00	2007	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2020/12/25 07:00:00	1856	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	11.2		
6.1	Total number of heavy vehicles (projected for period)	564713		
6.2	Estimated average number of axles per truck	5.3		
6.3	Estimated truck mass (Ton/truck)	32.0		
6.4	Estimated average E80/truck	2.3		
6.5	Estimated daily E80 on the road	3555		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.2 : 4.4 : 6.5)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(9.9 : 26.0 : 39.8)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.5 : 1.9 : 2.9)

TRAFFIC HIGHLIGHTS OF SITE 3083				
1.1	Site Identifier			3083
1.2	Site Name			Mantsole NB
1.3	Site Description	Northbound Screener at Mantsole Weigh Bridge (VP1)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.6km		
1.5	GPS Position	28.309448E -25.137211S		
1.6	Number of Lanes			3
1.7	Station Type			Permanent WIM
1.8	Requested Period			2021/01/01 - 2021/12/31
1.9	Length of record requested (hours)			8760
1.10	Actual First & Last Dates			2021/01/01 - 2021/05/14
1.11	Actual available good data (hours)			3197
1.12	Percentage good data available for requested period			36.5
				Total
2.1a	Total number of vehicles (counted)			1268867
2.1b	Total number of vehicles (projected for period)			3475780
2.2	Average daily traffic (ADT)			9523
2.3	Average daily truck traffic (ADTT)			1422
2.4	Percentage of trucks			14.9
2.5	Truck split % (short:medium:long)			12 : 22 : 66
2.6	Percentage of night traffic (20:00 - 06:00)			16.5
3.1	Speed limit (km/hr)			120
3.2	Average speed (km/hr)			96.1
3.3	Average speed - light vehicles (km/hr)			108.2
3.4	Average speed - heavy vehicles (km/hr)			26.7
3.5	Average night speed (km/hr)			80.4
3.6	15th centile speed (km/hr)			44.0
3.7	85th centile speed (km/hr)			123.9
3.8	Percentage vehicles in excess of speed limit			20.9
4.1	Percentage vehicles in flows over 600 vehicles/hr			34.4
4.2	Highest volume on the road (vehicles/hr)	2021/04/02 08:00:00		2660
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2021/04/02 08:00:00		1633
4.6	15th highest volume on the road (vehicles/hr)	2021/03/19 17:00:00		2063
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2021/03/05 18:00:00		1755
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead			11.8
6.1	Total number of heavy vehicles (projected for period)			519178
6.2	Estimated average number of axles per truck			5.5
6.3	Estimated truck mass (Ton/truck)			33.2
6.4	Estimated average E80/truck			2.4
6.5	Estimated daily E80 on the road			3471
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.2 : 4.4 : 6.5)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(9.7 : 25.8 : 40.0)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.4 : 1.8 : 3.0)

STATION INFORMATION			
Lane No	1	2	3
Rev.Lane	0	0	0
Position	1	1	2
Straddle Set	0	0	0
Direction	S	S	S
T.Stream	1	2	3
Rev.TStream	0	0	0
Vehicle Data			
Arrival Time	At	At	At
Speed	Sp	Sp	Sp
Length	Ln	Ln	Ln
Axle Data	Ax	Ax	Ax
Weight Data	Wt		
Offscale			
S/D Tyre			
IN Lane			
Description	SB Screener Lane	Slow to Pretoria	Fast to Pretoria

Site Identifier : 3084	Site Number : 3084
Site Name : Mantsole SB	
Site Description : Southbound Screener at Mantsole Weigh Bridge (VP4)	
Owner : BAKWENA	Site Type : Permanent WIM
Physical Lanes : 3	Logical Lanes : 3
GPS Longitude : 28.310284E	GPS Latitude : -25.131235S
Installation Date : 2013/12/01	Termination Date :
Speed Limit : 120.0km/hr	Companion Site :
Province : Limpopo	Municipality : (LP) Waterberg
Responsibility : N/A	SANRAL Region : Northern
Route : N001	Road : N001
Section : 23	Distance : 17.900
Road Description : N001-23 KM17.9	

No	Direction Description	Direction
01	SB Screener Lane	South
02	Main Line to Pretoria	South

