

Feasibility Study

SITE INVESTIGATION, VOLUMETRIC ANALYSIS AND BUSINESS PLAN FOR PROPOSED CALTEX KRIEL SERVICE STATION

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PROPOSED CALTEX KRIEL SERVICE STATION

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SITE INVESTIGATION, VOLUMETRIC ANALYSIS
AND BUSINESS PLAN FOR PROPOSED
CALTEX KRIEL SERVICE STATION

INTRODUCTION

Finland Consultants were appointed by Phumsa Bavuma to do a Site Investigation, Volumetric Analysis and Business Plan for a proposed new Service Station on STAND 1685 EXTENSION 5, GROEN AVENUE, KRIE, MPUMALANGA.

For the purpose of this document the proposed Service Station will be named as CALTEX KRIEL SERVICE STATION.

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SITE INVESTIGATION OF THE PROPOSED
CALTEX KRIEL SERVICE STATION

1. THE PROPERTY

1.1. DEED OF TRANSFER INFORMATION AND OWNERSHIP
(Refer Annexure "D")

The property is registered in the names of Gani Sikander and Gani Belkisbanoo (Refer Annexure "D" for Property Enquiry in Deeds Registry)

The diagram deed number is T55326/988

The property is 9272 SQM (Nine Two Seven Two) Square Metres in extent.

1.2. LOCATION (Refer Annexure "A")

The Proposed CALTEX KRIEL SERVICE STATION property is located on STAND 1685 EXTENSION 5, GROEN AVENUE, KRIEL, MPUMALANGA

COORDINATES: (Refer Annexure "A"3)

Degrees, Minutes, Seconds
 26°15'27"S , 29°15'25"E

Degrees, Decimal Minutes
 26°15.369'S , 29°15.424'E

Decimal Degrees
 26.256154°S , 29.257074°E

1.3. ZONING

The property is currently zoned "INSTITUTIONAL"

1.4. ACCESS ROADS

The Proposed Service Station will have access from the R547 road (Witbank – Kinross). The R547 road is under jurisdiction of the Provincial Administration.

A Professional Engineer shall design the accesses and comment on the site layout. The engineer should be on the panel of Roads Branch. The application must be made by a Professional Engineer to the Roads Branch for approval of the accesses.

1.5. AVAILABILITY OF SERVICES

- ⇒ Electricity will be supplied by the Local Municipality,
- ⇒ Water will be supplied by the Local Municipality,
- ⇒ Sewer will be supplied by the Local Municipality,
- ⇒ Waste removal by the Local Municipality,
- ⇒ Technical Services will be supplied by the Local Municipality

1.6. TOPOGRAPHY

The proposed site is flat and only minor earth works be required to level the site. (Refer Annexure "B"1 and "B"2)

1.7. ENVIRONMENTAL MANAGEMENT PLAN

An Environmental Management Plan is required. The capacity of the fuel tanks is less than 80,000 litres

1.8. TRAFFIC COUNTS (Refer Annexure "E")

Finland Consultants did a comprehensive and detailed traffic count on the R547 road opposite the Proposed Site on 30 October 2013 (Wednesday)

DIRECTION	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,939	433	3,652	429	8,454

24 HOUR COUNT = 12 HOUR COUNT x 1.3

1.9. VOLUMETRIC ANALYSIS (Refer Annexure "F")

ESTIMATED LITRES PER MONTH	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
TOTAL PETROL LITRES / MONTH	178,260	0	138,427	0	316,688
DIESEL TRANSIENT TRADE	19,807	58,442	15,381	38,810	132,239
TOTAL PETROL + DIESEL / MONTH	198,067	58,442	153,808	38,810	448,927

VOLUMETRIC ANALYSIS OF THE PROPOSED CALTEX KRIEL SERVICE STATION

The amount of litres pumped by a Service Station is determined mainly by the following factors:

- ⇒ **Traffic passing the Service Station.** Between 2% and 5% of the of the passing traffic stream will fill up at the Service Station (Guidelines for access to filling stations)
- ⇒ **Convenience of the motorist to put petrol in at the Service Station.** This is influenced by ease of access, travelling speed of traffic at the service station site and visibility of service station.
- ⇒ **The availability of ancillary facilities at the Service Station** such as Convenience Store, car wash, Auto-bank and others increases the use of the Service Station
- ⇒ **Other Service Stations.** The number of Service Stations in area, the ancillary facilities available and the level of service at the other Service Stations in the area.
- ⇒ **Locality of Service Station.** Is the Service Station located in a residential area, near or close to a shopping centre, before or after a traffic controlled intersection or 4-way stop.
- ⇒ **Security at the Service station.** The perceived danger or safety at the Service Station by the motorist. If the Service Station is not well illuminated the motorist will tend not to visit the Service Station.
- ⇒ **The price of the diesel sold.** The price of diesel is not regulated or controlled by Government. The Caltex Kriel Service Station owner can ask any price for the diesel to be sold.

In this document we will evaluate the proposed Service Station in terms of the above attributes The level of service at the proposed Service Station is very important and play a role in the selection of the Service Station, especially by regular customers. The level of service is determined by the potential operator of the Service Station and that cannot be evaluated at this stage.

- ⇒ **The availability of ancillary facilities at the Service Station;**
The following facilities and services will be available at the Caltex Kriel Service Station:
 - Fuel Sales
 - 93 Octane Unleaded Petrol
 - 95 Octane Unleaded Petrol
 - 50 ppm Diesel.
 - 500 ppm Diesel
 - Lubricant sales
 - FreshStop
 - Grocery Section – all daily essentials
 - Fresh Produce Section stocked by Fruit & Veg City
 - Pitstop Café – Take-away dishes and Breakfast Buns
 - Prepaid Phone Cards
 - Nedbank ATM - Auto-bank
 - Public telephones
 - Clean restroom/toilette facilities, and
 - Ample parking.
 - Car Wash ?

⇒ **Locality of Service Station;**

The Proposed Service Station site is located on Stand 1685 Extension 5, Groen Avenue, Kriel. The Proposed Site is located on the R547 road.

⇒ **Speed Limit**

The speed limit on the R547 road in Kriel, at the Proposed Site, is 60 kilometres per hour.

⇒ **Convenience of the Service Station;**

The Proposed Service Station will have full access from the R547 road. The visibility of the proposed Service Station site is excellent have full access from the R547 road. (Refer Annexure "B"3 and "B"4)

The Proposed Service Station will operate 24 hours a day.

⇒ **Security at the Service station;**

The premises will be well lit at night by providing a high level of illumination in the parking areas and on the walkways to the restrooms in and around the buildings.

Security will entail guard services, armed response and armed escorts service if and when necessary.

Reaction services to unwanted behavior ensuring right of admission and linkage to a centralized South African Police Services.

State of the art security and camera surveillance will be installed and the cash will be connected to the high security safe.

Communication services will be readily available in the event of emergencies.

⇒ **The price of the diesel to be sold**

The price of diesel to be sold will be 80 cents per litre.

⇒ **Other Service Stations;**

There are no service stations on the R547 road from Witbank to Kinross. The nearest Service Stations are in Kriel. None of these Service Stations will have much influence on the Proposed Service Station. (Refer Annexure "B" and "C")

1. MEGA MOTORS CALTEX WALTER STREET
2. PIT STOP CONVENIENCE CENTRE ENGEN BRONWYN STREET
3. MAVEK BELEGGINGS EXEL C/O ARCADE STR & MERLIN

1. MEGA MOTORS

CALTEX (Refer Annexure "A"2 and "C"1)



LOCALITY

- WALTER STREET, KRIEL

SERVICES AVAILABLE

- Kiosk
- Charcoal and wood on driveway
- Tavern

FUEL PUMPS AND ISLANDS

- Five islands
- 5 x 93 Unleaded Petrol
- 5 x 95 Unleaded Petrol
- 2 x 50 ppm Diesel

STRENGTHS

- Spacious and convenient driveway
- Ample parking space
- Next to shopping Centre

WEAKNESSES:

- No Star Mart or Fresh Stop
- No Carwash
- No ATM

2. PIT STOP CONVENIENCE CENTRE ENGEN
(Refer Annexure "A"2 and "C"2)



LOCALITY

- BRONWYN STREET, KRIEL

SERVICES AVAILABLE

- Quick Shop
- ATM
- Take-aways
- E-Fuel
- Free Nitrogen in Tyres

FUEL PUMPS AND ISLANDS

- Four islands
- 9 x 93 Unleaded Petrol
- 14 x 95 Unleaded Petrol
- 5 x Diesel 50 ppm diesel
- 1 x Diesel (Trucks)

STRENGTHS

- Spacious and convenient driveway
- Ample parking space
- Next to shopping Centre and Taxi rank

WEAKNESSES:

- No Carwash

3. MAVEK BELEGGINGS

EXEL

(Refer Annexure "A"2 and "C"3)



LOCALITY

- C/O ARCADE STREET AND MERLIN CRESCENT, KRIEL

SERVICES AVAILABLE

- Superette inclusive of:
 - All items found in a Supermarket
 - Butchery
 - Bakery
 - Take-Aways
 - Phone cards
 - Fruit and Vegetables
 - Hardware
- ABSA ATM

FUEL PUMPS AND ISLANDS

- Six islands
- 6 x 93 Unleaded Petrol
- 2 x 95 Unleaded Petrol
- 1 x 50 ppm Diesel
- 3 x 500 ppm Diesel

STRENGTHS

- Spacious and convenient driveway
- Ample parking space
- 24 Hours

WEAKNESSES:

- No Carwash

CALCULATIONS OF FUEL SALES VOLUMES (VOLUMETRIC ANALYSIS)

1. LOCAL MARKET

The local market for the proposed Caltex Kriel Service Station would be the residents and business in Kriel, employees (workers) at the Kriel Power Station and the farmers in the district.

There are 4,304 households in Kriel (Ga-Nala) (Refer Annexure "I")

2. TRANSIENT TRADE

Finland Consultants did a comprehensive and detailed traffic count on the R547 road opposite the proposed Site on 30 October 2013 (Wednesday)

DIRECTION TRAFFIC FLOW	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
06h00 - 07h00	182	38	455	37	712
07h00 - 08h00	234	25	191	20	470
08h00 - 09h00	215	33	184	28	460
09h00 - 10h00	217	23	189	35	464
10h00 - 11h00	213	17	191	32	453
11h00 - 12h00	225	25	224	18	492
12h00 - 13h00	204	36	202	40	482
13h00 - 14h00	212	38	218	38	506
14h00 - 15h00	230	27	217	23	497
15h00 - 16h00	296	21	207	35	559
16h00 - 17h00	427	26	249	20	722
17h00 - 18h00	368	24	290	4	686
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,662	429	8,454

24 HOUR COUNT = 12 HOUR COUNT x 1.3

3. CALCULATIONS OF PETROL VOLUMES – YEAR 1

3.1. LOCAL MARKET

The local market for the proposed Caltex Kriel Service Station was excluded from the calculations.

