Western Cape Government

Western Cape Mobility Department

Status quo assessment of truck stops in Western Cape

Final Report

April 2023

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ACRONYMS AND ABBREVIATIONS

DOH	Department of Health
DSD	Department of Social Development
FMN	Freight Movement Network
GHG	Green House Gas
WC	Western Cape
WCFDM™	Western Cape Freight Demand Model

1 Background

1.1 Introduction

There is an ever-increasing demand for road-based freight transport of goods in South Africa due to the consistent and steady decline of the national rail infrastructure since the implementation of the Transport Deregulation Act of 1988. As a result, it has become increasingly common for truck drivers to travel long distances without adequate resting stops to meet their delivery targets.

A national study conducted between 2015 and 2017 indicated that heavy vehicles are over-represented in fatal crashes. There are 4.9% more heavy vehicles involved in fatal crashes in the Western Cape compared to the modal representation of this vehicle type in the province (van Derschuren & Roux, 2018).

The Western Cape Freight Strategy includes Strategic Action 5A-6, which involves assessing the feasibility of developing more truck stops to reduce incidents involving heavy goods vehicles and to promote driver wellness in the Western Cape. The provision of adequate rest facilities is likely to reduce driver fatigue as well as the likelihood of accidents involving heavy vehicles. Truck stops are safe, secure overnight facilities that provide refuelling, parking, rest, food, and other refreshments (Truck Stop Africa, 2023). In addition, these facilities can include other services such as basic clinics, where driver health checks such as blood sugar level, blood pressure and fatigue can be performed. Truck stops provide benefits to drivers, who get access to facilities and services that they need when travelling over long distances and help to reduce the risk of unsafe parking of vehicles.

1.2 Institutional environment: Policy and Strategy

At the national level, it appears that no specific policies or strategies are outlined in the revised National Transport Policy White Paper (2019) or the National Infrastructure Plan (2050). Therefore, the Western Cape Freight Strategy informs the policy and strategy for freight transport in the province. The strategy highlights the importance of getting goods to market at a reasonable cost and at the right time, while acknowledging the role that freight movement plays in the economy. It is vital that the movement of goods is managed properly to prevent significant negative consequences such as increased greenhouse gas emissions, traffic accidents, and the damage to road transport infrastructure.

A key component of the Western Cape Strategy is freight traffic management, which falls under Strategic Focus Area 5. A reliable, safe, and efficient freight transport system in the

Western Cape requires effective traffic management and enforcement. The development of truck stops falls well within the strategic focus area of effective traffic management.

1.3 Purpose of the study

The status quo review conducted for the Western Cape Freight Strategy highlighted that unsafe parking of trucks at undesignated locations and the prevalence of fatigued truck drivers on the roads contribute to road traffic incidents. This can be addressed by the provision of safe, designated parking and resting facilities typically found at truck stops.

Currently, there are several stops in the Western Cape where trucks can stop but it is not clear whether the existing network sufficiently meets the needs in the province. As road freight traffic has increased over the years, coupled with the decline of freight rail services in South Africa, it is likely that improvements to the truck stop network are necessary to meet the increased demand for truck stops.

The purpose of this study is to identify the current truck stop network and investigate the need for additional facilities to supplement the existing facilities. Therefore, the key objectives of the study are:

i. Assess the adequacy of truck stops in the Western Cape;

ii. Prepare a comprehensive list of stakeholders for future engagement; and

iii. Develop a framework to engage key stakeholders.

1.4 Study type

The status quo assessment on the truck stops in the Western Cape is primarily a desktop study, focussing on a literature review and secondary data analysis with limited primary data collection and analysis. It involved mapping of the current fuel station network in South Africa as well as qualitative assessment of feedback from truck drivers and operators.

1.5 Limitations

As this is a desktop study, there are associated limitations which are discussed below:

1) The limited truck stop operator and truck driver interviews conducted were not based on a scientifically representative sample. The purpose of the limited interviews was to obtain preliminary insights that will serve as a basis for determining the need for additional truck stops and/or improvement of the existing truck stops and inform the primary research task to be undertaken as part of a more comprehensive study.

2) Whilst the views of local communities on the societal impact of truck stops are important, the stakeholder engagement with the broader community or local/district municipality is outside the scope of this desktop study. Upon completion of the study, the report will be used to engage local and district municipalities and a wider range of stakeholder groups.

3) As this is a desktop study, data on the facilities and services provided by truck stops is based on third-party sources and literature research. In-person primary investigation of the condition of fuel stations that could be classified as truck stop was not conducted in this study. An in-depth review of the services available at each fuel station that can accommodate trucks in the Western Cape is not in the scope of this study and is proposed to form part of future studies.

2 Literature review

2.1 Definitions

The definition of a truck stop requires context and clarification. Some service stations are called truck stops by their brand or management without offering a full array of facilities and services provided by a conventional truck stop.

In the South African context, comparisons can be drawn between the following:

i. Formal truck stops, such as the Highway Junction Truck Stop in Harrismith;

ii. Trucking facilities, which offer some of the services found at truck stops; and

iii. Service stations such as Engen, Total Energies, Sasol, Astron Energy and Puma, that provide all drivers with the opportunity to refuel, eat, and rest.

Formal truck stops typically come equipped with refuelling stations, secure overnight parking facilities, accommodation for vehicles without sleeper cabs, shared ablution blocks, medical facilities, tyre repair and fitment facilities, and 120-point check services to ensure vehicles are road worthy. Trucking facilities are a midpoint between truck stops and service stations. Trucking facilities may provide parking for trucks but do not offer the full array of services that are available at a formal truck stop, such as the Highway Junction in Harrismith.

2.2 Facility characteristics

To distinguish between formal truck stops, trucking facilities, and service stations, Table 2-1 illustrates the various characteristics. The list in Table 2-1 is not exhaustive and is merely intended to serve as a comparative guideline. For this study, a formal truck stop, trucking facility and service station will be defined as classified in Table 2-1. Trucking facilities are defined broadly, with no definitive measure of what services are necessary for that classification. At present, a facility with any number of truck stop services is eligible to be classified as a trucking facility.

Table 2-1 allows for a broad description of each of facility, however, does not provide a definitive measure that can be used to classify each facility. For example, it is yet to be established which services of a formal truck stop need to be present for it to be classified as a trucking facility. Therefore, during the analysis of existing service stations, trucking facilities and formal truck stops in the Western Cape, all facilities will be referred to as fuel stations. On-ground analysis of each fuel station in conjunction with a formal and definite description of

each facility will be required in future reports to determine the exact pre-requisites for each facility and then to classify each facility in the Western Cape accordingly.

Table 2-1: Service station, trucking facility and truck stop comparison

Facility provision	Service station	Truck facility	Formal truck stop
Accommodation	No	Maybe	Yes
Truck/car wash	Maybe	Maybe	Yes
Fuel	Yes	Yes	Yes
Quality food	Yes	Yes	Yes
Vehicle repair services	Maybe	Maybe	Yes
On-site security	Maybe	Maybe	Yes
Driver amenities (including showers)	Maybe	Maybe	Yes
Basic wellness clinic	No	Maybe	Yes
Clothes washing services	No	Maybe	Yes
Overnight parking facilities for vehicles	No	Maybe	Yes
Overnight parking facilities for trucks	No	Maybe	Yes

2.3 Rationale for formal truck stops

Formal truck stops provide a location where drivers take short or long breaks or await scheduled arrival times at freight facilities. Formal truck stops also provide drivers with safe and secure overnight accommodation. In South Africa, there is an increasing demand for road freight to transport goods and therefore, truck drivers are often required to travel long distances without adequately equipped trucking stops.

There are several factors that discourage drivers from parking at truck stops. These factors include inadequate parking, the enforcement of a time limit on parking, lack of security, unsatisfactory amenities for drivers, poor or expensive food options, the high cost associated with using the facility and unavailability of vehicle repair services.

Tired or fatigued drivers pose a significant risk to road safety, and several studies have shown that truck drivers often encounter this problem. A study conducted in the United States found that 36% of truck drivers have difficulty finding a rest area to park at night. More than 80% of respondents reported that once a week they drive past the point where they feel "safe and alert" because they cannot find a place to stop and rest. Another study conducted by Interdisciplinary Accident Research Centre of Kwa-Zulu Natal found that 39% of truck drivers experienced fatigue and that 41% of road accidents involving heavy vehicles were fatigue-related (Arrive Alive, 2023). Some of the recommendations made by the study are as follows:

1) **Improved Regulations**: The introduction of Government legislation enforcing drivers to stop between 11pm and 5am for rest.

2) **Integration of on-road facilities:** Additional safe and clean truck stops are required, as well as well-lit stops with adequate security.

3) **Improved Fleet Management Systems**: Trucks should be equipped with communication devices, such as two-way radios, to warn other drivers of possible hijacking situations or to ensure the safety of both truck and the driver. Other recommended systems include tracking devices.

4) **Improved driver well-being, training, and engagement:**

    a. Truck drivers expressed interest in participating in any government road safety strategy that will improve and promote their skills. Government should leverage this interest of truck drivers to take part in road safety initiatives that will improve and promote their skills.

    b. Drivers should be allowed more time off to spend with their families.

    c. Drivers need to attend regular training courses to improve their skills. Relevant training courses on transporting dangerous goods such as chemicals should be provided to those carrying such goods.

2.4 Freight in the Western Cape context

The total road and rail freight originating or arriving in the Western Cape is shown in Figure 2-1. In 2021, the total tonnes of goods with an origin or destination in Western Cape amounted to 142.2 million tonnes. The WCFDM™ showed that the modal share of total freight in the Western Cape (excluding air freight and pipelines) were 57% and 43% on road and rail respectively. For GFB[1], the road represents 98% and only 2% for rail.

[1] GFB is defined as the competitive market space and consists of the total freight tonnes less iron ore exports, manganese exports, pipelines and 'stone and aggregate'. The latter has been removed because it is typically a very short-distance movement of mostly construction aggregate, which is challenging to quantity and has extremely dispersed transport.