TRAFFIC HIGHLIGHTS OF SITE 3084				
1.1	Site Identifier	3084		
1.2	Site Name	Mantsole SB		
1.3	Site Description	Southbound Screener at Mantsole Weigh Bridge (VP4)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.9km		
1.5	GPS Position	28.310284E -25.131235S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2017/01/01 - 2017/12/31		
1.9	Length of record requested (hours)	8760		
1.10	Actual First & Last Dates	2017/01/01 - 2017/12/31		
1.11	Actual available good data (hours)	8735		
1.12	Percentage good data available for requested period	99.7		
		Total		
2.1a	Total number of vehicles (counted)	3950697		
2.1b	Total number of vehicles (projected for period)	3961664		
2.2	Average daily traffic (ADT)	10854		
2.3	Average daily truck traffic (ADTT)	1773		
2.4	Percentage of trucks	16.3		
2.5	Truck split % (short:medium:long)	16 : 30 : 54		
2.6	Percentage of night traffic (20:00 - 06:00)	15.2		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	111.9		
3.3	Average speed - light vehicles (km/hr)	126.2		
3.4	Average speed - heavy vehicles (km/hr)	38.8		
3.5	Average night speed (km/hr)	99.0		
3.6	15th centile speed (km/hr)	74.0		
3.7	85th centile speed (km/hr)	139.9		
3.8	Percentage vehicles in excess of speed limit	57.0		
4.1	Percentage vehicles in flows over 600 vehicles/hr	52.7		
4.2	Highest volume on the road (vehicles/hr)	2017/05/01 17:00:00	3597	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2017/09/25 12:00:00	1962	
4.6	15th highest volume on the road (vehicles/hr)	2017/09/25 17:00:00	3014	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2017/07/23 15:00:00	2753	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	15.7		
6.1	Total number of heavy vehicles (projected for period)	647224		
6.2	Estimated average number of axles per truck	4.9		
6.3	Estimated truck mass (Ton/truck)	24.3		
6.4	Estimated average E80/truck	1.5		
6.5	Estimated daily E80 on the road	2663		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.1 : 4.0 : 6.3)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(7.9 : 19.8 : 31.9)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.2 : 1.2 : 2.1)

TRAFFIC HIGHLIGHTS OF SITE 3084				
1.1	Site Identifier	3084		
1.2	Site Name	Mantsole SB		
1.3	Site Description	Southbound Screener at Mantsole Weigh Bridge (VP4)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.9km		
1.5	GPS Position	28.310284E -25.131235S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2018/01/01 - 2018/12/31		
1.9	Length of record requested (hours)	8760		
1.10	Actual First & Last Dates	2018/01/01 - 2018/12/31		
1.11	Actual available good data (hours)	8760		
1.12	Percentage good data available for requested period	100.0		
		Total		
2.1a	Total number of vehicles (counted)	3992622		
2.1b	Total number of vehicles (projected for period)	3992622		
2.2	Average daily traffic (ADT)	10939		
2.3	Average daily truck traffic (ADTT)	1836		
2.4	Percentage of trucks	16.8		
2.5	Truck split % (short:medium:long)	16 : 30 : 54		
2.6	Percentage of night traffic (20:00 - 06:00)	15.4		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	112.6		
3.3	Average speed - light vehicles (km/hr)	127.4		
3.4	Average speed - heavy vehicles (km/hr)	38.7		
3.5	Average night speed (km/hr)	99.6		
3.6	15th centile speed (km/hr)	76.0		
3.7	85th centile speed (km/hr)	142.0		
3.8	Percentage vehicles in excess of speed limit	58.5		
4.1	Percentage vehicles in flows over 600 vehicles/hr	53.1		
4.2	Highest volume on the road (vehicles/hr)	2018/04/02 12:00:00	3045	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2018/09/24 12:00:00	1908	
4.6	15th highest volume on the road (vehicles/hr)	2018/09/24 15:00:00	2796	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2018/06/03 16:00:00	2605	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	15.1		
6.1	Total number of heavy vehicles (projected for period)	670240		
6.2	Estimated average number of axles per truck	4.9		
6.3	Estimated truck mass (Ton/truck)	24.8		
6.4	Estimated average E80/truck	1.6		
6.5	Estimated daily E80 on the road	2884		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.1 : 4.0 : 6.3)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(8.2 : 20.2 : 32.4)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.2 : 1.3 : 2.1)