3.2. CALCULATIONS OF PETROL VOLUMES – YEAR 1

(Formula : Light vehicles x turn in ratio (support) x average fill x days
= litres per month)

DIRECTION VEHICLE TYPE	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,662	429	8,454
% USE PETROL	90%	0%	90%	0%	
VEHICLES USE PETROL	3,537	0	3,296		6,833
% SUPPORT	5.0%	0%	4%	0.0%	
SUPPORT - VEHICLES	176.8	0.0	131.8	0.0	308.7
LITRES PER FILL	28	0	28		
LITRES / DAY	4,952	0	3,691	0	8,643
LITRES / MONTH	148,550	0	110,742	0	259,292

PETROL LITRES PER MONTH = 259,292 LITRES

According to "Guidelines for Access to Filling Stations of 1993" between 2% and 5% of the passing traffic stream will fill up at Filling Stations.

The southbound traffic (Witbank to Kinross) (Positive Traffic Flow) will have a bigger turn in ratio than the northbound traffic (Negative Traffic Flow)

The southbound traffic a turn in ratio (Support) of 5% was used for light vehicles

The northbound traffic (Kinross to Witbank) (Negative Traffic Flow) a turn in ratio (Support) of 4% was used for light vehicles

It is important to note that approximately 90% of light vehicles use petrol.

The visibility of the proposed Service Station site for traffic travelling in both directions on the R547 road is good (Refer Annexure "B"3 and "B"4)

The speed limit on the Road, at the proposed site, is 60 kilometres per hour.

The Proposed Service Station will have full access roads from the R547 Road

4. CALCULATIONS OF DIESEL VOLUMES – YEAR 1

4.1. LOCAL MARKET

The local market for the proposed Caltex Kriel Service Station was excluded from the calculations.

4.2. TRANSIENT TRADE DIESEL

(Formula : Vehicles x turn in ratio (support) x average fill x days
= litres per month)

DIRECTION	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,662	429	8,454
% USE DIESEL	10%	100%	10%	100%	
VEHICLES USE DIESEL	393	433	366	429	
% SUPPORT	5.0%	2.0%	4.0%	1.0%	
SUPPORT - VEHICLES	19.65	8.66	14.65	4.29	
LITRES PER FILL	28	150	28	150	
LITRES / DAY	550	1,299	410	644	2,903
LITRES / MONTH	16,506	38,961	12,305	19,305	87,076

DIESEL LITRES PER MONTH = 87,076 LITRES

The southbound traffic (Witbank to Kinross) (Positive Traffic Flow) will have a bigger turn in ratio than the northbound traffic (Negative Traffic Flow)

The southbound traffic a turn in ratio (Support) of 2% was used for heavy vehicles

The northbound traffic (Kinross to Witbank) (Negative Traffic Flow) a turn in ratio (Support) of 1% was used for heavy vehicles

It is important to note that approximately 10% of light vehicles use diesel.

The visibility of the proposed Service Station site for traffic travelling in both directions on the R547 road is good (Refer Annexure "B"3 and "B"4)

The speed limit on the Road, at the proposed site, is 60 kilometres per hour.

The Proposed Service Station will have full access roads from the R547 Road

5. TOTAL FUEL SALES PER MONTH – YEAR 1

ESTIMATED LITRES PER MONTH VEHICLE TYPE	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
TOTAL PETROL LITRES / MONTH	148,550	0	110,742	0	259,292
DIESEL TRANSIENT TRADE	16,506	38,961	12,305	19,305	87,076
TOTAL PETROL + DIESEL / MONTH	165,056	38,961	123,047	19,305	346,368

TOTAL FUEL LITRES PER MONTH = PETROL + DIESEL:
= 259,292 + 87,076
= 346,368 LITRES

6. PROJECTED FUEL SALES FOR 10 YEARS

FUEL SALES PER MONTH	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / MONTH	259,292	267,071	275,093	283,335	291,836	300,590	309,608	318,899	328,463	338,317
TOTAL DIESEL LITRES / MONTH	87,076	89,886	92,379	95,100	98,005	100,945	103,973	107,092	110,305	113,614
TOTAL PETROL + DIESEL / MONTH	346,368	356,957	367,472	378,435	389,841	401,535	413,582	425,991	438,768	451,932
FUEL SALES PER YEAR	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / YEAR	3,111,504	3,204,849	3,300,916	3,400,024	3,502,026	3,607,086	3,715,299	3,826,767	3,941,569	4,059,807
TOTAL DIESEL LITRES / YEAR	1,044,912	1,078,629	1,108,547	1,141,804	1,178,058	1,211,339	1,247,689	1,286,110	1,323,663	1,363,373
TOTAL PETROL + DIESEL / YEAR	4,156,416	4,283,478	4,409,463	4,541,828	4,678,084	4,818,425	4,962,988	5,112,877	5,265,232	5,423,180

An annual growth rate of 3% was used in the calculation of the sales volume projections year 1 to year 10.

THE DEVELOPMENT OF THE PROPOSED CALTEX KRIEL SERVICE STATION

1. PROPOSED CALTEX KRIEL SERVICE STATION DEVELOPMENT PROGRAM

The Service Station Development program for the Caltex Kriel Service Station consists of the following phases:

⇒ FEASIBILITY PHASE

- Conducting a feasibility study and compiling a report
This phase has already been concluded

⇒ APPROVAL PHASE

- Obtaining preliminary and final approvals from the local Government regarding
 - Access Roads
 - Environmental Management Plan. Only an Environmental Management is required. The capacity of the fuel tanks are less than 80,000 litres
 - Obtaining zoning for Service Station.

⇒ FINANCING THE SERVICE STATION DEVELOPMENT

- Obtaining suitable finance to do the Service Station Development.

⇒ OIL COMPANY PHASE

- Obtaining an Oil Company letter stating their intention and willingness to get involved in the proposed Caltex Kriel Service Station and to supply the Service Station with fuel.

⇒ DEPARTMENT OF ENERGY

- Application for site license
- Application for retail license

⇒ PRE-CONSTRUCTION PHASE

- Appointment of a professional team
 - ☞ Service Station Consultant
 - ☞ Environmental Consultant
 - ☞ Town and Regional Planner
 - ☞ Architect
 - ☞ Quantity Surveyor
 - ☞ Traffic Engineer
- Obtaining plan approvals
- Do final costing on the development
- Settlement of the finance structure
- Tender process

⇒ CONSTRUCTION PHASE

- Appointment of all contractors and sub-contractors
 - ☞ Project Manager
 - ☞ Building Contractor
 - ☞ Civil Engineer
 - ☞ Electrical Engineer
- Site handover to the Professional team and contractors

- Date of completion of the development
- Arrange for product (fuel) supply and streaming of site
- Date of final completion and inspection of site

2. FINANCING OF THE SERVICE STATION DEVELOPMENT PROJECT

2.1 FINANCIAL VIABILITY

The major objective of the financial viability is to determine whether there is sufficient scope in the market to proceed successfully with the Service Station as an investment and business opportunity.

2.2. OPERATIONAL VIABILITY

This mainly entails determining the break -even point of the business and this is then compared with the market viability of the business.

However before the break-even point can be calculated, the following steps must be followed;

- The assets and initial cost required in the business must be determined. (Refer Annexure "G"3 and "G"5)
- The operating expenses (fixed costs) of the business must be calculated, (Refer Annexures "G"2 and "G"6) for the operating expenses of the proposed Caltex Kriel Service Station.
- The profit margin on products / services must be calculated. (Refer Annexures "G"1 and "G"5) for profit margins on products / services in the income statements.

CONCLUSION

The conclusion is that the market viability shows that the required level of sales can indeed be realised and that the business is financially viable.

2.3. DEVELOPMENT VIABILITY

The financial feasibility from a development point of view consists of the following;

- ⇒ **Estimation of total capital required for the Proposed Caltex Kriel Service Station project:**

PROPERTY COST		130,000
CONSTRUCTION & DEVELOPMENT COST		7,392,500
INVENTORY	1,100,000	1,100,000
FUEL	800,000	
FRESH STOP	200,000	
PITSTOP CAFÉ	100,000	
CASH ON HAND		6,000
TOTAL CAPITAL REQUIRED		8,628,500

- ⇒ **Estimation of the total net project income.** Refer Annexures "G"2 and "G"5 for the net income of the Proposed Caltex Kriel Service Station for a period of three years.
- ⇒ **An estimated cash flow projection** for the proposed Caltex Kriel Service Station (Refer Annexure "G"3 and "G"7).

- ⇒ **Estimation of the profitability** of the project. (Refer Annexure "G"4 and "G"8).

2.4. THE SERVICE STATION DEVELOPMENT ASSESSMENT

There are various factors which arise when an assessment on Service Station Facility Development is done. It is assumed that the property have the correct attached rights, proper accessibility, the capability of being used for potential income and facilities which is likely to produce income.

The improvements on a Service Station Site are specifically designed and built to sell fuel and related products. Therefore the Owner of the proposed Caltex Kriel Service Station primary interest in the Service Station is its income stream and desirable return on its equity.

2.5. REGULATORY ACCOUNTING SYSTEM (RAS)

There is no agreement between the Owner of the proposed Service Station site and the Oil Company. The result is that the REGULATORY ACCOUNTING SYSTEM (RAS) Gross Profit Margins on petrol could not be calculated.

The current Gross Profit Margins were used in the income statements and escalated by 8% per annum.

In the case of the proposed Caltex Kriel Service Station it will be a Retail Owned and Retail Operated (RORO) Service Station.

Refer Annexure "J" for the current margins and the Post RAS margins.

3. SERVICE STATION CHARACTERISTICS

It is imperative to satisfy the needs and requirements of both the transient trade and the traffic from the local trading area to ensure concurrent and full time support of the Service Station Facilities.