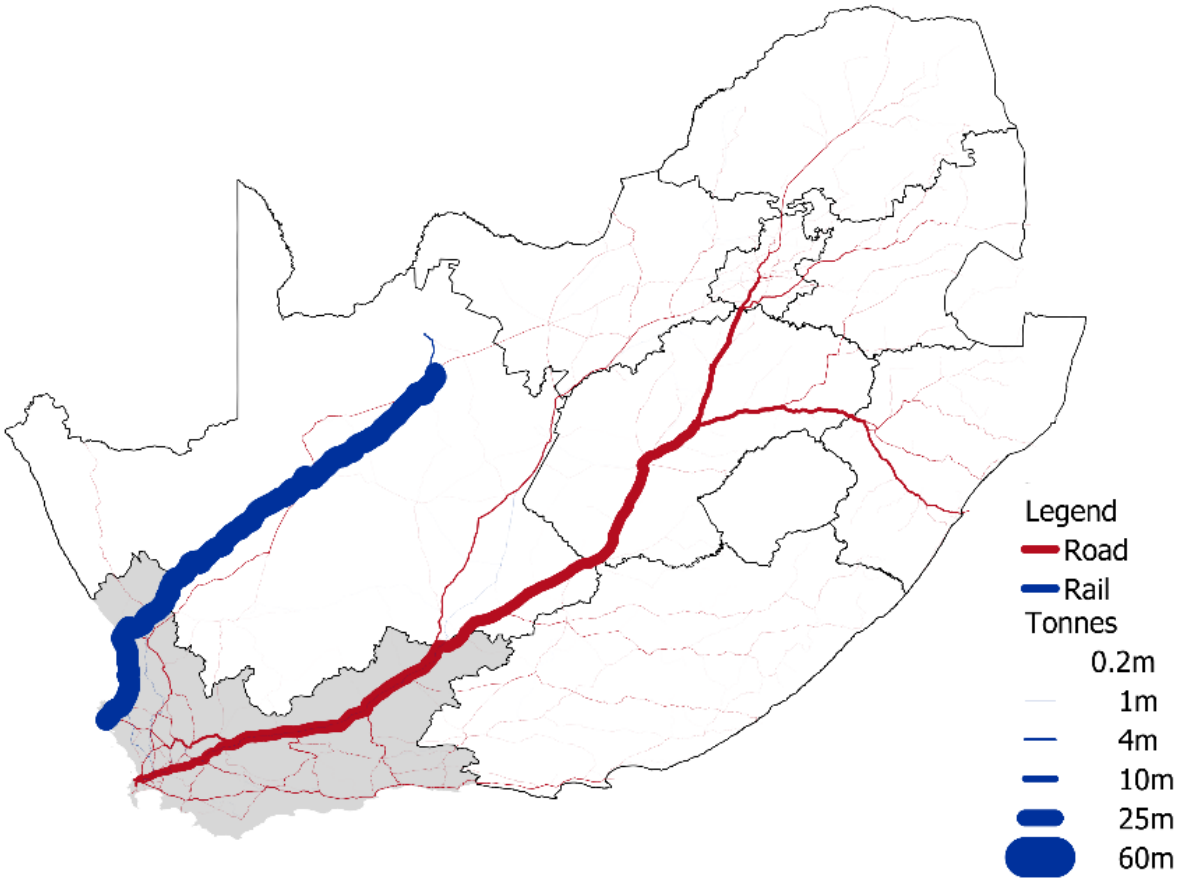

Figure 2-1: Total freight with an origin or destination in the WC scaled to iron ore export line (2021).

The national routes considered in the study are the N1, N2 and N7. The road statistics for freight originating or arriving in the Western Cape are shown in Table 2-2. The high road market share in Table 2-2 shows the importance of the three corridors for South Africa, and subsequently the Western Cape where they converge.

Table 2-2: Freight statistics on the N1, N2 and N7

Corridor	Road market share per corridor
N1	99.2%
N2	99.5%
N7	86.6%

The discussion above shows the dominance of road freight transport in Western Cape and South Africa, and consequently, the important role of road freight in the short to medium term. It is therefore imperative that the Western Cape maintain and improve a road-based freight network that ensures the safe and efficient movement of freight.

3 Status Quo Assessment

3.1 Introduction

This step involves the collection and processing of information on existing service stations, trucking facilities and truck stops in the Western Cape. As noted in Section 2.2, service stations, trucking facilities and truck stops will all be grouped together under the 'fuel station' classification until an on-ground analysis has been performed to formally classify each fuel station in the Western Cape as a service station, trucking facility or formal truck stop. Most of the road freight traffic into the province is transported along the N1, N2, N7 and other major regional corridors in the province, suggesting that these corridors require the highest level of attention.

3.2 Methodology

The following points outline the methodology followed in this section:

i. Fuel station mapping – the location of 70 identifiable existing fuel stations (service stations, trucking facilities, or formal truck stops) in the Western Cape were tabulated and mapped. Attention was also drawn to the distance between fuel stations in South Africa.

ii. The heavy vehicle demand at each station was estimated based on SANRAL traffic count data.

iii. The Hop multiplication metric was applied to all fuel stations to determine the truck stop intensity at each fuel station by taking the distance between each fuel station and the number of fuel stations available on the route into account.

3.3 Fuel station mapping

A combination of third-party and open-source data was used to create a database of identifiable fuel stations in the Western Cape. As stated above, service stations, trucking facilities and formal truck stops are grouped together as fuel stations until an on-ground analysis allows for the formal classification of each fuel station in the Western Cape as either a service station, trucking facility or formal truck stop. Fuel stations were identified from multiple brands and networks, including Engen, Caltex, Shell, BP, Total, Sasol, Puma, Atlantic Oil, OilCo and Truck Fuel Network. Figure 3-1 shows the 70 fuel stations identified in the Western Cape. It is possible that the identified fuel stations do not account for all fuel stations, but only those that were possible to locate were included. Further information on each fuel station location is provided in Appendix B.

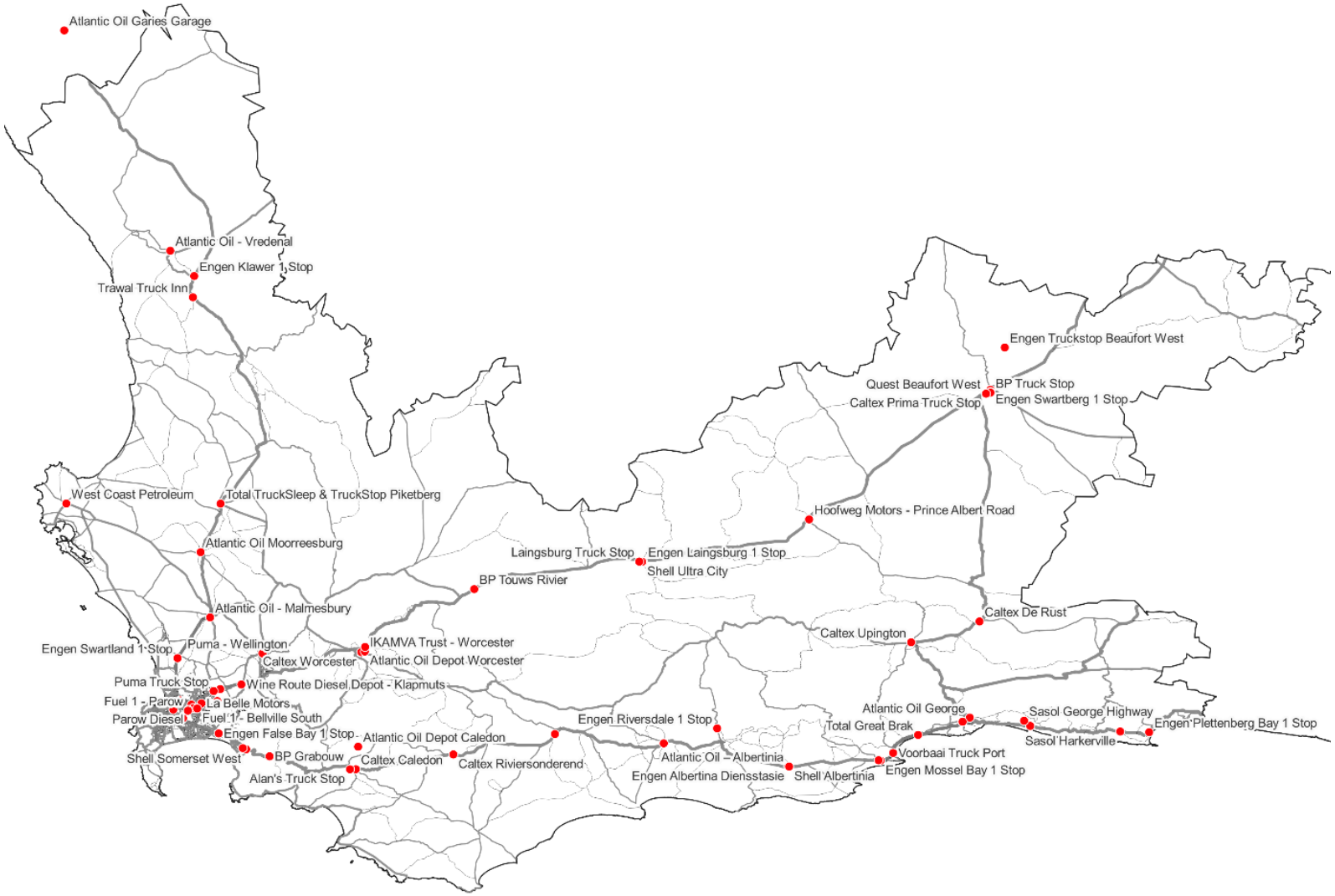

Figure 3-1: Identified fuel stations in the Western Cape.

A comparison with other provinces shows that the Western Cape has the most fuel stations of all the provinces, as seen in Figure 3-2 and Figure 3-3 below.

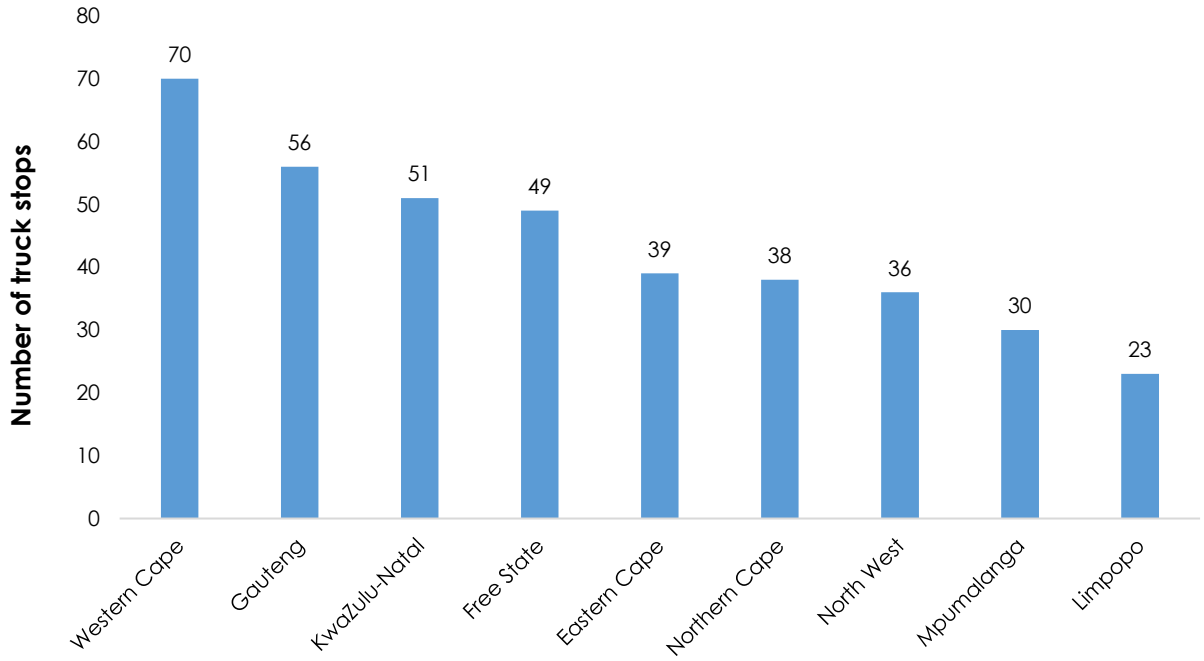

Figure 3-2: Number of fuel stations per province

Table 3-1 shows a comparison of the number of fuel stations with the 2020 road freight volumes for Western Cape and the rest of South Africa. The Western Cape province has about 18% of all fuel stations in the country, and 16% of all freight has an origin or destination in the province. Therefore, the ratio of fuel stations to freight carried in the province is consistent with that of the rest of the country.