TRAFFIC HIGHLIGHTS OF SITE 3084				
1.1	Site Identifier	3084		
1.2	Site Name	Mantsole SB		
1.3	Site Description	Southbound Screener at Mantsole Weigh Bridge (VP4)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.9km		
1.5	GPS Position	28.310284E -25.131235S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2019/01/01 - 2019/12/31		
1.9	Length of record requested (hours)	8760		
1.10	Actual First & Last Dates	2019/01/01 - 2019/12/31		
1.11	Actual available good data (hours)	8725		
1.12	Percentage good data available for requested period	99.6		
		Total		
2.1a	Total number of vehicles (counted)	3975929		
2.1b	Total number of vehicles (projected for period)	3991650		
2.2	Average daily traffic (ADT)	10936		
2.3	Average daily truck traffic (ADTT)	1844		
2.4	Percentage of trucks	16.9		
2.5	Truck split % (short:medium:long)	16 : 31 : 53		
2.6	Percentage of night traffic (20:00 - 06:00)	15.3		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	112.3		
3.3	Average speed - light vehicles (km/hr)	127.0		
3.4	Average speed - heavy vehicles (km/hr)	39.9		
3.5	Average night speed (km/hr)	100.5		
3.6	15th centile speed (km/hr)	76.0		
3.7	85th centile speed (km/hr)	139.9		
3.8	Percentage vehicles in excess of speed limit	58.2		
4.1	Percentage vehicles in flows over 600 vehicles/hr	53.5		
4.2	Highest volume on the road (vehicles/hr)	2019/08/11 13:00:00	3425	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2019/08/11 13:00:00	1992	
4.6	15th highest volume on the road (vehicles/hr)	2019/04/22 10:00:00	2838	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2019/03/03 17:00:00	2604	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	15.0		
6.1	Total number of heavy vehicles (projected for period)	673140		
6.2	Estimated average number of axles per truck	4.9		
6.3	Estimated truck mass (Ton/truck)	24.5		
6.4	Estimated average E80/truck	1.5		
6.5	Estimated daily E80 on the road	2780		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.1 : 4.0 : 6.3)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(8.2 : 20.0 : 31.9)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.2 : 1.3 : 2.0)



TRAFFIC HIGHLIGHTS OF SITE 3084				
1.1	Site Identifier	3084		
1.2	Site Name	Mantsole SB		
1.3	Site Description	Southbound Screener at Mantsole Weigh Bridge (VP4)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.9km		
1.5	GPS Position	28.310284E -25.131235S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2020/01/01 - 2020/12/31		
1.9	Length of record requested (hours)	8784		
1.10	Actual First & Last Dates	2020/01/01 - 2020/12/31		
1.11	Actual available good data (hours)	8783		
1.12	Percentage good data available for requested period	100.0		
		Total		
2.1a	Total number of vehicles (counted)	3026095		
2.1b	Total number of vehicles (projected for period)	3026347		
2.2	Average daily traffic (ADT)	8269		
2.3	Average daily truck traffic (ADTT)	1579		
2.4	Percentage of trucks	19.1		
2.5	Truck split % (short:medium:long)	16 : 24 : 60		
2.6	Percentage of night traffic (20:00 - 06:00)	14.4		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	105.6		
3.3	Average speed - light vehicles (km/hr)	121.8		
3.4	Average speed - heavy vehicles (km/hr)	36.8		
3.5	Average night speed (km/hr)	91.5		
3.6	15th centile speed (km/hr)	42.0		
3.7	85th centile speed (km/hr)	137.9		
3.8	Percentage vehicles in excess of speed limit	44.9		
4.1	Percentage vehicles in flows over 600 vehicles/hr	41.8		
4.2	Highest volume on the road (vehicles/hr)	2020/09/27 15:00:00	3042	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2020/09/27 18:00:00	1832	
4.6	15th highest volume on the road (vehicles/hr)	2020/03/01 18:00:00	2305	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2020/03/01 16:00:00	2139	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	12.4		
6.1	Total number of heavy vehicles (projected for period)	577950		
6.2	Estimated average number of axles per truck	5.2		
6.3	Estimated truck mass (Ton/truck)	24.8		
6.4	Estimated average E80/truck	1.4		
6.5	Estimated daily E80 on the road	2262		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.2 : 4.2 : 6.4)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(8.2 : 20.1 : 31.0)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.2 : 1.2 : 1.9)