The following are but some of the requirements needed to satisfy the motorists, the transient trade and also the local trade:

- Convenience
- Easy accessible
- Friendly, fast and efficient service
- Safe and secure environment
- Clean restroom/toilette facilities
- Ample Parking
- Petrol fuel points
- Diesel fuel points
- Convenience Shop with bakery and fast food facility
- ATM Bank teller
- Public telephone facilities

4. PROPOSED CALTEX KRIEL SERVICE STATION FACILITY GUIDELINES

The following, considerations guidelines and facilities and the foreseen usage thereof to be available:

4.1. FUEL BAY - DRIVEWAY / SERVICE

The number of petrol and diesel pumps and also the capacity of the fuel tanks have been determined:

FOUR ISLANDS

<u>FUEL FACILITIES</u>	<u>TANKS/LITRES</u>	<u>NOZZLES OR HOSES</u>
93 UNLEADED PETROL	1 x 23,000	6
95 UNLEADED PETROL	1 x 23,000	6
DIESEL 50 PPM	1 x 23,000	6
DIESEL 500 PPM	1 x 10,000	6

Fuel spillage is of great concern and therefore the fuel bay should be situated in such a manner, which in the event of such an occurrence the danger factor of fire should be minimized and should cause no direct concern.

The fuel bay must be strategically placed on site to prevent traffic flow problems as well as to ensure maximum utilization of all servicing points.

Research Surveys at Service Stations stress the importance of fast, friendly service - this being the prime motivating factor in a motorist's fuel purchasing decision.

Personal supervision on the driveway will be a firm policy of management and will pursue this aspect to ensure maximum efficiency and excellent service on the driveway.

4.2. CONVENIENCE SHOP, FRUIT AND VEG, BAKERY AND FAST FOOD

Convenient shopping facilities for customers in the local trading area and passing trade are of great importance. The following facilities will be available:

FreshStop (Convenience Shop)

- Grocery Section – all daily essentials
- Fresh Produce Section stocked by Fruit & Veg City
- Pitstop Café – Take-away dishes and Breakfast Buns
- Prepaid Phone Cards

4.3. COMMUNICATION

The following communication facilities are important and will be provided for at the Proposed Caltex Kriel Service Station.

- Communication services should be readily available in the event of emergencies.
- Phone facilities for private and work related calls
- Pay phone facilities for the convenience of the clients.
- Provide an information display stand complete with a map of the trading area and descriptions, street names, major routes and places of importance.

4.4. SECURITY

The premises will be well lit at night by providing a high level of illumination in the parking areas and on the walkways to the restrooms in and around the buildings.

Security will entail guard services, armed response and armed escorts service if and when necessary.

Reaction services to unwanted behavior ensuring right of admission and linkage to a centralized South African Police Services.

State of the art security and camera surveillance will be installed and the cash will be connected to the high security safe.

Communication services will be readily available in the event of emergencies.

4.5 ATM BANK TELLER

The management of the Proposed Caltex Kriel Service Station will apply to Nedbank for an ATM Bank teller, for the convenience of motorists. Surveys conducted at several sites with ATM'S revealed it provides for a large contribution towards fuel sales.

4.6. ADMINISTRATION OFFICES

Administration offices will be provided for, with visibility into the Convenience Shop and across the entire driveway. The surveillance cameras in the convenience store and on the driveway will be monitored from this office

OPERATING THE PROPOSED

CALTEX KRIEL SERVICE STATION

The owners of the Operating Rights will actively and fulltime, on a rotational basis, involved in the management of Caltex Kriel Service Station

The management of the Proposed Caltex Kriel Service Station will interview and appoint the staff to operate the Service Station

1. HUMAN RESOURCES - PERSONNEL MANAGEMENT

1.1. MANAGEMENT FUNCTIONS

The four management functions that will help to establish the objectives of the Proposed Caltex Kriel Service Station are as follow;

PLANNING

- Setting objectives and standards
- Programming
- Scheduling
- Budgeting

ORGANISING

- Allocating resources
- Delegating tasks
- Setting priorities

CONTROLLING

- Observing actual performance
- Identifying variances
- Responding to unacceptable work

LEADING

- Problem solving
- Developing staff
- Communicating
- Motivating

1.2. THE ROLE OF THE MANAGER

In conjunction with the above functions the Manager due to his position must be able to perform the following roles;

INTERPERSONAL ROLES

- Figurehead - perform ceremonial roles such as hosting a social function, attending staff members' weddings, conducting a prize giving.
- Leader - leadership is about influencing others to achieve organisational and personal goals
- Liaison - the manager needs to network within and outside of the Proposed Caltex Kriel Service Station.

INFORMAL ROLES

- Monitor - constantly scanning the environment for information that will improve the Proposed Caltex Kriel Service Station
- Spokesman - the manager represents the Proposed Caltex Kriel Service Station to others - both inside and outside of the Proposed Caltex Kriel Service Station

DECISION ROLES

- Entrepreneur - to seek to improve the Proposed Caltex Kriel Service Station - to grow and develop the Proposed Caltex Kriel Service Station
- Disturbance handler - to react to pressure - resolve conflict.
- Resource allocator - to be able to decide how to spend available resources.
- Negotiator - to negotiate with a number of parties on a daily basis.

1.3. CONTROLLING THE BUSINESS

Management's objective is to ensure that the objectives of the business are achieved together with the efforts of all the people within the business.

The following control methods will assist management to keep in touch with progress, identify trends and provides an early warning system when problems arise:

- Observing and measuring actual performance
- Identify variances
- Responding to and correcting unacceptable performance
- Responding to and rewarding good performance

1.4. MANPOWER STRATEGY**1.4.1. THE PROPOSED CALTEX KRIEL SERVICE STATION MANAGEMENT BELIEVE IN:**

- The passionate involvement and enthusiastic commitment of employees
- The importance of teamwork
- Fair employment and remuneration practices
- Recognition of individual dignity, service and performance
- Providing training and development opportunity to encourage personal growth and improve contribution
- Maintaining open community
- Promoting partnership and involvement with local communities
- Our commitment is to the creation of an environment where shared values and continued striving to uphold the vision from the basis of people working together

1.4.2. CAREER OPPORTUNITIES

- The Proposed Caltex Kriel Service Station management is dedicated to provide equal opportunities to the employee, regardless of race, creed, colour, gender or age.
- Career opportunities are open to all qualified applicants solely on the basis of their experience, aptitude and abilities

- Promotion, both upward and lateral is and shall be based entirely on the employee's achievement, performance, ability and attitude.
- the Proposed Caltex Kriel Service Station management believes in the empowerment of the individual and maintains such as one of it's goals.

1.4.3. EMPLOYMENT POLICY

- To be able to build a strong team, the right people must be recruited and developed.
- It will be the Proposed Caltex Kriel Service Station management recruitment philosophy to source the most appropriate qualified persons for available positions through internal and then external advertising and personnel agencies.
- the Proposed Caltex Kriel Service Station management aim will be to have an effective recruitment process, free of cultural bias, competency based and at the same time meeting the requirements of the constitution and labour legislation.
- A former employee may re-enter the service as a completely new employee without credit for past services in any of the employee benefit schemes.

1.4.4. INDUCTION AND TRAINING

- The Proposed Caltex Kriel Service Station management will develop a plan to induct and develop staff
- Trains staff in customer service, selling skills, safety standards and assess their training needs continually and provide the necessary training
- Personally show employees how to do important tasks.

1.4.5. TEAM COMMUNICATION

- Give staff responsibility, run incentive programmes and reward good performance
- Create an energetic, active and positive working environment to provide enthusiasm for customer service
- Give regular feedback and have monthly staff meetings to ensure that staff does not neglect important tasks and procedures
- Keep staff facilities up to standard and maintain very high standards of presentation.
- To implement a code of conduct in participation of all staff to accept the responsibility together.

1.4.6. MOTIVATION

Management will adhere the following six well proven techniques for motivating staff:

- Recognition
- Provide opportunities in terms of responsibility, promotion, development and financial incentives
- Job security - keep staff informed

- Give the staff a challenge by delegating and encourage them to develop new systems and ideas
- Accomplishment - let the staff know how management feel about their performance and what is expected from them - let the staff join in setting targets and help the staff to achieve the targets
- Expectation - if we expect a lot, we will get a lot. If we expect little, then that's exactly what we will get.

The Proposed Caltex Kriel Service Station management will be responsible for personnel employment, management and training.

2. FORECOURT OPERATIONS MANAGEMENT

2.1. SERVING CUSTOMERS ON THE FORECOURT

The most important event in a Service Station business day is when a customer drives a vehicle onto the Forecourt. Whether visiting the Caltex Kriel Service Station Shop or filling up with fuel, all the Proposed Caltex Kriel Service Station customers must be impressed with the way the Caltex Kriel Service Station team treats them.

To achieve this, each member of the team must act with the goal of providing excellent service.

2.2. FORECOURT ATTENDANT

DUTIES:

- Always run to the customer's vehicle because this shows customers how important they are and that we understand that they need to leave as quickly as possible;
- Give the customer a smiling welcome to the Forecourt and thank them for calling;
- Ask whether you may fill the tank and which grade of petrol they would require, and ensure that you confirm all instructions;
- If the customer requests that you fill to a certain Rand value, always repeat the value to the customer and make sure both you and the customer are in agreement;
- Ask the customer to open the fuel tank or request the keys to do this;
- Be very careful not to spill fuel on the vehicle or anywhere else;
- If you are filling the tank be sure to fill the tank properly, however, be careful not to overfill the tank;
- As soon as you have started filling the tank, ask the customer if you may check the oil, water, battery, tyres and wash windows; and
- When you have finished supplying fuel, proceed to the driver of the vehicle, and ask how payment for the fuel will be made. Tell the driver how much fuel you supplied and how much is owed.

2.3. DUTIES OF THE FORECOURT ATTENDANTS

- Litter must always be removed.
- Be sure your colleagues and yourself are always dressed according to rules.
- Clean/wipe up any spills immediately.
- Offer to remove litter from customers' vehicles.
- Always check that the islands, pumps and utensils are clean neatly stacked and in good repair.
- Participate in the gardening on the site as required.
- Clean and vacuum vehicles as required.
- Ensure that air hoses are neatly stored.
- Ensure promotional material is neatly and clearly displayed.

2.4. DUTIES TO ATTEND TO WHEN CUSTOMERS LEAVE THE FORECOURT:

- Thank them for calling the Caltex Kriel Service Station.
- Invite them to call again.
- Wish them 'a pleasant journey', 'a safe journey', 'a pleasant day' or similar friendly greeting.
- Be sure to smile and wave good-bye,
- NEVER WAIT AROUND FOR A TIP - IF THE CUSTOMER IS SATISFIED YOU WILL BE GIVEN A TIP.

3. WEEKLY PROCEDURES

This Section covers the major events of the week and consolidated weekly performance

3.1. MANAGEMENT

Management is the process of deploying and directing the resources of the business for the best results. When the Manager review past performance it should be in this context. The Manager should ask himself this battery of questions: Was, what happened part of the plan?