Table 3-1: Comparison of number of fuel stations with the road freight for Western Cape and the rest of South Africa

Region	Number of fuel stations	2020 Road Freight (million tonnes)
Western Cape	70 (18%)	72.4 (16%)
Rest of South Africa	322 (82%)	369.6 (84%)
South Africa	392 (100%)	442.0 (100%)

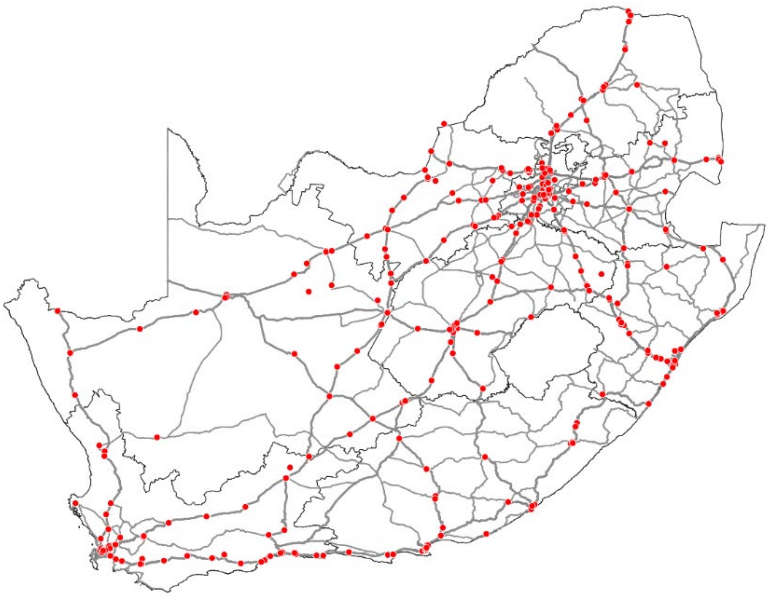

Figure 3-3: Fuel stations throughout South Africa

3.4 Truck stop demand based on truck counts

SANRAL traffic count data was used to understand the demand for truck stops in the Western Cape. Figure 3-4 shows the SANRAL vehicle counting stations within the Western Cape and shows the distribution around the N1, N2, N7 and other major corridors in the Western Cape.

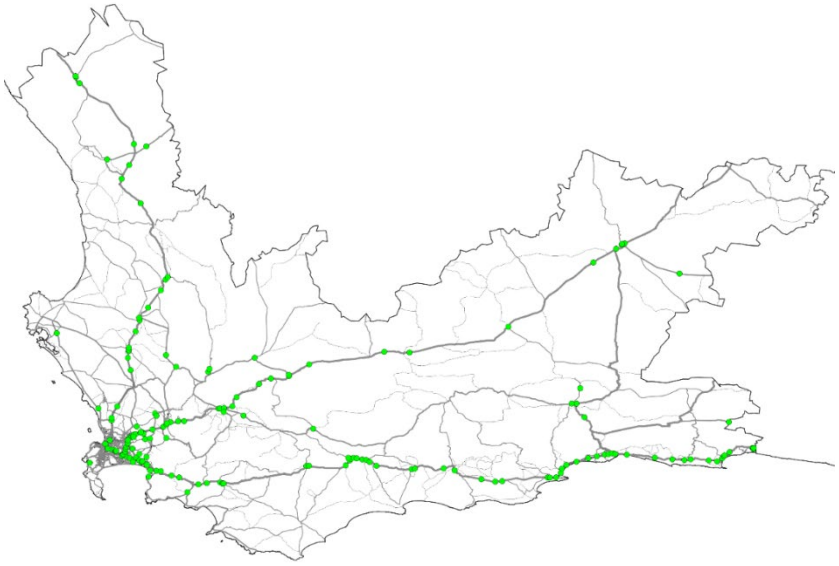

Figure 3-4: SANRAL vehicle counting stations within the Western Cape.

Each SANRAL vehicle count station in Figure 3-4 was matched with its nearest fuel station in Figure 3-5. It should be noted that the counting locations on the N7 before the Northern Cape border are closest to a fuel station outside of the Western Cape and are allocated to that fuel station (Figure 3-5).

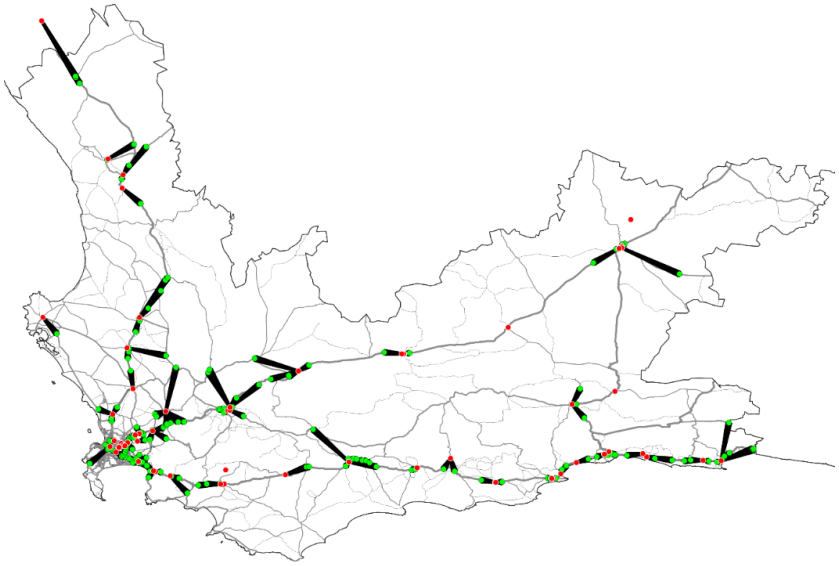

Figure 3-5: SANRAL vehicle counting stations (green) within the Western Cape allocated to the nearest identified fuel station (red)

3.5 Hop multiplication metric for fuel station intensity

A method for estimating truck volumes combined with the distances and number of fuel stations available on routes was used to determine a fuel station intensity indicator. Using this estimate, an initial determination was made as to whether there are sufficient fuel stations available for trucks. As a desktop study, no primary data collection was conducted to determine whether fuel stations can serve as truck stops. It is advised that the formal classification of each fuel station in the Western Cape as either a service station, trucking facility or truck stop is conducted in further research. Once the exact amount and location of truck stops are known, the analysis can be furthered to include only designated trucking facilities and truck stops. For the purpose of this analysis, each fuel station is assumed to be able to accommodate trucks.

The Hop Metric Multiplication formula utilised is as follows:

$$H_n^i = T_i \prod_{j=1}^{n} D_j$$

Where:

H_n^i is the b-Hop score for location i;

T_i is the corresponding ADTT; and

D_j is the distance to the closest j^{th} fuel station from location i

It is important to note that multiple counting stations are not so important, as there could have been several multiple counting station locations. However, the higher the metric, the more possible demand there can be for a truck stop in its location.

To determine the fuel station intensity in the Western Cape, a 1 Hop Multiplication was considered, which means that each SANRAL truck count's Average Daily Truck Traffic (ADTT) is multiplied by the distance to its nearest fuel station. This results in SANRAL locations with large daily truck traffic and far distances to its nearest fuel station having a large resulting metric (see Figure 3-6 and Table 8-1 in Appendix A).

This results in almost every location having an almost comparative metric score, especially due to the close proximity of truck stops and high truck counts in the city. However, locations in the city where drivers can utilise multiple fuel stations in the vicinity, are not comparable to locations in more remote areas with fewer alternative fuel stations available.

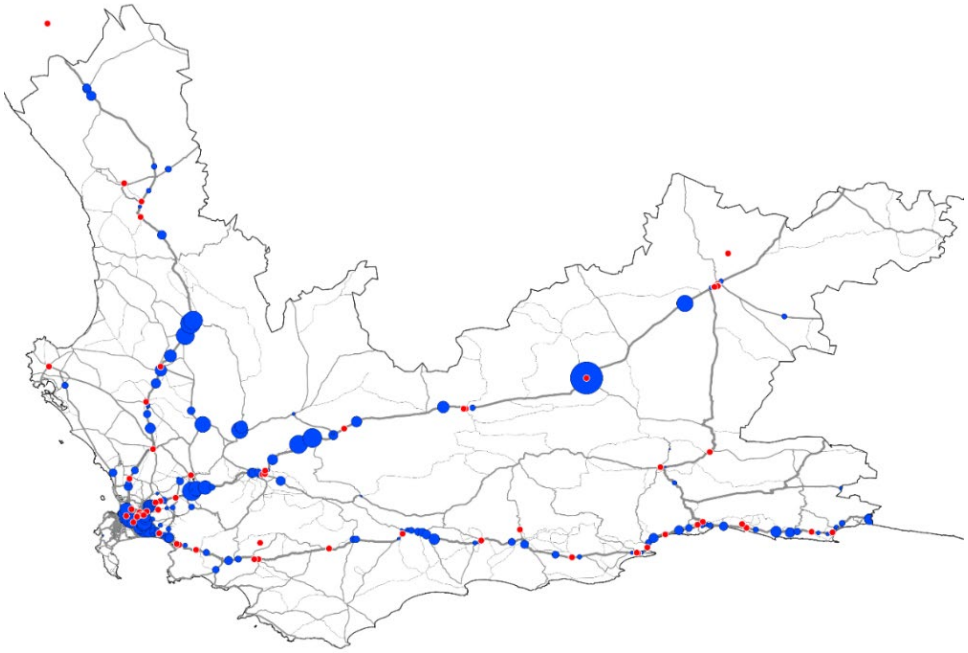

Figure 3-6: Result of the 1 Hop Multiplication Metric (counting stations in blue and fuel stations in red)

Following this, a 2 Hop Multiplication Metric was considered, which is the result of the 1 Hop Multiplication Metric multiplied by the distance to the second closest fuel station. This is to account for a truck missing a fuel station, or not being able to utilise a fuel station, and having to consider the next alternative. Figure 3-7 and Table 8-2 (in Appendix A) show the results of the 2 Hop Multiplication Metric. A final 3 Hop Multiplication Metric was considered, with its results indicated in Figure 3-8 and Table 8-3 in the Appendix A.