TRAFFIC HIGHLIGHTS OF SITE 3084				
1.1	Site Identifier	3084		
1.2	Site Name	Mantsole SB		
1.3	Site Description	Southbound Screener at Mantsole Weigh Bridge (VP4)		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 17.9km		
1.5	GPS Position	28.310284E -25.131235S		
1.6	Number of Lanes	3		
1.7	Station Type	Permanent WIM		
1.8	Requested Period	2021/01/01 - 2021/12/31		
1.9	Length of record requested (hours)	8760		
1.10	Actual First & Last Dates	2021/01/01 - 2021/05/14		
1.11	Actual available good data (hours)	3198		
1.12	Percentage good data available for requested period	36.5		
		Total		
2.1a	Total number of vehicles (counted)	1315518		
2.1b	Total number of vehicles (projected for period)	3603109		
2.2	Average daily traffic (ADT)	9872		
2.3	Average daily truck traffic (ADTT)	1574		
2.4	Percentage of trucks	15.9		
2.5	Truck split % (short:medium:long)	18 : 22 : 60		
2.6	Percentage of night traffic (20:00 - 06:00)	11.9		
3.1	Speed limit (km/hr)	120		
3.2	Average speed (km/hr)	98.5		
3.3	Average speed - light vehicles (km/hr)	110.8		
3.4	Average speed - heavy vehicles (km/hr)	33.5		
3.5	Average night speed (km/hr)	86.2		
3.6	15th centile speed (km/hr)	66.0		
3.7	85th centile speed (km/hr)	123.9		
3.8	Percentage vehicles in excess of speed limit	22.4		
4.1	Percentage vehicles in flows over 600 vehicles/hr	50.3		
4.2	Highest volume on the road (vehicles/hr)	2021/04/05 12:00:00	3089	
4.3				
4.4				
4.5	Highest volume in a lane (vehicles/hr)	2021/04/05 12:00:00	1923	
4.6	15th highest volume on the road (vehicles/hr)	2021/05/02 18:00:00	2359	
4.7				
4.8				
4.9	30th highest volume on the road (vehicles/hr)	2021/03/22 14:00:00	2029	
4.10				
4.11				
5.1	Percentage of vehicles less than 2s behind vehicle ahead	15.4		
6.1	Total number of heavy vehicles (projected for period)	574419		
6.2	Estimated average number of axles per truck	5.1		
6.3	Estimated truck mass (Ton/truck)	24.3		
6.4	Estimated average E80/truck	1.4		
6.5	Estimated daily E80 on the road	2153		
6.6				
6.7				
6.8				
6.9				
6.10	Actual average Axles/Truck (Short:Medium:Long)	(2.0 : 5.0 : 7.0)	(2.0 : 5.0 : 7.0)	(2.1 : 4.2 : 6.4)
6.11	Actual average Mass/Truck (Short:Medium:Long)	(10.9 : 31.5 : 39.8)	(10.9 : 31.5 : 39.8)	(8.1 : 20.4 : 30.5)
6.12	Actual average E80s/Truck (Short:Medium:Long)	(0.5 : 2.1 : 3.9)	(0.5 : 2.1 : 3.9)	(0.2 : 1.2 : 1.8)



STATION INFORMATION						
Lane No	1	2	3	4	5	6
Rev.Lane	0	0	0	0	0	0
Position	1	1	2	2	1	1
Straddle Set	0/0	0/0	0/0	0/0	0/0	0/0
Direction	N	N	N	S	S	S
T.Stream	1	2	3	4	5	6
Rev.TStream	0	0	0	0	0	0
Vehicle Data						
Arrival Time	At	At	At	At	At	At
Speed	Sp	Sp	Sp	Sp	Sp	Sp
Length	Ln	Ln	Ln	Ln	Ln	Ln
Axle Data						
Weight Data						
Offscale						
S/D Tyre						
IN Lane						
Description	On Ramp from Pienaarsrivier	Slow to Bela Bela	Fast to Bela Bela	Fast to Pretoria	Slow to Pretoria	On Ramp from Pienaarsrivier

Site Identifier : 1626
Site Name : BAKWNAPienaarsrivier
Site Description : Southern Side of Pienaarsrivier I/C
Owner : BAKWENA
Physical Lanes : 6
GPS Longitude : 28.303847E
Installation Date : 2011/11/12
Speed Limit : 120.0km/hr
Province : Limpopo
Responsibility : N/A
Route : N001
Section : 23
Road Description : N001-23 KM10.0

Site Number : 1626
Site Type : Permanent
Logical Lanes : 6
GPS Latitude : -25.209845S
Termination Date :
Companion Site :
Municipality : (LP) Waterberg
SANRAL Region : Northern
Road : N001
Distance : 10.000