3.1.1. IF IT WAS NOT PART OF THE PLAN:

- What can we learn from it?
- What have we done, or should we do, to promote or prevent a recurrence?

3.1.2. IF IT WAS PART OF THE PLAN:

- What can we learn from successful planning?
- What can we learn from what we did?
- How do we ensure that it is repeated?
- How do we improve upon it?

So, we consider the past only as far as it may influence the way we determine our future, and we find ways of neutralising the negatives and exploiting the positives.

3.1.3. WHAT WILL BE EXAMINED FROM THE BUSINESS PERSPECTIVE?

PERFORMANCE TO BUDGET FORECAST -

- Actual sales of Forecourt products - turnover, margin, shortages
- Analyse expenses and margins
- Analyse and managing sales to major customers
- Results of marketing/promotional campaigns
- Competitor activities

3.2. ADMINISTRATION

3.2.1. CASH MANAGEMENT AND BANKING

The actual handling of money and Banking the money are crucial in retail because margins are small, while the sheer mass of money to be handled is awesome. There could be those who think there are other ways in which your money should be distributed!

While there is a daily procedure to be observed, and close supervision and monitoring of the procedure should quickly pinpoint discrepancies. Over a period, it might be possible to identify trends that have not appeared when monitored daily.

When reviewing one week's administrative work, the Manager should also check:

- Adherence to all procedures;
- Uniform completion of documents:
- Use of software programs;
- Reports; and
- Completion of filing.

The Manager will need to decide upon any remedial action necessary to address deviations, as well as to discuss changes with staff, which could improve the functions which they perform on his behalf.

Changing circumstances, technology, as well as new insights into processes can lead to improvements and better protection of Service Station assets. Keep an open mind on these opportunities.

3.2.2. WAGES AND OVERTIME

Most, if not all, of the Driveway staff will be paid weekly. Together with Service Station staff, the Manager will need to select a suitable day for payment of wages.

The wage system, connected to the clock card system, will automatically calculate the wage pay out, gross total, deductions, and net amount and print envelopes. The Manager or the Supervisor will insert the cash into the wage packets.

The system will also calculate the total of all wages due. It is advisable to draw the exact sum by cheque from the Bank, made up according to the change requirements. The correct wage must be inserted into each packet but do not seal the packets until all the notes and coins in the wage packets have been distributed and have nothing left over, Then the wage packets can be sealed.

3.3. INVENTORY MANAGEMENT

Review of performance against standards and any remedial measures implemented to correct deviations from standard

3.4. PRICING

Review impact of price changes on sales and margin

3.5. SHIFT MANAGEMENT AND CONTROL

Review efficiency of planning and decision making on driveway expenses and service levels.

3.6. DRIVEWAY MANAGEMENT

Review daily shift reports to evaluate the quality of driveway supervision and the effectiveness of remedial action implemented.

4. MONTHLY PROCEDURES

The payment of VAT, UIF, PAYE/SITE and REL all has to be made monthly.

4.1. PAYMENT OF VAT

Value-added tax ('VAT') is a tax on consumption and is currently charged at 14%.

When the Service Station register with the Receiver of Revenue to become a 'VAT' vendor the Service Station will receive a VAT registration number. .

VAT is calculated as the difference between the VAT paid out by the Service Station and the VAT paid by customers to the Service Station. This difference will generally be a payment to be made to the Receiver of Revenue. VAT must be paid every second month by the 25th day of the relevant month.

4.2. PAYMENT OF UIF

The Unemployment Insurance Fund ('UIF') has been established in order to provide for the payment of benefits and allowances should a person become unemployed.

The manager must register with the UIF to pay monthly for employees. All the employees are subject to the payment of Unemployment Insurance Fund (UIF) provided they earn less than R76 400 per year.

The payments of UIF are as follows:

- Each employee must pay 1% of his/her earnings, i.e. the Manager must deduct or withhold 1% of each employee's salary; and
- For each employee employed, 1% of his/her earnings must be paid to the UIF.

4.3. PAYMENT OF PAYE

All the employees are subject to the payment of:

- Standard Income Tax on Employees (SITE) for annual remuneration of less than R50 000 per annum; or
- Pay-As-You-Earn Tax ('PAYE') for annual remuneration of more than R50,000 per annum.

The Manager must withhold or deduct each employee's tax from his/her remuneration on a monthly basis. Remuneration includes salary, wages, commissions, bonuses, taxable value of fringe benefits, allowances (excluding 65% of travel allowance), pensions, etc.

4.4. PAYMENT OF SKILLS DEVELOPMENT LEVY

Skills development levy at the rate of 1% of wages is payable

4.5. MIBCO (MOTOR INDUSTRY BARGAINING COUNCIL)

Fees payable to MIBCO are as follow:

- **Council Levy** Employer R2.35 per week
Employee Contribution R2.35 per week
- **Provident Fund** Employer 8% of wages
Employee 7.5% of wages

The Council levy and provident fund is compulsory. Medical aid is optional

4.6. COMPENSATION COMMISSIONER

Compensation commissioner insurance rate of 0.75% are based on wages and salaries

5. PERFORMANCE STANDARDS

5.1. INTRODUCTION

Performance standards are a reflection of the way we wish to be perceived by our customers who visit the forecourt of the proposed Caltex Kriel Service Station

Our employees are the most important component of the image that we convey to our customers. Even though we have the finest and most immaculate site we are completely dependent on our people to perform well, or else we will not achieve the desired results.

"To achieve success, devotion and discipline to self-assessment and self-direction is critical."

The Manager should conduct and review self - assessments periodically and then satisfy himself as to whether he, his staff and physical facilities rank amongst the best service stations.

In the following pages there are a series of checklists that the Manager and his staff should use to monitor adherence to the agreed and accepted standards. The process of managing these criteria rests with the Manager and the Forecourt staff assessing their own performance.

The Service Station staff at the frequency necessary for the Service Station site to consistently meet the required performance criteria completes the assessments. Deviations from standard must be dealt with promptly and remedied by the accountable individual.

This means that when the Manager reviews the self-assessment reports, the Manager will be able to identify the level at which the staff is performing, and whether the Service Station is meeting the required operational standards.

5.2. FORECOURT PERFORMANCE STANDARDS

The following are the standards, which are required to be maintained.

5.2.1. ARRIVAL AND DEPARTURE: DRIVEWAY AREAS

The Manager and personnel are required to:

Lighting

- Ensure all lights are in good repair and working order,
- Ensure all covers are clean.

Fencing

- Ensure fencing is in good and working order,
- Ensure fences are painted and in good condition,
- Ensure fencing is free from rust,
- Ensure that if creepers are growing over – they are neatly tended,

Signs

- Maintain all signs clean, unmarked, allowing for unobstructed view,
- Maintain current signage and remove all signage that is out of date,
- Obtain approval from the Oil Company for all signage that the Manager requires to display,

Landscaping / Gardens

- Keep the premises and gardens free of weeds,
- Keep the gardens well tended and regularly watered,
- Ensure the lawn is neatly and regularly cut to maintain them in an attractive condition,
- Ensure the flowerbeds are well tended,
- Ensure the pot plants are well tended and look attractive,
- Ensure pot-housing plants are in good repair, neatly painted and in attractive condition,

Driveway surfaces and Parking area

- Ensure no potholes are evident,
- Clean any oil / fuel spills,
- Replace any broken bricks,
- Remove any weeds on the driveway and parking surface,
- Ensure parking bays are clearly marked and kept freshly painted,
- Ensure access to the forecourt, driveways and parking areas is free and unobstructed,

Litter control

- Ensure sufficient refuse bins are placed at suitable points,
- Ensure refuse bins are emptied regularly,

Emergency equipment

- Ensure fire extinguishers are serviced and in good working order,
- Ensure sand buckets are available,
- Ensure alarms are accessible and in good working order,

Promotional literature / material / equipment

- Ensure all promotional materials are neatly displayed,
- Ensure all promotional material is current,
- Ensure that only approved material / literature / equipment is displayed,

Canopy

- Ensure the paint / signs / framework are in good repair and condition,
- Ensure the lights on the canopy are in good working order,

5.2.2. PUMP ISLANDS EQUIPMENT**Islands**

- Ensure pump islands are not damaged and freshly polished,
- Ensure pump islands are painted with no evident chipping,
- Ensure islands are regularly swept and kept free of litter, dirt and oil.
- Ensure only authorised accessories are housed on the islands.

Pumps

- Ensure pumps are clean and in working order,

Hoses

- Ensure hoses are neatly stored and in working order,

Watering cans

- Ensure cans are neatly positioned and presentable,
- Ensure a sufficient number of watering cans are available on the islands,

Windscreen cleaning kit

- Ensure there are sufficient rolls,
- Ensure the water is regularly replaced so that it is always clean,
- Ensure all windscreen cleaning equipment is available,

5.2.3 FUEL STORAGE AREAS

Manholes

- Ensure manholes are in place,
- Ensure manholes are not broken,
- Ensure filler points are clear,
- Ensure there is no debris in the manholes,

Tank ID

- Ensure the tank ID is on manhole surround,
- Ensure the tank is on the inlet collar,

Tank filler cap and dip cap

- Ensure tank filler and dip caps are in place,
- Ensure filler and dip caps are locked and sealed,

Air vents

- To ensure air vents are rust free,
- To ensure air vents are clear of blockages,

5.2.4. INTERIOR AND EXTERIOR OF BUILDINGS

- Ensure the roof of the buildings, all gutters, down pipes and drains on the premises are kept free of litter, leaves or obstruction at all times,
- Ensure the following is in good order (working order where appropriate) and condition:
 - ⇒ Fittings and fixtures,
 - ⇒ Doors,
 - ⇒ Windows,
 - ⇒ Plate glass,
 - ⇒ Locks and keys
 - ⇒ Electric light globes,
 - ⇒ Fluorescent tubes,
 - ⇒ Starters,
 - ⇒ Water taps,
 - ⇒ Electrical drainage and sanitary works.
- Replace any of the above if damaged, lost or for any reason cease to work efficiently,
- Paint the interior of the premises as required by Management considers it necessary,
- Ensure the premises are kept free of any accident damaged / unserviceable or abandoned motor vehicles, trailers, boats or any other machinery or equipment,
- Ensure the interior and exterior of the premises are kept free of litter.

5.3. PERSONNEL APPEARANCE

A photograph of the appearance of an attendant in the various prescribed uniforms will be placed in the change rooms above / below a mirror so the attendants can visually assess their own appearance.

The Manager and staff should ensure uniforms are kept clean and in good repair at all times.