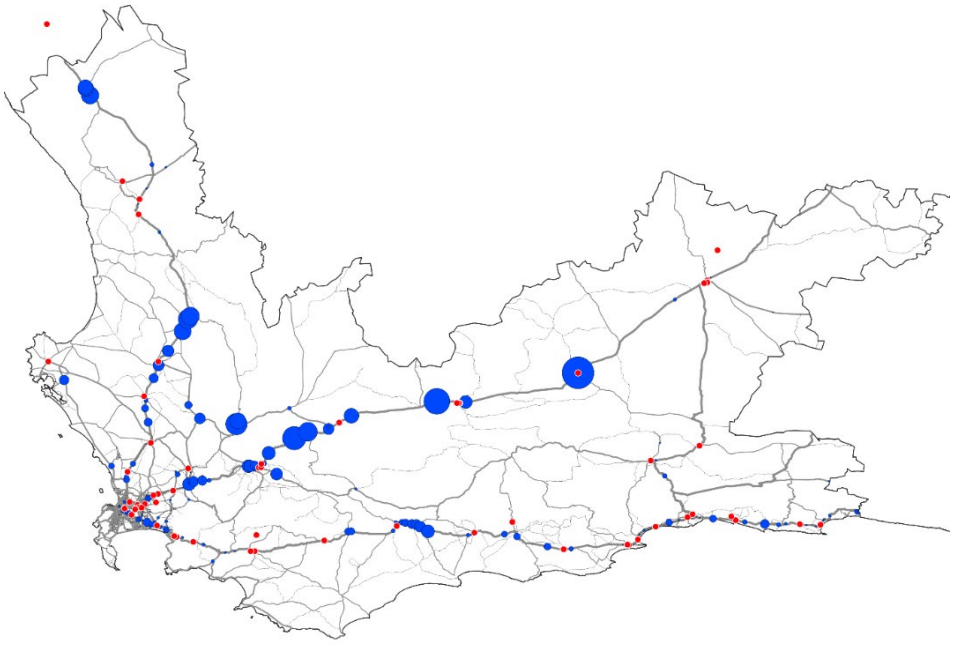

Figure 3-7 Result of the 2 Hop Multiplication Metric (counting stations in blue and fuel stations in red)

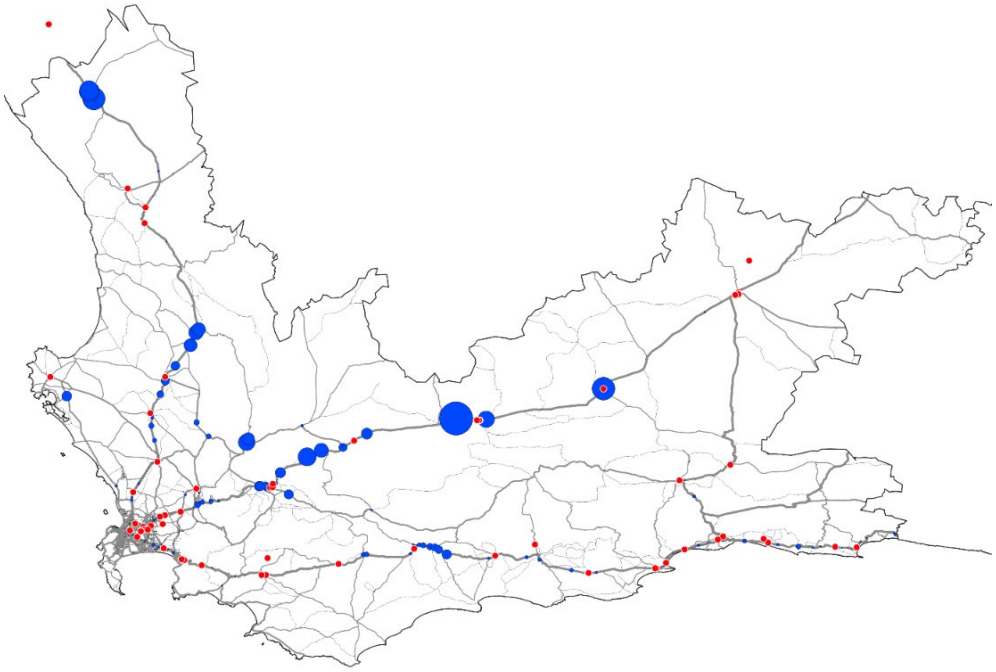

Figure 3-8 Result of the 3 Hop Multiplication Metric (counting stations in blue and fuel stations in red)

The Hop multiplication method treats all fuel stations equally with the assumption that each fuel station can accommodate trucks. However, in practice some fuel stations are capable of handling a much larger number of trucks and may be equivalent to two or more fuel stations. Without the truck volumes and facilities of the various fuel stations, it is unclear whether considering additional fuel stations is necessary. Therefore, the Hop Multiplication Metric beyond 3 was not considered until additional data on fuel stations can be made available or sourced.

3.6 Summary of findings

The results of this analysis identify the possible need for additional fuel stations that can accommodate trucks in two areas, as shown in Figure 3-9. It is possible that fuel stations are present in the areas but were not identified during the mapping process. Additional research in these areas will be required to determine the following:

1. What is the classification of the fuel stations at the start and end of these sections? If these fuel stations cannot accommodate trucks or be classified as trucking facilities or truck stops – further analysis must be done to determine whether these areas need to be extended.

2. Are there adequate trucking facilities/truck stops within these areas that have been overlooked during the desktop analysis?

It is therefore recommended that these results are verified with field surveys to calibrate the calculations and improve the accuracy thereof.

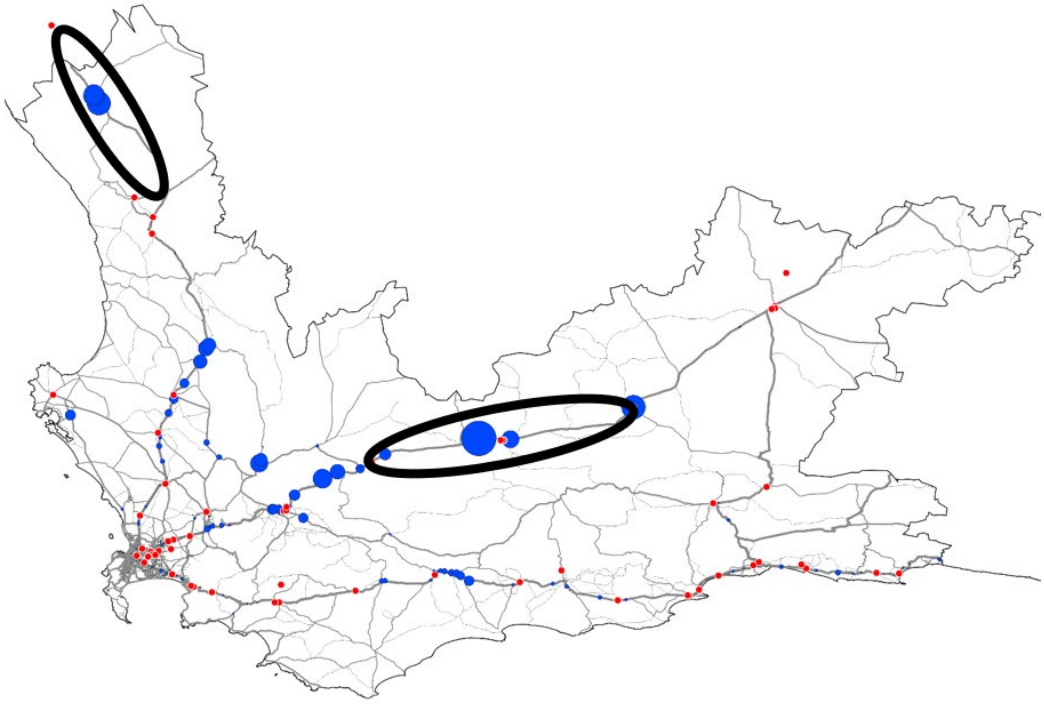

Figure 3-9 Potential areas for truck stops in the Western Cape identified through the 3 Hop Multiplication Metric

4 Truck Stop Users

4.1 Introduction

There are two key perspectives to consider when examining the truck stop user, namely the trucking company and truck driver. Both groups were interviewed to understand their perspectives on key truck stop elements. As the definition of a formal truck stop and trucking facility differs between respondents of the interviews, the assumption is made that a fuel station that can accommodate trucks will be viewed as a truck stop during the interview process in Chapter 4.

Refer to Table 2-1 for reference regarding the broad definition of a service station, trucking facility and formal truck stop.

4.2 Data collection

Two fuel stations that can accommodate trucks were included in this study, namely, the Engen Winelands One Stop on the N1 and the Total Piketberg on the N7. The Engen Winelands One Stop was surveyed on the 14th and 26th of November 2022 and the Total Piketberg on the 1st of December 2022. Twenty truck drivers were interviewed at the Engen Winelands One Stop and 12 truck drivers at the Total Piketberg, as shown in Table 4-1.

Table 4-1: Truck driver interviews details

Corridor	Fuel Station	Date	Number of drivers
N1and N2	Engen Winelands	14 & 24 November 2022	20
N7	Total Piketberg	1 December 2022	12

The interviews with truck drivers were conducted using a structured questionnaire which is illustrated in Appendix C. The structure of the interview covered the following key issues:

i. Factors influencing drivers' decision to stop at a truck stop;

ii. Factors influencing selection of a truck stop;

iii. Adequacy of truck stops in the Western Cape and sufficiency of existing truck stops in meeting the user needs; and

iv. Existence of informal truck stops.

4.3 Factors influencing the decision to stop

The survey sought to understand factors that influence the drivers' decision to stop at overnight stops and the need for specific services and amenities at such stops. The following topics were discussed with the drivers:

4.3.1 Time and distance interval considerations

Several transport companies seem to have internal guidelines regarding the regular intervals at which truck drivers must stop. These intervals are based on safety considerations related to loads and tyre conditions, as well as mitigating the effects of driver fatigue.

It is important to note that according to the South Africa Labour Relations Act, amended in 1996, truck drivers are required to take at least half an hour's rest after five hours of driving and must have a minimum of nine consecutive hours off per day (Maldonado, Mitchell, Taylor, & Driver, 2002). However, some truck drivers are under pressure to drive excessively to supplement their income and meet the company and customer's expectations.

66% of the respondents indicated that they stop every two to four hours or every 200 – 400 kilometres. This is aligned with legislation and good company practices. Of the remaining respondents, most said they only rest when they feel tired. In such cases, the drivers indicated that they stop if they deem it safe to do so.

4.3.2 Continuous rest considerations

The interval directives of some transport companies stipulate that drivers must rest from late evening hours (21:00 – 22:00) to early morning hours (03:00 – 05:00), while some even need to stop as early as 20:00 as part of their mandatory rest period. This is aligned with legislation and good company practice.

4.3.3 Other significant considerations

Almost 90% of the respondents stated that they were responsible for deciding where to stop, while many stated that their management expected them to exhibit good judgment, with safety and security as the key priority. A significant consideration for many drivers was the cost of stopping at a truck stop, which ranges between R100 and R200 per night. Many truck stops provide free use of their facilities as part of the refuelling service, which makes these stops an obvious choice for drivers and companies alike.

Majority of the respondents reported that their companies use company cards to pay for truck stops, and many also reported that their companies maintain accounts with certain regularly used truck stops. This system facilitates seamless business-to-business transactions by capturing the truck registration number and sending an invoice directly to the trucking company.

Occasionally, drivers pay themselves and receive reimbursement from their employers, which naturally requires them to maintain and present the required receipts and invoices. Generally, truck drivers do not receive cash to use at truck stop facilities.

4.4 Factors influencing selection of a truck stop facility

Once a decision has been made to stop, based on the factors described in Section 4.3, the next step will be to determine the most appropriate truck stop. Drivers without mandated truck stops are free to select a truck stop based on their preference and/or factors discussed in Section 4.3. For the trucking companies that have mandated truck stops, the preselection of the truck stops is based on the facilities available. These facilities include:

- Ablution

The availability of toilet paper, water and clean, maintained and well-equipped shower rooms were the most cited concerns from respondents.

- Food and other supplies

There was a perception among respondents that food options were expensive and unhealthy, with a limited variety of food. Additionally, respondents stated that the freshness of the food was often questionable, and that they had little interest in cooking facilities.

- Financial services

Most truck drivers use bank cards for payments, but a few highlighted that cash facilities were important. It was also reported that ATMs are often offline or out of service.

- Fuel, maintenance, and tyre services

Respondents considered 24-hour fuelling facilities to be extremely important. It was reported that maintenance and tyre services are generally regarded as nice to have since most transport companies have their own roadside assistance or agreements with Original Equipment Manufacturers (OEMs). Respondents noted that some truck stops charge significantly higher fuel prices than standard fuel stations.