TRAFFIC HIGHLIGHTS OF SITE 1626			
1.1	Site Identifier		1626
1.2	Site Name		BAKWNA Pienaarsrivier
1.3	Site Description		Southern Side of Pienaarsrivier I/C
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 10.0km	
1.5	GPS Position		28.303847E -25.209845S
1.6	Number of Lanes		6
1.7	Station Type		Permanent
1.8	Requested Period		2017/01/01 - 2017/12/31
1.9	Length of record requested (hours)		8760
1.10	Actual First & Last Dates		2017/01/01 - 2017/12/31
1.11	Actual available good data (hours)		8663
1.12	Percentage good data available for requested period		98.9
		To Bela Bela	To Pretoria
			Total
2.1a	Total number of vehicles (counted)	3843908	3745568
2.1b	Total number of vehicles (projected for period)	3886627	3787194
2.2	Average daily traffic (ADT)	10648	10376
2.3	Average daily truck traffic (ADTT)	1898	1883
2.4	Percentage of trucks	17.8	18.1
2.5	Truck split % (short:medium:long)	28 : 18 : 54	28 : 20 : 52
2.6	Percentage of night traffic (20:00 - 06:00)	20.9	15.1
3.1	Speed limit (km/hr)		120
3.2	Average speed (km/hr)	111.3	111.4
3.3	Average speed - light vehicles (km/hr)	116.7	116.5
3.4	Average speed - heavy vehicles (km/hr)	86.8	88.0
3.5	Average night speed (km/hr)	107.6	109.4
3.6	15th centile speed (km/hr)	87.8	85.8
3.7	85th centile speed (km/hr)	131.9	132.0
3.8	Percentage vehicles in excess of speed limit	35.0	34.5
4.1	Percentage vehicles in flows over 600 vehicles/hr	42.7	49.8
4.2	Highest volume on the road (vehicles/hr)		2017/05/01 17:00:00
4.3	Highest volume in the To Bela Bela (vehs/hr)		2017/12/23 09:00:00
4.4	Highest volume in the To Pretoria (vehs/hr)		2017/05/01 17:00:00
4.5	Highest volume in a lane (vehicles/hr)		2017/09/25 12:00:00
4.6	15th highest volume on the road (vehicles/hr)		2017/12/22 17:00:00
4.7	15th highest volume in the To Bela Bela direction (vehs/hr)		2017/12/23 11:00:00
4.8	15th highest volume in the To Pretoria direction (vehs/hr)		2017/06/18 13:00:00
4.9	30th highest volume on the road (vehicles/hr)		2017/01/02 16:00:00
4.10	30th highest volume in the To Bela Bela direction (vehs/hr)		2017/04/14 10:00:00
4.11	30th highest volume in the To Pretoria direction (vehs/hr)		2017/05/01 12:00:00
5.1	Percentage of vehicles less than 2s behind vehicle ahead	14.4	16.7
6.1	Total number of heavy vehicles (projected for period)	692833	687253
6.2	Estimated average number of axles per truck	5.2	5.2
6.3	Estimated truck mass (Ton/truck)	30.2	29.9
6.4	Estimated average E80/truck	2.6	2.6
6.5	Estimated daily E80 on the road		9837
6.6	Estimated daily E80 in the To Bela Bela direction		4981
6.7	Estimated daily E80 in the To Pretoria direction		4856
6.8	Estimated daily E80 in the worst To Bela Bela lane		4242
6.9	Estimated daily E80 in the worst To Pretoria lane		4282
6.10	ASSUMPTION on Axles/Truck (Short:Medium:Long)		(2.0 : 5.0 : 7.0)
6.11	ASSUMPTION on Mass/Truck (Short:Medium:Long)		(10.9 : 31.5 : 39.8)
6.12	ASSUMPTION on E80s/Truck (Short:Medium:Long)		(0.5 : 2.1 : 3.9)