Uniforms are to be worn by staff at all times when they are on duty. It is sound marketing practice for all staff, administrative sales, etc., to wear Oil Company branded clothing.

5.4. PERSONNEL PERFORMANCE

To assess the performance of personnel and customer service provided, ensure answers to the following questions are positive:

- Do attendants run to customers on the forecourt to show enthusiasm?
- Is the customer driving the vehicle directed to the nearest available pump'?
- Do customers have to wait for service?
- Are customers greeted in a friendly way?
- Is the customer asked which grade of fuel they require?
- Do the attendants ask to check oil'?
- Is the dipstick shown to the customer?
- Do the attendants ask whether they can check windscreen / tyres / battery / water?
- Are name badges worn?
- Are customers invited to call again?
- Does the attendant make an attempt to chat to the customer, especially acknowledging regular customers?

5.5. EQUIPMENT MANAGEMENT

Equipment refers to storage, dispensing, monitoring, pumping and any other equipment required for the effective operation of the business. The equipment is placed in trust of the Management

The following are requirements that the Manager should follow to ensure efficient and effective operation of all equipment:

- To maintain equipment clean and tidy,
- To conduct routine maintenance and servicing of the hoist compressor, air gauges and any fire equipment at regular intervals as recommended by relevant manufacturer or contractor.

5.6. STANDARDS OF SERVICE

It is of fundamental importance that high standards of service are maintained allowing for the Proposed Caltex Kriel Service Station to be recognised as a leader in the area. To achieve required standards of service, the following guidelines should be taken into consideration:

- Sufficient staff is to be employed to enable speedily and efficiently cope with the level of activity and demands of customers and the business,

- Adequate stock of all products are to be maintained to ensure optimisation of sales,
- Promotion of stock is paramount to allow for optimal sales to be increased,
- To ensure forecourt attendants are equipped with the necessary materials to service the customers,
- To ensure all staff whom have direct contact with customers are trained from time to time to ensure high standards of service and good public relations are maintained,
- To evaluate the performance of staff on a regular basis providing them with feedback on the results of the evaluations,
- To provide staff with incentives and bonuses to acknowledge and reward good performance.

6. MARKETING PLAN

Marketing is the single most important activity to be undertaken by the Proposed Caltex Kriel Service Station management. If the marketing is unsuccessful there will soon be no business to manage.

What is marketing?

- It is about all the little things that can make a customer become aware of the Service Station and the service the Service Station offer, eg, ensuring that customers are not kept waiting, the service provided is always friendly and efficient, etc.

The **primary goal** of the Management marketing effort is to persuade people, as individuals or as members of a group, to decide that a visit to the Service Station is a satisfying buying experience.

The **primary task** of the Management marketing effort is to provide a climate within which the Service Station Forecourt Attendants are able to excel at their task of closing sales.

There are eight ways to evaluate Management's marketing program. The Manager should ask himself, colleagues and personnel to judge whether Management's marketing effort:

- Clearly differentiates the Service Station from competitors?
- Creates a continuous flow of traffic on the Service Station Forecourt? Attracting potential customers to Service Station precedes making a sale and it is capturing the attention of potential customers, which is the task of marketing.
- Keeps Service Station in the mind of customers, competitors, prospects and the distribution channel at large when considering the supply of fuel by repetitive marketing? Awareness is an essential component of the marketing task.
- Gives the Service Station a competitive stronghold within Service Station's market place? The task of marketing is to plan and shape, and constantly fosters a consistent image in the mind of the market.
- Communicates the competence, expertise and knowledge of the Service Station people to the customers - existing and potential. Perceivably different, relevant and superior capabilities can be one of the greatest assets in changing technologies and markets.

- Persuades the stakeholders, customers, staff, suppliers and the local community that the Service Station has a long-term orientation? The plan must keep Management focused on what they are doing and act as a beacon for measuring their success in planning the short and long-term future.
- Ensures that the organisation recognises the customer as the all-embracing orientation for the organisation? The plan must enable the organisation to convince the customers that their needs are understood. Furthermore, that the only result of a sale must be intense customer satisfaction.
- Acts as a vital force in the customer retention program? The fire in the relationship must not die when the customer drives away. That is when the customer becomes your ally and advocate and the relationship becomes even more critical to future success.

There are four elements to a marketing program. These are known as the four P's of marketing and despite new concepts and ideas these are only variations on the Four P's theme which is the underlying foundation of any marketing program

- ⇒ **Promotion**
- ⇒ **Place**
- ⇒ **Price**
- ⇒ **Product**

There are a number of ways in which you will achieve success in marketing. These ways are embodied in the three of the four Key Success Criteria.

- Each staff member at the Service Station must be fanatical about providing customers with excellent service
- Apply initiative in promoting the Service Station to existing and potential customers.
- Conscientiously adhere to the Proposed Caltex Kriel Service Station standards of quality and services as Management need to exceed customers' expectations.

An explanation of the Marketing Mix and how it can apply it to the Service Station follows:

6.1. PLACE - LOCATION AND ENSURING THAT SERVICE STATION IS THE BEST RETAILER IN THE AREA

'Place' in the context of retailing fuel is where Service Station is located. Unlike a hawker, who can move to where the business is, the Service Station has to attract the business to your site. Place relates to the geographic area and / or customer categories from which the Service Station will draw customers.

In the retailing industry, one need to overcome the customer's perception that the Service Station sell a commodity - the Service Station need to sell excellent service and provide the customer with value-added benefits.

The most important activity that the Service Station staff will undertake is to make the site the first-choice-stop for customers who need fuel.

6.2. PRODUCT

It might be argued that when a vehicle arrives on the Service Station forecourt the purpose is to buy fuel. Never make that assumption.

- Very few of the Service Station customers ever see, or want to see, or even need to see, the fuel the Service Station supply on the forecourt. Think about how the fuel is supplied. From a tank underground, through a pump, through a pipe and nozzle and then into the tank of the customers' vehicle.
- The Service Station staffs' function is also to make the Service Station customer's visit as comfortable as possible, by providing the most efficient and friendly service, so their stay on the Service Station's forecourt is short and satisfying.
- Service Station staff therefore has to know their customers so that they can use their understanding and interpretation of customer behaviour to present the appropriate type of service.
- This does not mean just greeting the regulars, it means knowing what type of customer the staff will encounter because the staff knows the demographics of the Service Station area and the potential passing trade, eg. Schools in area, vernacular. It means the Service Station management and staff know how to attract customers by promoting the Service Station business to the customer and letting the customers know how the Service Station value their custom.
- Management and staff have to be fanatical about making their customer feel good about spending money on a product which the customer do not see by giving fast, happy and satisfying service which the customers recognise as better than that offered by other service stations. The customer must know that the Service Station staff is enjoying what the staff is doing by the way in which the staff goes about their work.
- Product knowledge is important to the Service Station success. Whilst the Service Station has a limited range of fuels and lubricants, the make, model and vintage of vehicles is enormous and growing. Forecourt Attendants must learn, almost only by experience, which fuels and / or lubricants are suitable for a specific vehicle.
- Forecourt Attendants must also understand that the product is not fuel and lubricants, but is the 'hard' product supported and sustained by service.

THESE ACTIVITIES, BEHAVIOUR AND AN ATTITUDE ARE THE SERVICE STATION'S PRODUCT.

6.3 PROMOTION

The description 'Promotion' is a term for the marketing activities over which Management and staff have most influence and can use most effectively to differentiate the Service Station from other Service stations in the trading area.

IT COMPRISES:

- ⇒ ADVERTISING
- ⇒ SALES PROMOTION
- ⇒ PERSONAL SELLING
- ⇒ PUBLIC RELATIONS

One can advertise using television, leaflets, outdoor billboards (still or mobile), cinema, direct response, press and magazines to create awareness of your enterprise, to build an image or to publicize some specific activity such as special offers.

Some of these media can be used very creatively to build business. These include: local press, billboards, local radio, leaflets, brochures and direct response.

Sales Promotion: the use of various activities to encourage visits by existing customers and new prospects to the Service Station site to enjoy some special benefit. These are typically premium offers for goods branded with the Oil Company monogram, special offers publicised by some advertising media, or some competition which has a component of skill attached to it.

Managers have to be aware of relevant legislation and / or regulations in this context.

- ⇒ A National Energy Council regulation allows a service station to hold promotions using premiums and prizes but stipulates an annual limit to the value of these rewards and may also give away items of no commercial value.
- ⇒ The Gambling Act (51 of 1965) prohibits lotteries or games of chance. This prohibition is bypassed by including an element of skill such as the need to write a slogan or answer a question.
- ⇒ The Petroleum Act (of 1977) in effect prohibits the giving a benefit to a customer as a condition of or the result of any sale of fuel. Prescribes that the right to participate in a promotion or competition may not be linked to the sale of fuel.

Public Relations is a powerful mechanism that can be used to enhance the Service Station's image in the business and local community. It must not be confused with personal selling since it is largely directed at individuals and / or groups that could influence the success of the Service Station. These will include stakeholders such as unions, local government and officials, school and church communities as well as welfare and the needy.

An effective public relations campaign can be implemented at low cost if it is considered carefully where the most effective influencers can be found.

Personal Selling is conducted in two places

- ⇒ When a customer arrives on the forecourt and the Forecourt Attendant offers the range of products and services to the customer.
- ⇒ The second place is at the customer's place of business when the Manager might visit to promote sales because of advantages which the Manager believe the prospect or customer might find appealing. Regardless of how long a customer has been with the Service Station, it is essential to regularly reassure them that their decision to remain a customer of the Service Station is a good one, and highly valued by the Service Station.

Good Selling Techniques

When stopping on the Service Station forecourt the customer has specific needs.

It is reasonable to believe the customer wish to buy fuel, but may have many other needs or other needs can be created by skilful suggestions.

Good customer etiquette dictates that the forecourt attendant must greet the customer in a friendly way and offer to fill the vehicle with fuel.

The Manager wants the customer out of the vehicle and spending in the Convenience Shop. The Service Station Forecourt Attendants can be briefed on how to achieve this through suggestive selling.

There are many suggestive ways of pricing the customer out of the vehicle, and these depend on the time of day, season, weather, what is freshly cooked, or what is on special. This will always make the customer want to return to discover other specialties of the service. It may seem that the important need to close a sale has a limited role in the business since customers are coming onto the forecourt with a definite purpose to purchase fuel.

It is critical the Service Station staff understand how important it is to listen to the customer. It means confirming what the customer wants to buy and expects to receive, for example: which fuel, in what quantity or for what value.

Training in Selling

All staff and management need training, and sales training is one of the most important, since it is where the contact with the customer occurs.