- Laundry facilities

Laundry facilities are considered useful by some respondents while others, especially those who travel for long periods, deemed it important. It is important that these facilities be clean and tidy for drivers' use.

- Parking

In addition to safety and security, the availability of sufficient parking is one of the most important concerns regarding truck stops, especially during evenings and weekends, when truck stops typically come alive.

- Accommodation

Accommodation at truck stops was not even considered a viable option, with some respondents stating that they prefer to sleep in their trucks. The major reasons stated were:

i. safety (can look after the load and truck);

ii. affordability (cheaper than paying for a room); and

iii. inadequate accommodation options to meet demand.

- Safety and security aspects

The prevalence of crime is the top consideration when deciding whether to use a truck stop. According to respondents, a significant number of crimes are committed at truck stops. Among the hotspots mentioned are stops along the N2, as well as stops on the N1 in the Beaufort West area. Safety concerns range from petty thefts of the driver's belongings, truck tyres, and loads to complete hijackings and threats to the driver's life. It was emphasised that fencing, security guards, dogs, controlled access, sufficient illumination, and cameras are important safety and security measures. The use of cameras is particularly important when it comes to proving innocence and/or accountability.

- Wash bay facility

Most respondents indicated that wash bay facilities are not that important since their respective companies have their own wash bay facilities at their depots, which are considerably less expensive to use.

- Wellness clinics

There were polarising views regarding wellness clinics. Some respondents indicated that clinics are essential, while others stated that they would never visit a truck stop clinic. Although some truck stops do offer wellness clinics, many of these facilities are never open. Respondents noted that, where available, the clinics had varying operating times which did not correlate with drivers stopping late at night. The unavailability of important chronic disease medications (such as high blood pressure and diabetes) was also raised.

- Other considerations for drivers

The availability of Wi-Fi at truck stops was cited by others as a competitive advantage, while others emphasised the need for exercise facilities.

- Other considerations for trucking companies

Typically, trucking companies have other considerations in addition to those mentioned by drivers. Some of the considerations include:

i. It is ideal for truck stops to be located close to their routes to reduce the distance detoured to and from the truck stop.

ii. Trucking companies to avoid paying their drivers in cash as much as possible to protect their drivers and property from criminal elements. In this regard, the opening of business-to-business accounts between truck stop operators and trucking companies has been raised as a potential solution that would eliminate the need for cash payments. As a result, seamless operational procedures are often achieved, risk is reduced, and savings can be realised on operating budgets.

iii. There is no sale of alcohol at the truck stop.

iv. Access control.

v. Competitive fuel pricing.

4.5 Adequacy of truck stops and the existence of informal truck stops

Based on the truck stop user interviews, the main findings relating to the adequacy of truck stops in the Western Cape; the extent to which existing truck stops are meeting the user needs; and existence of informal truck stops are discussed below.

4.5.1 Adequacy of truck stops, and sufficiency of existing truck stops in meeting driver needs

Respondents noted that there is a sufficient number of truck stops in the Western Cape, particularly along the N1 and N7. Respondents identified the truck stop services on N2 as an area for improvement. There appears to be a need to expand the capacity of existing truck stops in the evenings and during the weekends, as many of them are extremely busy in these periods. Participants specifically mentioned the need to increase capacity at Beaufort West.

Respondents noted the need to improve security at existing truck stops (especially along the N2). One respondent urged the issue of chronic medications being unavailable at wellness clinics to be addressed. Another suggested the establishment of a traffic department/administration facility which would allow drivers to renew important documents and pay outstanding fines. There was also a strong demand for healthy food options among the participants.

Table 4-2 shows the summarised feedback from respondents around the adequacy of the number of truck stops network and the sufficiency of the network in meeting user needs.

Table 4-2: Feedback on existing truck stops.

Corridor	Truck stops	Comment
N1	Truck stops mentioned most frequently were: i. Beaufort West ii. Joostenberg Vlakte iii. Kraaifontien iv. Kuils River v. Laingsburg vi. Touws River vii. Worcester	All the drivers indicated that there are sufficient truck stops on the N1 corridor.
N2	Locations with sufficient truck stops: i. Albertinia ii. Macassar iii. Tsitsikamma	Most drivers indicated that there are not enough truck stops along the N2 corridor.
N7	No stops were explicitly mentioned	Drivers indicated that there are sufficient truck stops on the N7 corridor from Cape Town to the Namibian border.

4.5.2 Informal truck stops

Many respondents said they never use informal truck stops due to safety concerns, with some even saying that the use of informal truck stops is a serious risk to life. Other respondents mentioned only using informal truck stops during the daytime and highlighted crime as a major concern at informal truck stops.

The respondents that use informal truck stops mostly do so when they are tired and want to take a short break (ranging from less than 10 minutes to an hour at most). Informal truck stops in Beaufort West were mentioned as safe to use, albeit, with police presence nearby. Very few respondents mentioned that they were comfortable with stopping anywhere in the Western Cape during the day and feel safe.

A location near the Tsitsikamma tollgate (on the N2) was the only informal truck stop mentioned explicitly by the respondents.

5 Truck Stop Operators

5.1 Key success factors for truck stops

Several key factors contribute to the success of a truck stop in South Africa. Security measures such as fencing, access control, security controls, dog handlers, and armed response are major contributors to success. The consideration of these factors is especially relevant to the South African context, where truck hijacking and theft are a reality. It is also important for a truck stop to provide fuel at marginal prices, as well as high-quality food through a restaurant. Retail and convenience shops are also important to the success of a truck stop. Other key considerations are presented in Table 5-1.

Table 5-1: Key considerations in truck stop selection

Element	Description
Land use and transportation planning	• Land use and zoning are important factors to consider when analysing a potential site. Discussions between private sector (trucking companies) and local authorities are in identifying truck stop locations.
Site Selection and Design	• The site should be accessible to major highways/freeways with a high truck volume. • A site should accommodate the types of vehicles that will use the facilities, and there should be sufficient parking with the appropriate dimensions. • Setting up usage agreements between a truck stop operator and trucking companies will allow for the accurate forecast of future income streams and expected truck volumes. • Other considerations include building placement, landscaping, noise mitigation, lighting, and the design of service lanes in strategic locations (Ontario, 2016).
Safety and Security	It is a significant consideration within the South African context, which should influence aspects of the site design as well as be considered on its own. This is evident from the interviews as discussed in Section 4.3.
Stakeholder Collaboration:	• Local authorities must play a proactive role in understanding the needs of the freight operators and carriers.

Element	Description
Amenities	• A driver's decision to utilize a stop can be influenced by the amenities that are offered. A retail/convenience store and/or restaurant that offers high-quality food is important. Other amenities such as accommodation and ablution block equipped with showers are attractive for drivers. • Offer tyre services, a canteen, and even laundry services for drivers. • Medical facilities which allow drivers to collect prescription medication or receive health checks can improve driver wellbeing.

5.1.1 Implementing key success factors

Highway Junction (Figure 5-1) is a flagship truck stop in Southern Africa that has implemented all the key success factors. It is located approximately halfway between Johannesburg and Durban, adjacent to the N3/N5 junction south of Harrismith.

Figure 5-1: Highway Junction truck stop in Harrismith

The success of the truck stop is largely dependent on its location and accessibility, approach to driver and cargo safety, as well as its competitive pricing on diesel. The Highway Junction truck stop offers a wide range of facilities, amenities, and features, as listed below:

i. 3 separate branded forecourts

ii. 24-hour workshops

iii. Drivers' clubhouse

iv. Safe and secure hard parking

v. Open 24 hours a day

vi. Fresh & homemade food

vii. 3 branded ATM's

viii. Monthly undercover parking

ix. Trucking wellness clinic

x. OK Express

xi. Driver rooms

xii. Laundromat

xiii. TV & entertainment centre

xiv. Weighbridge

xv. CCTV cameras

xvi. Driver incentive scheme for every litre refuelled

xvii. Dog patrol units

5.2 Challenges for truck stops

Industry leaders have noted that security is a major concern, especially since there are only a few properly configured truck stops in the country. These concerns, combined with the prevalence of cargo theft, hijacking, and illegal parking at toll-stations are the most prevalent challenges facing the industry (Safety and Security , 2021). Figure 5-2 presents the cargo theft trends in South Africa during 2020. It is interesting to observe the sudden increase in the theft of medical supplies from 0% in Q1 to 12% in Q2 of 2020.

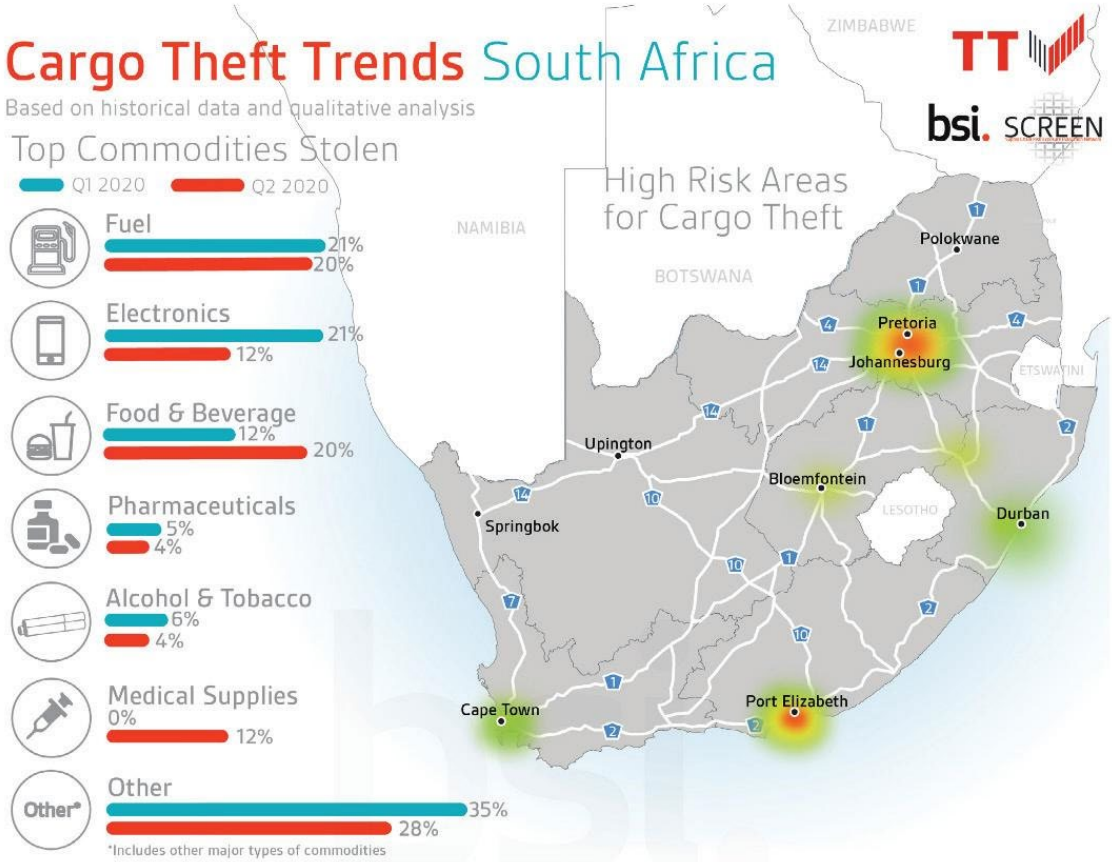

Figure 5-2: Cargo Theft Trends in South Africa (Safety and Security , 2021)

Truck stops within small towns often serve as perceived safety nets due to safety in numbers hypothesis. This presents the local community with several challenges including noise pollution from idling trucks, damage to the road infrastructure, unhygienic conditions as a result of the lack of amenities and garbage disposal, prostitution, and the potential for crime because of the exposure of drivers and their loads to criminal activity. While law enforcement officers in these communities are often frustrated with the drivers, it is often safer for the trucks to be parked in town than on the outskirts of town. In general, drivers park between the hours of 11pm and 3am. Many drivers have reported that this results in a poor night's sleep, resulting in fatigue. Additionally, there is a history of trucks stopping at toll gates, and these are the locations where they are most likely to be hijacked or robbed. Truck stops can address these challenges by providing adequate secure parking and basic amenities designated for rest.