TRAFFIC HIGHLIGHTS OF SITE 1626			
1.1	Site Identifier		1626
1.2	Site Name		BAKWNA Pienaarsrivier
1.3	Site Description		Southern Side of Pienaarsrivier I/C
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 10.0km	
1.5	GPS Position		28.303847E -25.209845S
1.6	Number of Lanes		6
1.7	Station Type		Permanent
1.8	Requested Period		2018/01/01 - 2018/12/31
1.9	Length of record requested (hours)		8760
1.10	Actual First & Last Dates		2018/01/01 - 2018/05/01
1.11	Actual available good data (hours)		2783
1.12	Percentage good data available for requested period		31.8
		To Bela Bela	To Pretoria
			Total
2.1a	Total number of vehicles (counted)	1184345	1229700
2.1b	Total number of vehicles (projected for period)	3726937	3869662
2.2	Average daily traffic (ADT)	10211	10602
2.3	Average daily truck traffic (ADTT)	1922	1928
2.4	Percentage of trucks	18.8	18.2
2.5	Truck split % (short:medium:long)	32 : 17 : 51	34 : 17 : 49
2.6	Percentage of night traffic (20:00 - 06:00)	21.1	15.1
3.1	Speed limit (km/hr)		120
3.2	Average speed (km/hr)	111.5	113.0
3.3	Average speed - light vehicles (km/hr)	116.8	117.8
3.4	Average speed - heavy vehicles (km/hr)	88.8	91.1
3.5	Average night speed (km/hr)	107.0	110.3
3.6	15th centile speed (km/hr)	85.8	87.8
3.7	85th centile speed (km/hr)	132.0	134.0
3.8	Percentage vehicles in excess of speed limit	36.5	37.9
4.1	Percentage vehicles in flows over 600 vehicles/hr	37.2	50.3
4.2	Highest volume on the road (vehicles/hr)		2018/04/02 13:00:00
4.3	Highest volume in the To Bela Bela (vehs/hr)		2018/04/27 15:00:00
4.4	Highest volume in the To Pretoria (vehs/hr)		2018/04/02 13:00:00
4.5	Highest volume in a lane (vehicles/hr)		2018/04/02 13:00:00
4.6	15th highest volume on the road (vehicles/hr)		2018/04/27 12:00:00
4.7	15th highest volume in the To Bela Bela direction (vehs/hr)		2018/04/27 09:00:00
4.8	15th highest volume in the To Pretoria direction (vehs/hr)		2018/01/07 17:00:00
4.9	30th highest volume on the road (vehicles/hr)		2018/04/08 15:00:00
4.10	30th highest volume in the To Bela Bela direction (vehs/hr)		2018/03/30 13:00:00
4.11	30th highest volume in the To Pretoria direction (vehs/hr)		2018/01/02 15:00:00
5.1	Percentage of vehicles less than 2s behind vehicle ahead	14.1	16.9
6.1	Total number of heavy vehicles (projected for period)	701659	703890
6.2	Estimated average number of axles per truck	5.0	5.0
6.3	Estimated truck mass (Ton/truck)	29.0	28.6
6.4	Estimated average E80/truck	2.5	2.5
6.5	Estimated daily E80 on the road		9536
6.6	Estimated daily E80 in the To Bela Bela direction		4809
6.7	Estimated daily E80 in the To Pretoria direction		4728
6.8	Estimated daily E80 in the worst To Bela Bela lane		4117
6.9	Estimated daily E80 in the worst To Pretoria lane		4176
6.10	ASSUMPTION on Axles/Truck (Short:Medium:Long)		(2.0 : 5.0 : 7.0)
6.11	ASSUMPTION on Mass/Truck (Short:Medium:Long)		(10.9 : 31.5 : 39.8)
6.12	ASSUMPTION on E80s/Truck (Short:Medium:Long)		(0.5 : 2.1 : 3.9)



TRAFFIC HIGHLIGHTS OF SITE 1626			
1.1	Site Identifier		1626
1.2	Site Name		BAKWNA Pienaarsrivier
1.3	Site Description		Southern Side of Pienaarsrivier I/C
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 10.0km	
1.5	GPS Position		28.303847E -25.209845S
1.6	Number of Lanes		6
1.7	Station Type		Permanent
1.8	Requested Period		2019/01/01 - 2019/12/31
1.9	Length of record requested (hours)		8760
1.10	Actual First & Last Dates		2019/02/18 - 2019/12/31
1.11	Actual available good data (hours)		7450
1.12	Percentage good data available for requested period		85.1
		To Bela Bela	To Pretoria
2.1a	Total number of vehicles (counted)	3458404	3268648
2.1b	Total number of vehicles (projected for period)	4046291	3825127
2.2	Average daily traffic (ADT)	11086	10480
2.3	Average daily truck traffic (ADTT)	1839	1807
2.4	Percentage of trucks	16.6	17.2
2.5	Truck split % (short:medium:long)	24 : 17 : 59	25 : 18 : 57
2.6	Percentage of night traffic (20:00 - 06:00)	21.2	15.4
3.1	Speed limit (km/hr)		120
3.2	Average speed (km/hr)	110.5	111.3
3.3	Average speed - light vehicles (km/hr)	115.7	117.0
3.4	Average speed - heavy vehicles (km/hr)	84.0	83.8
3.5	Average night speed (km/hr)	106.0	108.4
3.6	15th centile speed (km/hr)	85.8	85.8
3.7	85th centile speed (km/hr)	129.9	131.9
3.8	Percentage vehicles in excess of speed limit	35.2	37.8
4.1	Percentage vehicles in flows over 600 vehicles/hr	46.6	51.3
4.2	Highest volume on the road (vehicles/hr)		2019/08/11 13:00:00
4.3	Highest volume in the To Bela Bela (vehs/hr)		2019/09/20 16:00:00
4.4	Highest volume in the To Pretoria (vehs/hr)		2019/08/11 13:00:00
4.5	Highest volume in a lane (vehicles/hr)		2019/08/11 13:00:00
4.6	15th highest volume on the road (vehicles/hr)		2019/09/29 18:00:00
4.7	15th highest volume in the To Bela Bela direction (vehs/hr)		2019/09/20 15:00:00
4.8	15th highest volume in the To Pretoria direction (vehs/hr)		2019/04/22 12:00:00
4.9	30th highest volume on the road (vehicles/hr)		2019/11/29 17:00:00
4.10	30th highest volume in the To Bela Bela direction (vehs/hr)		2019/12/21 11:00:00
4.11	30th highest volume in the To Pretoria direction (vehs/hr)		2019/03/31 17:00:00
5.1	Percentage of vehicles less than 2s behind vehicle ahead	14.6	16.2
6.1	Total number of heavy vehicles (projected for period)	671356	659582
6.2	Estimated average number of axles per truck	5.4	5.4
6.3	Estimated truck mass (Ton/truck)	31.3	31.2
6.4	Estimated average E80/truck	2.8	2.7
6.5	Estimated daily E80 on the road		10117
6.6	Estimated daily E80 in the To Bela Bela direction		5135
6.7	Estimated daily E80 in the To Pretoria direction		4982
6.8	Estimated daily E80 in the worst To Bela Bela lane		4503
6.9	Estimated daily E80 in the worst To Pretoria lane		4465
6.10	ASSUMPTION on Axles/Truck (Short:Medium:Long)		(2.0 : 5.0 : 7.0)
6.11	ASSUMPTION on Mass/Truck (Short:Medium:Long)		(10.9 : 31.5 : 39.8)
6.12	ASSUMPTION on E80s/Truck (Short:Medium:Long)		(0.5 : 2.1 : 3.9)