Training staff should not be a once off event, even though training new staff is, of course, essential. It is a process that never stops because needs change and Management must continue to enhance staff skills and motivate them.

Poor or no training is one of the major reasons for low productivity and poor customer relations. Furthermore, both factors will reduce Service Station profit by negatively impacting on return on expenses through sub-optimal sales.

A good procedure for any training is as follows:

- Explain what has to be done
- Show the trainee how you want it done
- Let them do it
- Observe and correct the procedure
- Compliment the trainee on successfully completing the procedure

Customer Etiquette

Customers that complain are not always right, but discretion should be used as how to handle difficult customers.

The first decision is simply whether this is a "once off" transaction that can have no future influence on any future customer. This is, however, always difficult to decide. The alternative is a customer who could return and / or influence others.

The second alternative is the most frequent and highest risk option.

If it is decided on the "once off" option, the transaction should be terminated as quickly and peacefully as possible. Recognise that the customer may be dissatisfied, with how the situation has been received.

If it is identified that the customer as possibly being a repeat customer, you should embark on a compromise negotiation. Both parties must emerge from the conflict with as much honour and satisfaction as possible.

It is impossible to describe all the contingencies related to customer service policies, but they are usually related to quality or service.

The Service Station suppliers are sensitive to product quality and will, almost without exception, replace faulty product and appreciate the Service Station participation in providing the customer satisfaction and quality control. Defective service, clearly within realm of control and responsibility, must be quickly remedied, as a deficient level of service can quickly become a new standard.

6.4. PRICE

At this time and for the foreseeable future, the government regulates the price of Petrol that the Service Station sells. Therefore, the Service Station will not experience any competitive pricing, in the medium term.

Nevertheless the margin – the difference between the cost and the selling of fuel – can still be lower than desirable because:

- ⇒ Different fuels have different margins e.g. Super, Diesel, and the mix of fuels sold affects overall margins
- ⇒ Fuel prices change with little warning e.g.
 - In the event of a drop in the cost or selling price of fuel, and the Service Station are holding high levels of wet stock at the time of the change.
 - In the event of cost price increase the Service Station may be holding too little stock.

6.5. THE PROPOSED CALTEX KRIEL SERVICE STATION SITE MARKETING

Activities that Service Station management should embark upon on an ongoing basis with a major review approximately every 6 months should include:

6.5.1. SET CLEAR OBJECTIVES

Set very clear marketing objectives of the increase that is required in:

- Volumes (petrol, diesel, paraffin, lubricants)
- Convenience Shop turnover.

6.5.2. IDENTIFY MACRO-ECONOMIC AND INDUSTRY FACTORS

Share information with the Oil Company consultant about industry information on a macro level, which will affect the individual Service Station site's:

- National statistics
- Regional statistics
- Deregulation issues
- Factors that are affecting petrol price changes

6.5.3. IDENTIFY LOCAL MARKET FACTORS

Identify specific aspects in the Service Station target market, which need to be dealt with after considering:

- Review of the Service Station market, identifying changes, dynamics of the market.
- Assess the effect of retail, commercial and residential developments and how they will affect the Service Station site.

6.5.4. DEVELOP A LOCAL MARKETING PLAN

The following marketing tools should be considered:

Advertising in Local Media

Management can place an advertisement in a local newspaper in order to inform people in the area about the Convenience Shop and bring customers into the shop. Should Management consider this option:

- Assess carefully which local newspaper is the most read, to ensure that the largest number of people possible are reached;
- Compare prices of advertising to ensure that the best possible deal are received; and
- Ensure that the advertising costs are in line with the Service Station budget.

Should Management wish to place an advertisement in the local newspaper, Management will need to design this advertisement. It is vital that the design of the advertisement is in line with all Oil Company advertising, therefore Management should contact Oil Company Head Office for assistance with the layout of the advertisement.

Public Relations in Local Media

This is one of the most ideal forms of marketing as it is free. Public relations includes all articles written about the Service Station retail facility for publication in a newspaper or magazine. Management should try to obtain public relations whenever something newsworthy happens on the Service Station forecourt and / or Convenience Shop. Some newspapers will offer free articles on condition that the Service Station advertises on the page.

In-store Marketing

This is the most effective form of local marketing, as it brings customer into the store and into the forecourt for an initial purchase, and then brings customers back for the repeat purchase.

- In-store marketing can be effected using the following tools:
- Specific promotions
- Window displays
- In-store displays
- Posters
- Good merchandising
- Music, lights and colours

6.6. CUSTOMER CARE STRATEGY

Customer service is the responsibility of every person at the Proposed Caltex Kriel Service Station and no change will occur until people become (and want to become) more marketing orientated. The bottom line should generally be to increased profits through superior Customer Care.

Each staff member at the Proposed Caltex Kriel Service Station will follow the following seven quality service characteristics:

ACCESS AND AVAILABILITY

- Ease in making contact at all times and able to reach the right person right away
- Readily available to assist with problems or answer questions

COMMUNICATION

- Good quality and quantity of communication interactions, both verbal and written, between management, staff and the customer.
- Sufficient information given, not too much either.

COMPETENCE

- Level of demonstrated technical expertise, i.e. accurate, relevant advice.
- Pro-active review of customer's needs and adapting for continuous improvement.

REPUTATION / CREDIBILITY

- Built up over a period of time, credibility is earned.
- Consistency of service levels plays a major role.

COURTESY

- The care that is taken in the relationship to ensure that the customer's needs is met.
- Being perceived as fair and sincere
- Sensitivity to others, treating customers with dignity

RELIABILITY

- Meets service promises regarding problems in good time with regular contact during service or promotion
- Consistently high standards

RESPONSIVENESS AND FLEXIBILITY

- Pro-actively asks for and listens to customer's feedback, then reacts to what was heard and agreed.
- Show flexibility to match changing customers needs

7. THE OPERATING FINANCIAL PLAN**7.1. COMPUTER SYSTEM**

The Proposed Caltex Kriel Service Station will implement a computer program, used by Service Stations.

7.2. CONTROL

Although management will be fully responsible to control all aspects of the business some of the duties will be delegated to specific personnel to attend to the following:

- Daily sales reconciliation
- Inventory control
- Banking e.g. reconciliation of money, delivery to the bank
- Personnel records
- Ordering of stock
- Safekeeping of records
- Administration of each profit centre

7.3. BASIC FINANCIAL STATEMENTS

Analysing the strengths and weaknesses of any business cannot be comprehensively assessed without reference to financial statements. Financial statements include an income statement, balance sheet and cash flow statement. (Refer Annexure "G")

Often reference is made to management accounts that differ from annual financial statements. The main difference is that management accounts are produced on a monthly (or more frequent basis) whereas annual financial statements are produced at the end of the financial year (usually the fiscal year), and include adjustments for stock write-offs, provisions, accruals, etc which may not be included in the management accounts. To analyse the success of a Service Station, it is essential that timeous financial information be obtained usually – monthly management accounts.

7.4. PREPARATION OF INCOME STATEMENTS

To be able to analyse the financial results of the Service Station, it is necessary to produce income statements for each area of activity ie. Forecourt and Convenience Shop. There may be expenses that should be allocated on a proportional basis across all the activities. The main principle is, however, to ensure each activity unit operates profitably and in accordance with Management plans and budget.

An income statement shows the results of operations during a time period. The Service Station accountant or the financial system employed will produce an income statement on a monthly basis.

An income statement alone is insufficient for the purposes of analysis and should be compared against:

- The budgeted figures; and
- Against the figures of the previous year / same month in the previous year.

7.4.1. MONTHLY INCOME STATEMENTS

Management should produce monthly income statements. To do so more often would involve an excessive amount of work, while leaving a longer period between statements may mean that Management have left too little time to take corrective action.

In order to understand this income statement properly, it is important to understand the various elements of the statement:

⇒ Sales:

These are the total sales of the business. These sales have to be net of VAT which is not difficult to work out, as VAT have to be separated to work out VAT that is payable to the Receiver of Revenue

$$\text{Net Sales} = \text{Sales (including VAT)} - \text{VAT}$$

⇒ Cost of Sales:

Direct cost of sales must be worked out - not how much was purchased that month, but the cost of what was sold. These figures can differ because more may have been sold than what have been purchased (ending up with lower stocks at the end of the month than the beginning) or less than that was purchased (ending up with higher stocks at the end of the month than the beginning). This figure is calculated by adding purchases to opening stock to get the total amount available for sale. Then deduct closing stock (what have been left) to obtain the cost of what was sold.

Cost of Sales = Opening stock + purchases - Closing stock

⇒ **Gross Profit:**

This is calculated as net sales less cost of sales, which gives the gross profit that will be available to pay expenses after which a operating profit (or loss) will be made. Gross profit on the forecourt and Convenience Shop should be in the region of 10% and 30% respectively.

⇒ **Overhead Expenses**

Overheads are the expenses that will incur on a monthly basis. Some expenses vary every month and others are fixed expenses.

7.4.2. ANNUAL INCOME STATEMENTS

It is necessary to produce an annual income statement, at the end of the financial year, for:

- The Service Station's own records;
- Tax purposes;
- The bank manager, should finance be required; and
- For the auditors.

7.5. PREPARATION OF BALANCE SHEETS

While the income statement indicates the results of operations over a certain period, the balance sheet gives the financial position or a financial "snap-shot" at a particular point in time.

7.5.1. MONTHLY BALANCE SHEETS

As is the case with the income statement, balance sheets should be drawn up on a monthly basis to examine the financial position of the business on a monthly basis.

The top part of the balance sheet shows the amount of capital employed and is divided between equity and debt. The lower half reflects the employment of capital, being the business' assets.

Employment of capital:

This sets out the capital, or assets that are employed in the business. The assets should be listed in order of ascending liquidity, i.e. the least liquid assets first and the most liquid assets last.

Fixed assets:

These are assets with a useful life of more than one year. With extended use, these assets deteriorate, and thus depreciation is provided for to reflect the decline of the assets useful life and to match the amortisation expense against revenue.

Net current assets:

This is the excess of current assets over current liabilities or "net working capital".

Current assets:

These assets also known as the working capital of the Service Station consist of assets that are normally converted into cash within one year and form part of the trading cycle. It will be noticed that stock is given first, as it is the least liquid of the current assets, as it will take some time to turn into cash. These assets include:

- Debtors;
- Stock in trade;
- Cash balances; and
- Deposits

Current liabilities:

These are financial obligations with less than a year to maturity, or obligations that must be repaid on demand, such as an overdraft. Creditors are those amounts that are owed to suppliers i.e. if the Service has 30 days terms on sweets from a supplier, the amount outstanding will be recorded as a current liability. Taxation is shown as a current liability, as it is an expense that has been provided for in the income, but has not yet been paid. It is a debt that the Service Station will have to pay to the taxman in the near future.