5.3 Lessons learned

Several challenges and lessons can be drawn from engagements with the private sector. Truck stops were identified as being critically dependent on-site selection, not only from a geographical perspective, but also from a business perspective.

The first challenge is often the establishment of truck stops and obtaining the associated permits. Due to the low yield of truck stops, the choice of land needs to be taken into consideration. Important aspects are land parcel size, possible earth moving requirements and the accessibility of the major corridors. Furthermore, the zoning of land, particularly outside of metropolitan areas, may continue to pose a challenge to the industry. This is because much of the land outside of metropolitan areas is zoned for agriculture and would be required to be rezoned for purposes of developing truck stops.

There have been reports of delays in the approval of permit applications for the development of truck stops by various government agencies, such as the Department of Mineral Resources and Energy and local authorities. Efforts to reduce red tape in the Western Cape can be undertaken by the Red Tape Reduction Unit. A major objective of the unit is to facilitate business growth and create jobs in the Western Cape by improving the ease of doing business (Western Cape Government, 2021).

Furthermore, the private sector has highlighted the need to keep large freight trucks out of the metropolitan area. The establishment of truck stops, in conjunction with warehousing and consolidation areas outside metropolitan areas will be one of the keys to addressing the problem of noise pollution and the strain placed on the infrastructure of metropolitan areas by heavy vehicles.

6 Summary of findings and next steps

6.1 Summary of findings

A summary of the study's findings is provided below:

6.1.1 Assess the adequacy of truck stops in meeting the needs of the truck stop users

Chapter 3 examined the existing fuel station network in the Western Cape. The Hop Multiplication Method was used to identify possible gaps in the network. The status quo assessment identified possible gaps in the network on the N1 (between Laingsburg and Prince Albert Way Service Station) and the N7 (between Citrusdal and Bitterfontein) where truck stops are required. The analysis did not include a 1) definitive formal descrition of a service station, trucking facility or truck stop or 2) formal classification of each fuel station as a service station, a trucking facility, or a truck stop. It is important to note that both points mentioned above must be addressed in further research. The formal identification and analysis of the fuel stations will allow for a better understanding of the current status regarding truck stops in the Western Cape.

Based on the analysis conducted, it can be inferred that the fuel stations at the beginning and end of these gaps are forced to operate at high levels of capacity to accommodate the demand. Due to the limited scope of this analysis, it is difficult to determine whether there are indeed truck stops in the perceived gaps, whether the fuel stations identified can be classified as truck stops and whether the fuel stations at the beginning and end of the gaps can accommodate the current truck volumes.

Further investigation is required to determine whether the fuel stations surrounding the gaps are operating at a standard that is safe and efficient for the truck drivers, and if they have sufficient capacity to meet the demand. Should the surrounding fuel stations be operating at a level below the minimum requirements, consideration will be given to upgrading these fuel stations to formal truck stops or developing new ones to supplement the capacity.

6.1.2 Truck stop operator and user interviews

As stated in Chapter 4, all fuel stations that can accommodate trucks are regarded as truck stops during Chapter 4 due to the difference in understanding of a formal truck stop among interview respondents. From a user perspective based on the interviews, the following key insights were ascertained:

i. There appears to be adequate truck stops that meet driver needs on the N1 and N7.

ii. There are perceived gaps in the truck stop network on the N2, resulting in serious perceived security concerns along this national route.

Based on the interview responses, it appears that there are informal truck stops that drivers typically use to take short breaks. However, the current extent of the informal truck stops in the Western Cape is unclear.

Further investigation is required to identify candidate truck stops for infrastructure upgrades by identifying truck stops in strategic locations that operate at high truck volumes but do not meet the safety and infrastructure standards of a modern formal truck stop.

6.1.3 Identification of key stakeholders for future engagement

The primary group of stakeholders to be consulted for inputs into the study is the road freight sector, mainly truck stop users and truck stop operators. Stakeholders from the road freight sector will provide inputs into the challenges identified in this study and the proposed improvements. The provisional list of stakeholders for future engagement based on the study deliverables is listed below:

a) **Western Cape Department of Transport and Public Works' Land Transport Safety, Road Safety Management Units, and Provincial Traffic Law Enforcement** – these stakeholders may be consulted regarding potential road traffic safety and driver wellness challenges linked to the state of truck stops in the Western Cape.

b) **Western Cape Department of Environmental Affairs and Development Planning (DEA&DP)** – DEA&DP may be consulted regarding the links between the provision of truck stops, land use, and spatial planning. In addition, the department may be engaged regarding environmental considerations in the potential placement of truck stops, although most such engagements are envisaged at a later stage when it is necessary to identify specific locations for the truck stops.

c) **Western Cape Department of Economic Development and Tourism (DEDAT)** – DEDAT may be consulted on the economic implications of the state of truck stops, including their potential impact on trade in the province. Most such engagements are, however, likely to occur at a later stage, when it is necessary to identify specific locations for the truck stops.

d) **Western Cape Department of Health (DoH**) – DoH may be consulted regarding health-related issues linked with truck stops, including the social challenges of truck stops e.g., sex trade or the potential to provide driver wellness services at truck stops.

e) **Western Cape Department of Social Development (DSD)** – DSD may be consulted regarding the social impacts of truck stops, including issues related to the sex trade and how these may be mitigated.

f) **Extensive private truck stop operators** – these stakeholders may be consulted for inputs into the study's findings on the state of the truck stop network and opportunities for improvement, taking advantage of their experience in operating these facilities. The private sector may also be engaged regarding opportunities to work with the government to address the current challenges.

g) **Local municipalities and their Road Traffic Law Enforcement or Road Safety Management Units** – these will be consulted regarding the findings on the state of truck stops in their areas, ongoing initiatives to address related challenges, and support that may be needed from the Western Cape Government.

h) **SANRAL** – the agency will be consulted regarding potential links between the truck stops and the national road network infrastructure.

The list of stakeholders suggested above is not exhaustive. Other stakeholders such as non-profit organisations and research organisations may also be engaged as the need is identified.

6.1.4 Frameworks for future engagements

Two frameworks for future stakeholder discussion were identified in this study, as discussed below:

i. As a point of departure, it is important to identify the key characteristics required of service stations, trucking facilities and formal truck stops to create a clear definition of each. Setting up a set of minimum requirements for each of the three facility types will allow for the standardisation of the high-quality, high-capacity truck stop network. By adhering to minimum standards, currently underperforming truck stops will be able to provide adequate service to drivers. Drivers will have access to a larger volume of efficient truck stops, mitigating the effects of fatigue and disperse truck volumes along important freight routes.

ii. Legislation/incentives may be required for developers to create or improve on the existing truck stops to meet the framework above.

6.2 Next steps

6.2.1 On-site investigation of truck stop network in the Western Cape

A preliminary database of all current fuel stations (service stations, trucking facilities and truck stops) was developed in this study (Appendix B). As part of future work, it is necessary to update

the preliminary database in line with the outcomes of the stakeholder engagement process through the following steps:

1. Establish a clear definition of a service station, trucking facility and formal truck stop.
2. Determine the formal classification of each fuel station in the Western Cape as either a service station, trucking facility or truck stop according to the definitions established in Point 1.
3. Analyse the adequacy of the formal truck stop network in the Western Cape.

This process will further streamline the fuel stations network based on the number of trucks serviced, capacity of the facility, current standard of facilities, and amenities and services provided.

6.2.2 Exploring Potential Site locations

From the analysis of the 3 Hop Multiplication Metric there are areas within the Western Cape which have been identified to have inadequate fuel stations and consequently truck stops. Analysis must be done to determine whether:

1. The fuel stations at the beginning and end of the areas can accommodate trucks. If not, analysis must be done to determine whether the areas need to be extended.
2. There are any fuel stations within the areas that have been overlooked during the desktop study that need to be included.

It will be worthwhile to hold engagements with the local municipalities and with government departments that can bolster the development of truck stops along these areas.

6.2.3 Guidelines for truck stop implementation

The report provided information on the requirements of a formal truck stop and underlines the most pressing features within a South African freight transport context (Table 5-1, Section 5.1 and Section 4.4). The development of a formal guideline for truck stop implementation in Western Cape is recommended. This report forms the basis of the guideline document, which can be finalised during engagements with the various stakeholder groups. The guideline will serve as a specification tool when considering the construction of new truck stops or upgrading existing truck stops.

7 Bibliography

Arrive Alive. (2023). *Truck Stops and Road Safety*. Retrieved from Arrive Alive: https://www.arrivealive.mobi/truck-stops-road-safety

Department of Planning, Monitoring and Evaluation. (2022). *National Spatial Development Framework*. Pretoria.

Department of Public Works and Infrastructure. (2022). *National Infrastrcture Plan (2050)*. Pretoria.

Department of Transport. (2021). *White Paper on National Transport Policy (Revised)*. Pretoria.

Maldonado, C., Mitchell, D., Taylor, S., & Driver, H. (2002). Sleep, work schedules and accident risk in South Africa long-haul truck drivers. *South African Journal of Science*, 319 - 323.

News, F. (2022, November 24). *62% of South African road accidents involve trucks.* Retrieved from https://www.freightnews.co.za/article/62-south-african-road-accidents-involve-trucks

Ontario, M. o. (2016). *Freight Supportive Guidelines.* Retrieved from www.ontario.ca: https://www.ontario.ca/files/2022-03/mto-freight-supportive-guidelines-en-2022-03-31.pdf

Safety and Security . (2021, May). Retrieved from Sunday Times ZA: https://issuu.com/sundaytimesza/docs/freight2021/s/12379140

Truck Stop Africa. (2023, January 24). *What is a Truckstop?* Retrieved from Truck Stop Africa: https://truckstop.africa/truckstop-africa---what-is-a-truckstop.html

Truck Stops and Road Safety. (2022). Retrieved from Arrive Alive: https://www.arrivealive.co.za/Truck-Stops-Road-Safety

van Derschuren, M., & Roux, D. (2018). *Road safety comparison in South Africa - How do the different provinces compre?* Cape Town.