TRAFFIC HIGHLIGHTS OF SITE 1626				
1.1	Site Identifier	1626		
1.2	Site Name	BAKWNA Pienaarsrivier		
1.3	Site Description	Southern Side of Pienaarsrivier I/C		
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 10.0km		
1.5	GPS Position	28.303847E -25.209845S		
1.6	Number of Lanes	6		
1.7	Station Type	Permanent		
1.8	Requested Period	2020/01/01 - 2020/12/31		
1.9	Length of record requested (hours)	8784		
1.10	Actual First & Last Dates	2020/01/01 - 2020/12/31		
1.11	Actual available good data (hours)	8783		
1.12	Percentage good data available for requested period	100.0		
		To Bela Bela	To Pretoria	Total
2.1a	Total number of vehicles (counted)	2989770	2894517	5884287
2.1b	Total number of vehicles (projected for period)	2989784	2894530	5884314
2.2	Average daily traffic (ADT)	8169	7909	16077
2.3	Average daily truck traffic (ADTT)	1638	1597	3234
2.4	Percentage of trucks	20.0	20.2	20.1
2.5	Truck split % (short:medium:long)	23 : 14 : 63	24 : 16 : 60	23 : 15 : 62
2.6	Percentage of night traffic (20:00 - 06:00)	19.3	14.4	16.9
3.1	Speed limit (km/hr)			120
3.2	Average speed (km/hr)	109.7	110.3	110.0
3.3	Average speed - light vehicles (km/hr)	116.6	117.6	117.1
3.4	Average speed - heavy vehicles (km/hr)	82.3	81.7	82.0
3.5	Average night speed (km/hr)	104.1	105.7	104.8
3.6	15th centile speed (km/hr)	81.7	81.8	81.7
3.7	85th centile speed (km/hr)	129.9	131.9	131.9
3.8	Percentage vehicles in excess of speed limit	35.9	37.5	36.7
4.1	Percentage vehicles in flows over 600 vehicles/hr	33.2	38.7	80.5
4.2	Highest volume on the road (vehicles/hr)		2020/09/27 15:00:00	3459
4.3	Highest volume in the To Bela Bela (vehs/hr)		2020/12/24 08:00:00	2170
4.4	Highest volume in the To Pretoria (vehs/hr)		2020/09/27 15:00:00	2846
4.5	Highest volume in a lane (vehicles/hr)		2020/09/27 12:00:00	1821
4.6	15th highest volume on the road (vehicles/hr)		2020/10/23 16:00:00	2787
4.7	15th highest volume in the To Bela Bela direction (vehs/hr)		2020/02/28 16:00:00	1893
4.8	15th highest volume in the To Pretoria direction (vehs/hr)		2020/01/05 17:00:00	2116
4.9	30th highest volume on the road (vehicles/hr)		2020/02/02 16:00:00	2647
4.10	30th highest volume in the To Bela Bela direction (vehs/hr)		2020/09/04 16:00:00	1756
4.11	30th highest volume in the To Pretoria direction (vehs/hr)		2020/01/05 15:00:00	1991
5.1	Percentage of vehicles less than 2s behind vehicle ahead	12.1	13.8	13.0
6.1	Total number of heavy vehicles (projected for period)	599347	584446	1183792
6.2	Estimated average number of axles per truck	5.6	5.5	5.5
6.3	Estimated truck mass (Ton/truck)	32.1	31.7	31.9
6.4	Estimated average E80/truck	2.9	2.8	2.9
6.5	Estimated daily E80 on the road			9248
6.6	Estimated daily E80 in the To Bela Bela direction			4736
6.7	Estimated daily E80 in the To Pretoria direction			4512
6.8	Estimated daily E80 in the worst To Bela Bela lane			4229
6.9	Estimated daily E80 in the worst To Pretoria lane			4059
6.10	ASSUMPTION on Axles/Truck (Short:Medium:Long)			(2.0 : 5.0 : 7.0)
6.11	ASSUMPTION on Mass/Truck (Short:Medium:Long)			(10.9 : 31.5 : 39.8)
6.12	ASSUMPTION on E80s/Truck (Short:Medium:Long)			(0.5 : 2.1 : 3.9)