7.5.2. ANNUAL BALANCE SHEET

At the end of the financial year, it is essential to produce an annual balance sheet. As in the case of the income statement, an annual balance sheet is needed for:

- ⇒ For the Service Station's own records;
- ⇒ Tax purposes;
- ⇒ The bank manager, should finance be required; and
- ⇒ Auditors.

7.6. PREPARATION OF THE CASH FLOW STATEMENT

Cash flow indicates the inflows and outflows of cash within a business. Forecasting cash flow in the form of the cash flow statement is critical in order to ensure that cash inflows will always be sufficient and timeous to pay for the regular operational outflows. This will ensure that all eventualities are foreseen and planned for, preventing any cash flow crises.

7.5.1. ANNUAL CASH FLOW STATEMENT

Cash flow statements should be prepared in advance for each month of the following year at the beginning of that year. In this way, planning can be done properly for each month in advance. In making cash flow projections, assumptions need to be detailed for example salary and wage increases, anticipated increases in suppliers' prices and operating expenses and the cyclical characteristics of the business.

7.7. BUDGETED INCOME STATEMENTS (Refer Annexes "G"1 and "G"5)

INCOME / MONTH / YEAR	YEAR 1	AVG/MTH	YEAR 2	AVG/MTH	YEAR 3	AVG/MTH
PETROL SALES LITRES	3,111,504	259,292	3,204,849	267,071	3,300,995	275,083
PETROL GROSS PROFIT PER LITRE	1.124	1.124	1.214	1.214	1.311	1.311
PETROL GROSS PROFIT	3,497,330	291,444	3,890,430	324,203	4,327,718	360,843
DIESEL SALES LITRES	1,044,912	87,076	1,076,259	89,688	1,108,547	92,379
DIESEL GROSS PROFIT PER LITRE	0.800	0.800	0.864	0.864	0.933	0.933
DIESEL GROSS PROFIT	836,930	69,651	929,858	77,491	1,034,408	86,201
LUBRICANT SALES RAND	387,932	32,328	399,570	33,298	411,557	34,296
LUBRICANT GROSS PROFIT %	33%	33%	33%	33%	33%	33%
LUBRICANT GROSS PROFIT	128,018	10,668	131,358	10,968	136,814	11,313
FRESH STOP SALES - RAND	6,234,624	519,552	6,421,863	535,139	6,614,313	551,193
FRESH STOP GROSS PROFIT %	28%	28%	28%	28%	28%	28%
FRESH STOP GROSS PROFIT	1,745,695	145,476	1,798,086	149,839	1,862,008	154,334
PREPAID CARD SALES - RAND	1,662,566	138,547	1,712,443	142,704	1,763,817	146,985
PREPAID CARD SALES GROSS PROFIT %	9%	9%	9%	9%	9%	9%
PREPAID CARD SALES GROSS PROFIT	149,631	12,469	154,120	12,843	159,744	13,229
PITSTOP CAFE (BAKERY / FAST FOOD) SALES	1,454,746	121,229	1,498,388	124,866	1,543,340	128,612
PITSTOP CAFE SALES GROSS PROFIT %	53%	53%	53%	53%	53%	53%
PITSTOP CAFE SALES GROSS PROFIT	771,015	64,251	794,148	66,179	817,970	68,194
GROSS OPERATING PROFIT	7,127,519	593,988	7,688,508	641,542	8,326,557	693,888

INTRODUCTION

For the purpose of this document the financial statements of the Property Owning Company and the Operating Company, were incorporated into one set of financial statements.

PROJECTED FUEL SALES (Refer Annexure "F")

FUEL SALES PER MONTH	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / MONTH	259,292	267,071	275,083	283,335	291,835	300,580	309,608	318,986	328,483	338,317
TOTAL DIESEL LITRES / MONTH	87,076	89,688	92,379	95,150	98,005	100,946	103,973	107,092	110,305	113,614
TOTAL PETROL + DIESEL / MONTH	346,368	356,759	367,462	378,486	389,840	401,526	413,582	426,088	438,788	451,931
FUEL SALES PER YEAR	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / YEAR	3,111,504	3,204,849	3,300,995	3,400,024	3,502,025	3,607,086	3,715,298	3,826,767	3,941,580	4,069,807
TOTAL DIESEL LITRES / YEAR	1,044,912	1,076,259	1,108,547	1,141,604	1,176,068	1,211,339	1,247,660	1,285,110	1,323,663	1,363,373
TOTAL PETROL + DIESEL / YEAR	4,156,416	4,281,108	4,409,542	4,541,628	4,678,093	4,818,425	4,962,958	5,111,867	5,265,243	5,433,180

ALL FIGURES EXCLUDE V A T.

PETROL SALES

The gross profit margin is currently R1.041 per litre. The Service Station will only start operating in ± one year's time. The GP (Gross profit) margin is increased by 8% per annum for YEAR 1. The gross profit margin during YEAR 1 will be R1.124 per litre. The GP margin of petrol is increased by 8% per annum for the remaining years.

An annual growth rate of 3% was used in the calculation of the petrol sales volume from year 1 to year 10 projections.

DIESEL SALES

The price of diesel is not controlled and the proposed gross profit margin on diesel is 80.0 cents per litre during the first year. The GP margin of diesel is increased by 8% per annum for the remaining years.

An annual growth rate of 3% was used in the calculation of the diesel sales volume from year 1 to year 10 projections.

LUBRICANT SALES

For every 300 litres of fuel sold 1 litre of oil will be sold. The gross profit margin on oil is 33%

FRESH STOP SALES (CONVENIENCE STORE)

The Convenience Store will generate at least R1-50 for every litre of fuel sold. The gross profit margin on Convenience Store sales is 28%.

PREPAID CARD SALES

The prepaid card sales will generate at least 25 cents for every litre of fuel sold. The gross profit margin on Prepaid Card sales is 9%.

PITSTOP CAFÉ (BAKERY / FAST FOOD) SALES

The Pitstop Café (bakery / fast food) will generate at least 35 cents for every litre of fuel sold. The gross profit margin on Pitstop Café sales is 53%.

7.8. BUDGETED EXPENSE STATEMENTS (Refer Annexes "G"2 and "G"5)

EXPENSES / YEAR / MONTH	YEAR 1	AVG/MTH	YEAR 2	AVG / MTH	YEAR 3	AVG / MTH
ACCOUNTING & AUDIT FEES	36,000	3,000	38,880	3,240	41,990	3,499
ADMINISTRATIVE ASSISTANTS	240,000	20,000	259,200	21,600	279,936	23,328
ADVERTISING AND PROMOTION	72,000	6,000	77,760	6,480	83,981	6,998
BANK & CREDIT CARD CHARGES	178,851	14,904	184,216	15,351	189,743	15,812
CASH IN TRANSIT	108,000	9,000	116,640	9,720	125,971	10,498
CLEANING & CONSUMABLES	78,000	6,500	84,240	7,020	90,979	7,582
COMPENSATION COMMISSIONER	10,748	896	11,358	947	12,010	1,001
ENTERTAINMENT	18,000	1,500	19,440	1,620	20,995	1,750
INSURANCE	144,000	12,000	155,520	12,960	137,962	13,997
MAINTENANCE, REPAIRS & GARDEN	48,000	4,000	51,840	4,320	55,987	4,666
MANAGEMENT FEES	240,000	20,000	259,200	21,600	279,936	23,328
MIBCO	144,092	12,008	152,627	12,719	161,755	13,480
MOTOR VEHICLE EXPENSES	28,400	2,200	28,512	2,376	30,793	2,566
OFFICE, & COMPUTER EXPENSES	42,000	3,500	45,360	3,780	48,989	4,082
PEST CONTROL	3,300	275	3,564	297	3,849	321
RATES AND TAXES	66,000	5,500	71,280	5,940	76,982	6,415
SECURITY	144,000	12,000	155,520	12,960	167,962	13,997
SHRINKAGE 2%	124,692	10,391	128,433	10,703	132,286	11,024
SKILLS & DEVELOPMENT LEVY 1%	14,330	1,194	15,144	1,262	16,013	1,334
STAFF TRAINING	6,240	520	6,739	562	7,278	607
TELEPHONE, FAXES & INTERNET	54,000	4,500	58,320	4,860	62,986	5,249
UIF 1%	14,330	1,194	15,144	1,262	16,013	1,334
UNIFORMS / PROTECTIVE CLOTHING	48,000	4,000	51,840	4,320	55,987	4,666
WAGES CASHIERS	336,000	28,000	362,880	30,240	391,910	32,659
WAGES PITSTOP (BAKERY / FAST FOOD)	192,000	16,000	207,360	17,280	223,949	18,662
WAGES MERCHANDISERS	240,000	20,000	259,200	21,600	279,936	23,328
WAGES PETROL ATTENDANTS	665,027	55,419	684,977	57,081	705,527	58,794
WATER & ELECTRICITY	168,000	14,000	181,440	15,120	195,955	16,330
INTEREST ON BANK LOAN	699,016	58,251	650,511	54,209	597,456	49,788
OPERATING-EXPENSES	4,161,026	346,752	4,337,147	361,429	4,525,117	377,093
NET OPERATING PROFIT	2,966,592	247,216	3,361,351	280,113	3,801,540	316,795
CUMULATIVE OPERATING PROFIT	2,966,592		6,327,954		10,129,494	

ALL FIGURES EXCLUDE V A T.

Expenses escalated at 8% per annum except for expenses that are pre-determined.

ACCOUNTING AND AUDIT FEES

The accounting fees payable by the Service Station is R3,000 per month, during the first year

ADMINISTRATIVE ASSISTANTS

Provision has been made for two administrative assistants

ADVERTISING AND PROMOTION

Advertising and promotion expenses payable, average per month for the first year, will be R6,000

BANK AND CREDIT CARD CHARGES

The bank and credit card charges, during the first year will be R14,904 average per month

CASH IN TRANSIT

Provision has been made for cash in transit to the amount of R9,000 per month, during the first year

CLEANING AND CONSUMABLE EXPENSES

Provision has been made for cleaning expenses payable by the Service Station to the amount of R6,500 per month, during the first year

COMPENSATION COMMISSIONER

Compensation commissioner insurance rate of 0.75% are based on wages and salaries

ENTERTAINMENT

Provision has been made for entertainment to the amount of R1,500 per month, during the first year

INSURANCE

The insurance for the Service Station will be R12,000 per month, during the first year

MAINTENANCE, REPAIRS AND GARDEN

The maintenance, repairs and garden expenses, during the first year will be R4,000 average per month.