Western Cape Government. (2021, February 26). *Red Tape Reduction Unit saves project and supports jobs in the Western Cape*. Retrieved from Western Cape Government: https://www.westerncape.gov.za/news/red-tape-reduction-unit-saves-project-and-supports-jobs-western-cape

Western Cape Government. (2022). *WCFDM Report.*

8 Appendix A: Hop Multiplication Metric tables

Table 8-1 The top 10 locations for the 1 Hop Multiplication Metric

Site Id	Site Name	Site Type	Location	Latitude	Longitude	Lanes	ADTT	Nearest fuel station	1 Hop Multi-plication metric
1229	Prince Albert Rd	Permanent	North of Prince Albert Rd Town	-32.985142	21.684572	2	1622	Caltex Upington	133 729
292	Piekenierskloof New	Secondary	Between Piketberg and Citrusdal	-32.611332	18.971972	3	898	Atlantic Oil Moorreesburg	59 287
18017	ST-J_N001_03_50-4	Secondary (Temp)	Between De Doorns & R318 Montagu T/O	-33.395485	19.805935	2	1772	Mosh Petroleum - Worcester	53 160
621	Franschoek I/C	Permanent	Western side of Jan van Riebeeck I/C	-33.75933	18.98021	6	4350	Puma - Wellington	52 778
5015	Citrusdal	Permanent	Between Citrusdal and Clanwilliam (0054C)	-32.591194	18.98917	2	759	Atlantic Oil Moorreesburg	52 169
710	Khayelitsha	Permanent Piezo	Western side of Mew Way/M44 I/C	-34.010178	18.65485	8	4997	Mosh Petroleum CC	50 101
1206	De Doorns	Secondary (Temp)	Between De Doorns and Touwsriver	-33.439388	19.711267	2	1683	Mosh Petroleum - Worcester	48 936
18078	ST-J_N007_03_60-0	Secondary (Temp)	Between R365 Porterville T/O & R365 Eendekuil T/O	-32.696133	18.935322	2	867	Atlantic Oil Moorreesburg	48 605
5054	PGWC Ceres North	Permanent	Between Ceres and Prince Alfred Hamlet	-33.341946	19.309166	2	1215	Mosh Petroleum - Worcester	42 098
297	Letjiesbos	Secondary	Between Leeu-Gamka and N12 TO	-32.47531	22.358513	2	1815	Quest Beaufort West	41 209

Table 8-2 The top 10 locations for the 2 Hop Multiplication Metric

Site Id	Site Name	Site Type	Location	Latitude	Longitude	Lanes	ADTT	Nearest fuel station	2 Hop Multi-plication metric
1229	Prince Albert Rd	Permanent	North of Prince Albert Rd Town	-32.985142	21.684572	2	1622	Caltex Upington	5 095 021
18020	ST-J_N001_04_ 66.57	Secondary (Temp)	Between R354 Sutherland T/O & Laingsburg	-33.183533	20.70283	2	1800	Laingsburg Truck Stop	3 569 321
1206	De Doorns	Secondary (Temp)	Between De Doorns and Touwsriver	-33.439388	19.711267	2	1683	Mosh Petroleum - Worcester	2 987 574
5054	PGWC Ceres North	Permanent	Between Ceres and Prince Alfred Hamlet	-33.341946	19.309166	2	1215	Mosh Petroleum - Worcester	2 570 128
292	Piekenierskloof New	Secondary	Between Piketberg and Citrusdal	-32.611332	18.971972	3	898	Atlantic Oil Moorreesburg	2 137 025
18017	ST-J_N001_03_50-4	Secondary (Temp)	Between De Doorns & R318 Montagu T/O	-33.395485	19.805935	2	1772	Mosh Petroleum - Worcester	2 068 362
5015	Citrusdal	Permanent	Between Citrusdal and Clanwilliam (0054C)	-32.591194	18.98917	2	759	Atlantic Oil Moorreesburg	1 880 450
18008	ST-J_N007_05_79-3	Secondary (Temp)	Between Nuwerus and Bitterfontein	-31.055665	18.29149	2	262	Atlantic Oil Garies Garage	1 805 616
18078	ST-J_N007_03_60-0	Secondary (Temp)	Between R365 Porterville T/O & R365 Eendekuil T/O	-32.696133	18.935322	2	867	Atlantic Oil Moorreesburg	1 751 986
5020	PGWC Goudini	Permanent	Between Ceres and Worcester (4425B-P)	-33.319683	19.319683	2	686	Mosh Petroleum - Worcester	1 525 966

Table 8-3 The top 10 locations for the 3 Hop Multiplication Metric

Site Id	Site Name	Site Type	Location	Latitude	Longitude	Lanes	ADTT	Nearest fuel station	3 Hop Multi-plication metric
18020	ST-J_N001_04_ 66.57	Secondary (Temp)	Between R354 Sutherland T/O & Laingsburg	-33.183533	20.70283	2	1800	Laingsburg Truck Stop	560 339 709
1229	Prince Albert Rd	Permanent	North of Prince Albert Rd Town	-32.985142	21.684572	2	1622	Caltex Upington	287 912 631
18008	ST-J_N007_05_79-3	Secondary (Temp)	Between Nuwerus and Bitterfontein	-31.055665	18.29149	2	262	Atlantic Oil Garies Garage	281 821 257
18009	ST-J_N007_06_03-7	Secondary (Temp)	Between Bitterfontein and Pofadder T/O	-31.008088	18.261728	2	243	Atlantic Oil Garies Garage	236 114 447
18010	ST-J_N007_06_04-7	Secondary (Temp)	Between Pofadder T/O and WC Border	-30.99925	18.259172	2	218	Atlantic Oil Garies Garage	208 111 872
1206	De Doorns	Secondary (Temp)	Between De Doorns and Touwsriver	-33.439388	19.711267	2	1683	Mosh Petroleum - Worcester	196 274 636
5054	PGWC Ceres North	Permanent	Between Ceres and Prince Alfred Hamlet	-33.341946	19.309166	2	1215	Mosh Petroleum - Worcester	168 849 726
18021	ST-J_N001_05_4-5	Secondary (Temp)	Between Laingsburg & R328 Prince Albert Rd	-33.188938	20.90357	2	1722	Engen Laingsburg 1 Stop	165 399 359
292	Piekenierskloof New	Secondary	Between Piketberg and Citrusdal	-32.611332	18.971972	3	898	Atlantic Oil Moorreesburg	134 676 396
18017	ST-J_N001_03_50-4	Secondary (Temp)	Between De Doorns & R318 Montagu T/O	-33.395485	19.805935	2	1772	Mosh Petroleum - Worcester	126 276 068

9 Appendix B: Identified fuel stations in the Western Cape

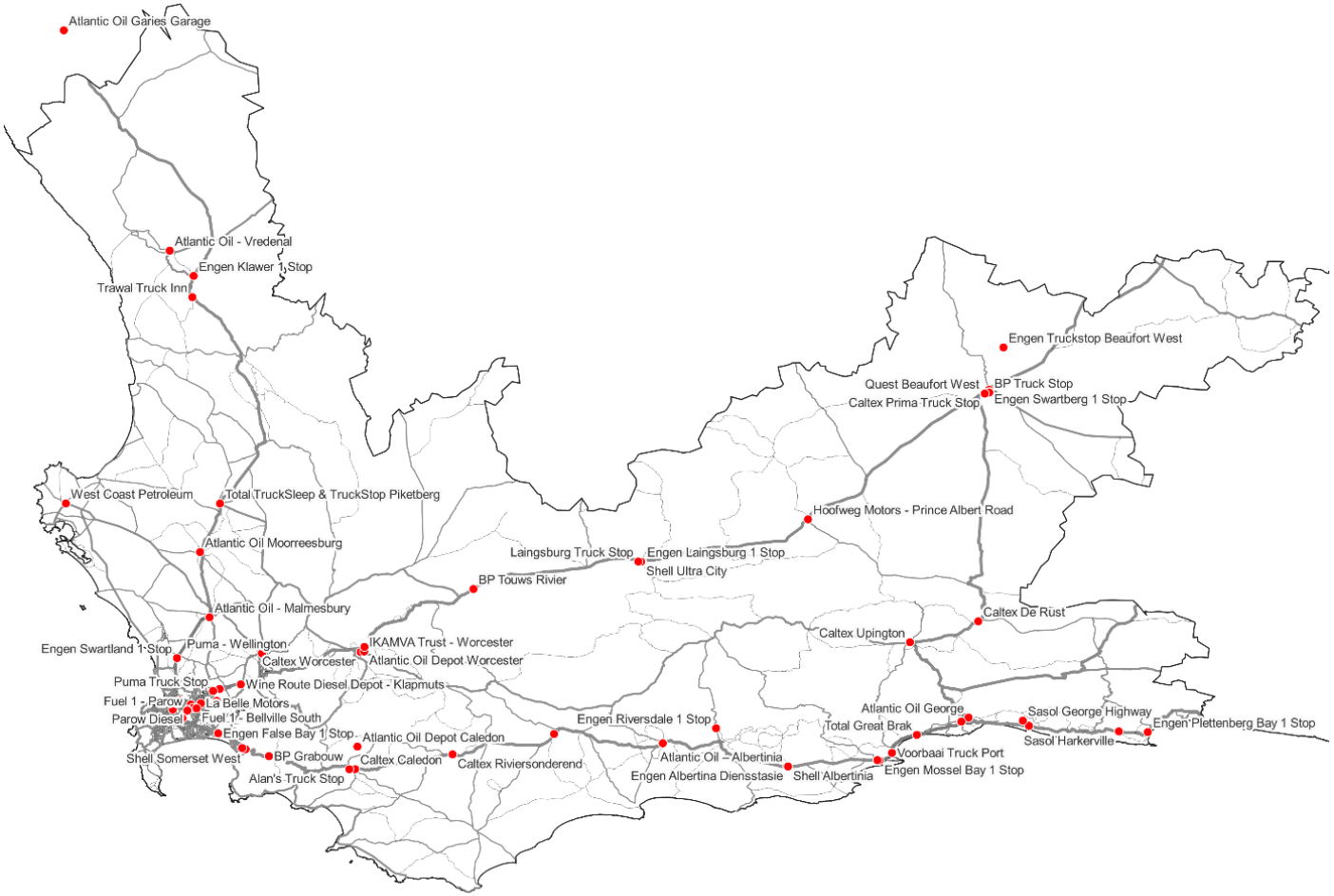

Figure 9-1 Identified fuel stations in the Western Cape

Table 9-1 Identified fuel stations in the Western Cape

	Source	ID	Province	Name	Latitude	Longitude	Address
1	Atlantic Oil	76	Western Cape	Atlantic Oil Depot Caledon	-34.1131701	19.4481361	18 Industrie St, Caledon, 7230
2	Atlantic Oil	77	Western Cape	Atlantic Oil Filling Station George	-33.9900458	22.4448416	6 Saffier Cres, Tamsui Industria, George, 6529
3	Atlantic Oil	78	Western Cape	Atlantic Oil Moorreesburg	-33.1482253	18.6671954	Moorreesburg, 7310
4	Atlantic Oil	79	Western Cape	Atlantic Oil Depot Swellendam	-34.0503867	20.4239723	2 Koringland St, Swellendam, 6740
5	Atlantic Oil	80	Western Cape	Atlantic Oil Depot Worcester	-33.6386887	19.4817230	1 Perkins Street, Worcester, 6850
6	Atlantic Oil	84	Western Cape	Atlantic Oil - Vredenal	-31.6532437	18.5169383	12 Sirkel Street, Vredendal, Western Cape, 8160
7	Atlantic Oil	85	Western Cape	Atlantic Oil - Malmesbury	-33.4717625	18.7143867	3 Schoonspruitweg, Malmesbury, Western Cape, 7299
8	Atlantic Oil	86	Western Cape	Atlantic Oil – Albertinia	-34.2108416	21.5804367	14 Nywerheids Avenue, Albertinia, Western Cape, South Africa, 6695
9	Atlantic Oil	87	Western Cape	Atlantic Oil – George industria	-33.9885169	22.4432827	6 Saffier Crescent, George, Western Cape, South Africa, South Africa, 6529
10	Atlantic Oil	88	Western Cape	Atlantic Oil George	-33.9689148	22.4808450	2 Nelson Mandela Blvd, George Industria, George, 6536
11	BP	183	Western Cape	BP Truck Stop	-32.3570810	22.5835240	Donkin Road