TRAFFIC HIGHLIGHTS OF SITE 1626			
1.1	Site Identifier		1626
1.2	Site Name		BAKWNA Pienaarsrivier
1.3	Site Description		Southern Side of Pienaarsrivier I/C
1.4	Road Description	Route : N001 Road : N001 Section : 23 Distance : 10.0km	
1.5	GPS Position		28.303847E -25.209845S
1.6	Number of Lanes		6
1.7	Station Type		Permanent
1.8	Requested Period		2021/01/01 - 2021/12/31
1.9	Length of record requested (hours)		8760
1.10	Actual First & Last Dates		2021/01/01 - 2021/05/14
1.11	Actual available good data (hours)		3192
1.12	Percentage good data available for requested period		36.4
		To Bela Bela	To Pretoria
			Total
2.1a	Total number of vehicles (counted)	1216677	1255808
2.1b	Total number of vehicles (projected for period)	3338822	3446205
2.2	Average daily traffic (ADT)	9147	9442
2.3	Average daily truck traffic (ADTT)	1664	1623
2.4	Percentage of trucks	18.2	17.2
2.5	Truck split % (short:medium:long)	23 : 14 : 63	25 : 16 : 59
2.6	Percentage of night traffic (20:00 - 06:00)	16.2	12.0
3.1	Speed limit (km/hr)		120
3.2	Average speed (km/hr)	110.9	111.3
3.3	Average speed - light vehicles (km/hr)	117.1	117.4
3.4	Average speed - heavy vehicles (km/hr)	82.8	81.8
3.5	Average night speed (km/hr)	105.0	106.9
3.6	15th centile speed (km/hr)	83.8	83.8
3.7	85th centile speed (km/hr)	129.9	131.9
3.8	Percentage vehicles in excess of speed limit	38.0	38.7
4.1	Percentage vehicles in flows over 600 vehicles/hr	31.2	46.4
4.2	Highest volume on the road (vehicles/hr)		2021/04/05 12:00:00
4.3	Highest volume in the To Bela Bela (vehs/hr)		2021/04/01 16:00:00
4.4	Highest volume in the To Pretoria (vehs/hr)		2021/04/05 12:00:00
4.5	Highest volume in a lane (vehicles/hr)		2021/04/05 12:00:00
4.6	15th highest volume on the road (vehicles/hr)		2021/03/19 17:00:00
4.7	15th highest volume in the To Bela Bela direction (vehs/hr)		2021/04/02 11:00:00
4.8	15th highest volume in the To Pretoria direction (vehs/hr)		2021/04/05 11:00:00
4.9	30th highest volume on the road (vehicles/hr)		2021/04/02 08:00:00
4.10	30th highest volume in the To Bela Bela direction (vehs/hr)		2021/04/02 06:00:00
4.11	30th highest volume in the To Pretoria direction (vehs/hr)		2021/01/03 19:00:00
5.1	Percentage of vehicles less than 2s behind vehicle ahead	12.7	16.1
6.1	Total number of heavy vehicles (projected for period)	607245	592256
6.2	Estimated average number of axles per truck	5.5	5.5
6.3	Estimated truck mass (Ton/truck)	31.8	31.4
6.4	Estimated average E80/truck	2.9	2.8
6.5	Estimated daily E80 on the road		9280
6.6	Estimated daily E80 in the To Bela Bela direction		4755
6.7	Estimated daily E80 in the To Pretoria direction		4525
6.8	Estimated daily E80 in the worst To Bela Bela lane		4313
6.9	Estimated daily E80 in the worst To Pretoria lane		4120
6.10	ASSUMPTION on Axles/Truck (Short:Medium:Long)		(2.0 : 5.0 : 7.0)
6.11	ASSUMPTION on Mass/Truck (Short:Medium:Long)		(10.9 : 31.5 : 39.8)
6.12	ASSUMPTION on E80s/Truck (Short:Medium:Long)		(0.5 : 2.1 : 3.9)