	Source	ID	Province	Name	Latitude	Longitude	Address
12	BP	186	Western Cape	La Belle Motors	-33.8981640	18.6713260	La Belle Rd, Stikland Industrial, Cape Town, 7530
13	BP	192	Western Cape	BP Grabouw	-34.1607659	19.0092989	Oudebrug Rd, 1 Marsh Rose Mall, Grabouw, 7130
14	BP	197	Western Cape	BP Atlantic - George	-33.9892800	22.4451600	c/o Pearl &and Saffire Street, Tamsui Industria, George, 6530, Western Cape
15	BP	402	Western Cape	BP Touws Rivier	-33.3315000	20.0237400	N1 National Road, Touws River, 6880
16	Caltex	120	Western Cape	Caltex Prima Truck Stop	-32.3607828	22.5617562	Corner Arbeid Street, Tegniek St, and, Beaufort West, 6970
17	Caltex	125	Western Cape	FreshStop at Caltex Prime Park Service Station	-33.9044551	18.6214361	Tienie Meyer Bypass, Landdros St, Bellville, 7535
18	Caltex	134	Western Cape	Caltex De Rust	-33.4918346	22.5289926	De Rust, 6650
19	Caltex	136	Western Cape	Caltex Caledon	-34.2247833	19.4368211	1 Nerina St, Caledon, 7230
20	Caltex	137	Western Cape	Caltex Upington	-33.5953426	22.1901139	Oudtshoorn, 6620
21	Caltex	141	Western Cape	Caltex Worcester	-33.6440195	19.4641892	Leipoldt Ave, Western Cape Province, 6850
22	Caltex	144	Western Cape	Caltex Riviersonderend	-34.1516194	19.9203739	1d Main Street, Riversonderend, Western Cape Province, South Africa 7250, Western Cape Province, 7250
23	Caltex	148	Western Cape	Caltex Heidelberg	-34.0964543	20.9635174	1 Eksteen St, Heidelberg - Wc, Heidelberg, 6665

	Source	ID	Province	Name	Latitude	Longitude	Address
24	ENGEN 1 Stop	5	Western Cape	Winelands 1 Stop North	-33.8261088	18.7628427	N1, Joostenberg Vlakte, Cape Town, 7570
25	ENGEN 1 Stop	6	Western Cape	Winelands 1 Stop South	-33.8274279	18.7643823	N1, Joostenberg Vlakte, Cape Town, 7570
26	ENGEN 1 Stop	13	Western Cape	Engen Albertina Diensstasie	-34.2117001	21.5842884	31 Station St, Albertinia, 6695
27	ENGEN 1 Stop	15	Western Cape	Engen False Bay 1 Stop	-34.0475954	18.7568558	N2, Macassar, Cape Town, 7130
28	ENGEN 1 Stop	19	Western Cape	Engen Klawer 1 Stop	-31.7787866	18.6354279	Cnr N7 &, Kerk St, Klawer, 8145
29	ENGEN 1 Stop	26	Western Cape	Engen Laingsburg 1 Stop	-33.1956205	20.8611277	1 Voortrekker St, Laingsburg, 6900
30	ENGEN 1 Stop	27	Western Cape	Engen Swartland 1 Stop	-33.6739320	18.5529300	N7, Cape Farms, Philadelphia, 7304
31	ENGEN 1 Stop	32	Western Cape	Engen Mossel Bay 1 Stop	-34.1822051	22.0384149	N2, Vyf Brakke Fonteinen, Mossel Bay, 6506
32	ENGEN 1 Stop	42	Western Cape	Engen Sedgefield 1 Stop	-34.0100262	22.7806268	N2, The Island, Sedgefield, 6525
33	ENGEN 1 Stop	43	Western Cape	Engen False Bay 1 Stop	-34.0472888	18.7569426	N2, Macassar, Cape Town, 7130
34	ENGEN 1 Stop	50	Western Cape	Engen Heidelberg 1 Stop	-34.0960990	20.9638491	Eksteen St, Heidelberg - Wc, Heidelberg, 6665

	Source	ID	Province	Name	Latitude	Longitude	Address
35	ENGEN 1 Stop	52	Western Cape	Engen Riversdale 1 Stop	-34.0222934	21.2281332	N2, Riversdale, 6670
36	ENGEN 1 Stop	56	Western Cape	Engen Plettenberg Bay 1 Stop	-34.0412504	23.3701992	Beacon Way, Plettenberg Bay, 6600
37	ENGEN 1 Stop	58	Western Cape	Engen Swartberg 1 Stop	-32.3429618	22.5830285	Donkin St, Beaufort West, 6970
38	ENGEN Truckstop	59	Western Cape	Engen Truckstop Beaufort West	-32.1330669	22.6542271	Beaufort West Industrial Area Concrete Street, Beaufort West, 6970
39	ENGEN Truckstop	62	Western Cape	Kempston Truck Stop (Epping)	-33.9291300	18.5318100	12 Gunners Cir, Goodwood, Cape Town, 7475
40	Other	216	Western Cape	Laingsburg Truck Stop	-33.1950412	20.8421006	1 Voortrekker St, Bergsig, Laingsburg, 6900
41	Other	279	Western Cape	IKAMVA Trust - Worcester	-33.6410790	19.4813010	23 Ramond Pollet Weg
42	Other	284	Western Cape	Mosh Petroleum CC	-33.9219110	18.6314760	Cnr Robert Sobukwe
43	Other	329	Western Cape	JEV Petroleum Cape	-33.8865878	18.7498511	Meerdam Farm, Bottelary Rd, Brackenfell, Cape Town, 7561
44	Other	362	Western Cape	Alan's Truck Stop	-34.2250964	19.4079948	Cemetery Rd, Caledon, 7230
45	Sasol	198	Western Cape	Sasol George Highway	-33.9842730	22.7500134	N2, George, Western Cape, 6529
46	Sasol	199	Western Cape	Sasol Harkerville	-34.0376931	23.2267983	N2, Harkerville, 6604
47	Shell	103	Western Cape	Cape Town Truck Port	-33.8833000	18.5667000	7 Bofors Cir, Goodwood, Cape Town, 7460
48	Shell	108	Western Cape	Shell Ultra City	-33.1957834	20.8562585	Voortrekker St, Laingsburg, 6900

	Source	ID	Province	Name	Latitude	Longitude	Address
49	Shell	111	Western Cape	Shell Albertinia	-34.2116983	21.5851653	Station Street, N2, Albertinia, 6695
50	Shell	112	Western Cape	Voorbaai Truck Port	-34.1441531	22.1008484	Voorbaai, Louis Fourie Rd, Voorbaai, Mossel Bay, 6500
51	Shell	116	Western Cape	Shell Somerset West	-34.1257956	18.8929008	N2, Helderberg Rural, Cape Town, 7130
52	TFN	211	Western Cape	Trawal Truck Inn	-31.8840310	18.6291250	N7, Klawer, 8145, Western Cape
53	TFN	212	Western Cape	Puma - Wellington	-33.6500760	18.9737460	1 Oude Pont Street, Wellington, 7655, Western Cape
54	TFN	213	Western Cape	Puma Truck Stop	-33.8370132	18.7317247	12 Acacia Way, Kraaifontein Industria, Kraaifontein, 7570, Western Cape
55	TFN	239	Western Cape	Quest Beaufort West	-32.3612583	22.5589722	Quest, Hillside, Beaufort West Local Municipality, South Africa
56	TFN	297	Western Cape	Mosh Diesel Depot - Bellville South	-33.9213080	18.6307830	Propnet Industrial Park, Modderdam Road, Sacs Circle, Bellville South, 7560, Western Cape
57	TFN	311	Western Cape	Mosh Petroleum - Worcester	-33.6184510	19.4826500	N1, Worcester, Farm Bersig, Worcester, 6850, Western Cape
58	TFN	317	Western Cape	Wine Route Diesel Depot - Klapmuts	-33.8044650	18.8690940	80 Old Paarl Road (Sandringham Close), R101, Klapmuts, 7625, Western Cape
59	TFN	323	Western Cape	Sir Lowry Diesel Depot	-34.1201790	18.8763780	2 Laker Road, Helderberg Industrial Park, Strand, Western Cape

	Source	ID	Province	Name	Latitude	Longitude	Address
60	TFN	325	Western Cape	West Coast Petroleum	-32.9070240	18.0011970	Main Road (R399), Vredenburg, 7310, Western Cape
61	TFN	328	Western Cape	Parow Diesel	-33.9302130	18.6063020	c/o Stellenberg and Tekstiel Road, Parow Industria, 8001, Western Cape
62	TFN	385	Western Cape	Fuel 1 - Manhattan Airport	-33.9722820	18.5795810	50 Manhattan Street, Airport Industria, 8001, Western Cape
63	TFN	391	Western Cape	Fuel 1 - Bellville South	-33.9237620	18.6501670	6 Mill Road, Bellville South, Western Cape
64	TFN	392	Western Cape	Fuel 1 - Parow	-33.9344670	18.6040950	3 Radnor Street, Parow Industria, 7490, Western Cape
65	TFN	396	Western Cape	Beaufort West - EDC	-32.3623050	22.5615140	c/o Concrete and Production Road, Beaufort West, 6970, Western Cape
66	TFN	400	Western Cape	Hoofweg Motors - Prince Albert Road	-32.9856640	21.6844120	National Road (N1), Prince Albert Road, Western Cape
67	Total	153	Western Cape	Total Beaufort West	-32.3542487	22.5836870	127 Donkin St, Beaufort West, 6970
68	Total	172	Western Cape	Total Petroport Mossel Bay	-34.1803410	22.0286403	2, Mossel Bay, 6506
69	Total	173	Western Cape	Total Great Brak	-34.0548246	22.2243968	R102, Bergsig, Groot Brakrivier, 6525
70	Total	401	Western Cape	Total TruckSleep & TruckStop Piketberg	-32.9076600	18.7660100	Kerk st N7 Corner of N7 and R44, CBD, Piketberg, 7320

10 Appendix C: Truck driver questionnaire

1. What are your origin and destination pairs?
2. How often do you stop (km or time)?
3. What time do you stop at night and what is the duration of your stop?
4. Who makes the decision on where you stop (self or management)?
5. Are there sufficient truck stops along main road freight corridors?

   N1

   N2

   N7

6. Do you think the truck stops adequately cater to your needs? Specific reference to be made to the following:

   a. Facilities

Toilet	Takeaways	ATM	Workshop	Wellness clinic
Shower	Restaurant	Forex	e-fuel/access	Laundry
Braai	Shops	Parking	24 hours fuel	Security
Security Cameras	Tyre service	Wash bay	Accommodation	Other

   b. What additional services can be provided?

7. What are the costs associated with using a truck stop and who covers these costs?
8. Are you aware of any informal truck stops/parking areas?
9. What is the role/responsibility of government in ensuring an adequate truck stop network is in place?
10. What do you think are the biggest challenges as a truck driver in South Africa?
11. Apart from these more governmental issues, what else must change to improve your experience as a truck driver?

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