MANAGEMENT FEES

The management fees will be R20,000 per month, during the first year

MIBCO (MOTOR INDUSTRY BARGAINING COUNCIL)

Fees payable to MIBCO are as follow:

Council Levy	Employer R2.35 per week	Employee Contribution R2.35 per week
--------------	-------------------------	--------------------------------------

Provident Fund Employer 8% of wages	Employee 7.5% of wages
-------------------------------------	------------------------

The Council levy and provident fund is compulsory. Medical aid is optional

MOTOR VEHICLE EXPENSES

The office and motor vehicle expenses, during the first year will be R2,200 average per month,

OFFICE AND COMPUTER EXPENSES

The office and computer expenses, during the first year will be R3,500 average per month,

PEST CONTROL

Provision has been made for pest control expenses to the amount of R275 per month, during the first year

RATES AND TAXES

Provision has been made for rates and taxes to the amount of R5,500 per month, during the first year

SECURITY

Provision has been made for security to the amount of R12,000 per month, during the first year

SHRINKAGE

Provision has been made for shrinkage at 2% of shop sales

SKILLS DEVELOPMENT LEVY

Skills development levy at the rate of 1% of wages is payable by the employer

STAFF TRAINING

Provision has been made for staff training to the amount of R520 per month, during the first year

TELEPHONE, FAXES AND INTERNET

Provision has been made for telephone, faxes and internet to the amount of R4,500 per month, during the first year

UIF

Unemployment fund at the rate of 1% of wages, payable by the employer

UNIFORMS / PROTECTIVE CLOTHING

The uniform / protective clothing expenses, during the first year will be R4,000 average per month

WAGES CASHIERS

Provision has been made for seven cashiers.

WAGES PITSTOP (BAKERY AND FAST FOODS)

Provision has been made for four attendants at the Pitstop (bakery and fast food) department.

WAGES MERCHANDISERS

Provision has been made for five merchandisers

WAGES FORECOURT ATTENDANTS

A petrol attendant should pump between 25,000 and 30,000 litres per month.

WATER AND ELECTRICITY

Provision has been made for Water and electricity to the amount of R14,000 per month, during the first year

INTEREST ON BANK LOAN

The interest portion of the instalment payable to the Bank is shown in the expense statement. The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

7.9. PROJECTED NET CASH FLOW (Refer Annexes "G"3 and G"7)

CASHFLOW / MONTH / YEAR	MONTH 1	YEAR 1	YEAR 2	YEAR 3
CASH INFLOW	8,745,467	11,466,592	3,361,361	3,801,540
		0		
OPERATING PROFIT (LOSS)	245,467	2,966,592	3,361,361	3,801,540
CORRECTIONS				
CREDIT SALES (- OUTFLOW)	0	0	0	0
DEBTORS PAYMENTS		0	0	0
DEBTORS DEPOSITS	0	0		
OWNERS CONTRIBUTION	500,000	500,000		
FINANCIAL INSTITUTION LOAN	8,000,000	8,000,000		
CASH OUTFLOW	8,669,841	11,015,571	3,165,576	3,618,631
PROPERTY COST	130,000	130,000		
CONSTRUCTION & DEVELOPMENT COST	7,392,600	7,392,500		
COST OF INVENTORY	1,100,000	1,100,000		
CASH ON HAND	6,000	6,000		
CAPITAL PAYMENT ON BANK LOAN	41,341	517,071	565,576	618,631
TRANSFER TO RETAINED INCOME		1,870,000	2,600,000	3,000,000
NET CASHFLOW (- NEG)	75,626	451,021	195,785	182,909
CUM. CASHFLOW (- NEG)	75,626	451,021	646,807	829,716

CASH INFLOW

OPERATING PROFIT

The net operating profit (gross operating profit - operating expenses) is a net cash inflow in the cash flow statements

CORRECTIONS PREPAID PETROL ACCOUNTS

Provision has been made for sales on credit and payments (Prepaid fuel accounts).

DEBTORS DEPOSITS (Pre-paid fuel accounts)

Provision has been made for deposits (prepaid fuel accounts) payments.

OWNERS LOAN (CONTRIBUTION)

Owners loan (contribution) will be R500,000

FINANCIAL INSTITUTION LOAN

The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

CASH OUTFLOW

PROPERTY COST

The property cost is R130,000 (Refer Annexure "D")

CONSTRUCTION AND DEVELOPMENT COST OF CALTEX KRIEL SERVICE STATION (Refer Annexure "H")

The estimated construction & development cost of the proposed Service Station will be R7,392,500

CASH ON HAND

Provision has been made for "cash on hand" to the amount of R6,000

COST OF INVENTORY

The inventory is:

FUEL	800,000
FRESH STOP	200,000
PITSTOP CAFÉ	100,000
INVENTORY	1,100,000

CAPITAL REQUIRED TO DEVELOP AND OPERATE CALTEX KRIEL SERVICE STATION (Refer Annexure "G")

PROPERTY COST	130,000
CONSTRUCTION & DEVELOPMENT COST	7,392,500
	<u>1,100,000</u>
INVENTORY	1,100,000
FUEL	800,000
FRESH STOP	200,000
PITSTOP CAFÉ	100,000
CASH ON HAND	6,000
TOTAL CAPITAL REQUIRED	8,628,500

CAPITAL PAYMENT ON LOAN

The capital portion of the instalment payable to the Bank is shown in the cash flow statement. The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years

(Refer Annexure "G")

TRANSFER TO RETAINED INCOME

All surplus capital is transferred to RETAINED INCOME in the Balance Statements

7.10. PROJECTED BALANCE STATEMENTS (Refer Annexes "G"4 and G"8)

BALANCE STATEMENT END OF PERIOD	MONTH 1	MONTH 12	YEAR 2	YEAR 3
PROPERTY COST	130,000	130,000	130,000	130,000
CONSTRUCTION & DEVELOPMENT COST	7,392,500	7,392,500	7,392,500	7,392,500
CURRENT ASSETS	1,106,000	1,106,000	1,106,000	1,106,000
DEBTORS	0	0	0	0
FUEL ACCOUNTS	0	0	0	0
CASH ON HAND	6,000	6,000	6,000	6,000
PETTY CASH	1,000	1,000	1,000	1,000
CASH	5,000	5,000	5,000	5,000
INVENTORY	1,100,000	1,100,000	1,100,000	1,100,000
FUEL	800,000	800,000	800,000	800,000
FRESH STOP	200,000	200,000	200,000	200,000
PITSTOP CAFE (BAKERY / FAST FOODS)	100,000	100,000	100,000	100,000
CURRENT LIABILITIES (- ASSETS)	-75,626	-451,021	-646,807	-829,716
FUEL DEPOSITS (CREDITORS)	0	0	0	0
BANKBALANCE DT (- KT)	-75,626	-451,021	-646,807	-829,716
TOTAL CURRENT ASSETS (- LIABILITIES)	1,181,626	1,557,021	1,752,807	1,935,716
EMPLOYMENT OF CAPITAL	8,704,126	9,079,521	9,275,307	9,458,216
CAPITAL EMPLOYED	8,704,126	9,079,521	9,275,307	9,458,216
FINANCIAL INSTITUTION LOAN	7,958,659	7,482,929	6,917,353	6,298,722
OWNERS CONTRIBUTION	500,000	500,000	500,000	500,000
PROFIT TO DATE	245,467	2,966,592	6,327,954	10,129,494
RETAINED INCOME (-)	0	-1,870,000	-4,470,000	-7,470,000

EMPLOYMENT OF CAPITAL

PROPERTY COST

The property cost is R130,000 (Refer Annexure "D")

CONSTRUCTION AND DEVELOPMENT COST OF CALTEX KRIEL SERVICE STATION (Refer Annexure "H")

The estimated construction & development cost of the proposed Service Station will be R7,392,500

DEBTORS DEPOSITS (Pre-paid petrol accounts)

Provision has been made for deposits (Prepaid petrol accounts).

COST OF INVENTORY

FUEL	✓	800,000
FRESH STOP	✓	200,000
PITSTOP CAFÉ	✓	100,000

INVENTORY	1,100,000
------------------	------------------

The levels of stock of Fuel, Fresh Stop and Pitstop Café (bakery & fast foods) are kept on the same amount for the purpose of the financial statements, although it is recognised that higher stock levels will have to be kept due to price increases.

BANK BALANCE (CURRENT ACCOUNT)

A credit balance in the current account will be shown as (-)

CAPITAL EMPLOYED

OWNERS LOAN (CONTRIBUTION)

Owners loan (contribution) will be R500,000

BANK LOAN

The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

RETAINED INCOME

All surplus capital is shown as "Retained Income" in the Balance Statements and can be utilised to pay shareholders loans or increased stock levels or pay dividends to shareholders

8. CHECK LIST AND ACTION PLAN.

Before the opening of the Proposed Caltex Kriel Service Station, there are certain matters that must be attended to by the management of the Service Station. The following is a checklist of matters that must be attended to:

8.1. OIL COMPANY

- Arrange a meeting with OIL COMPANY to finalise all legal matters, open account / manumatic and complete all the necessary order forms i.e. for uniforms, stationary, driveway equipment etc.
- Issue all payments required by OIL COMPANY as well as the Bank Guarantee.
- Finalise any outstanding matters prior to the opening of the new site

8.2. BANK

- Open new Bank Account.
- Arrange and finalise:
 - "Speed Point"/Veriphone.
 - Garage / Petrol Cards: Nedfleet, Autofleet, Volkskasfleet, and Stannicfleet etc.
 - Manual "Zip-Zap" card machine.

8.3. BUY- AID SOCIETIES

- Register as Merchant Member with the different Buy-Aid Societies
- Arrange for the necessary petrol pre-payments

8.4. REGISTRATIONS

- Arrange the following registrations:
 - VAT: Receiver of Revenue
 - As Employer at Receiver of Revenue.
 - MIBCO.
 - U.I.F.
 - Compensation Commissioner
 - Fire Department for the storage of inflammable Liquids

8.5. PERSONNEL

- Arrange a meeting with the newly appointed personnel and communicate the following:-
- The Management structure of the business.
- Explain the vision, mission and objectives of the team.
- Explain what is expected of each member.
- Explain personnel matters i.e. leave sick leave, competitions, bonuses, etc.
- Discuss what training they will undergo prior to opening of site and the ongoing training thereafter.
- Allow adequate question time, and give complete answers.
- Complete and sign probationary appointment letters.

8.6. MISCELLANEOUS

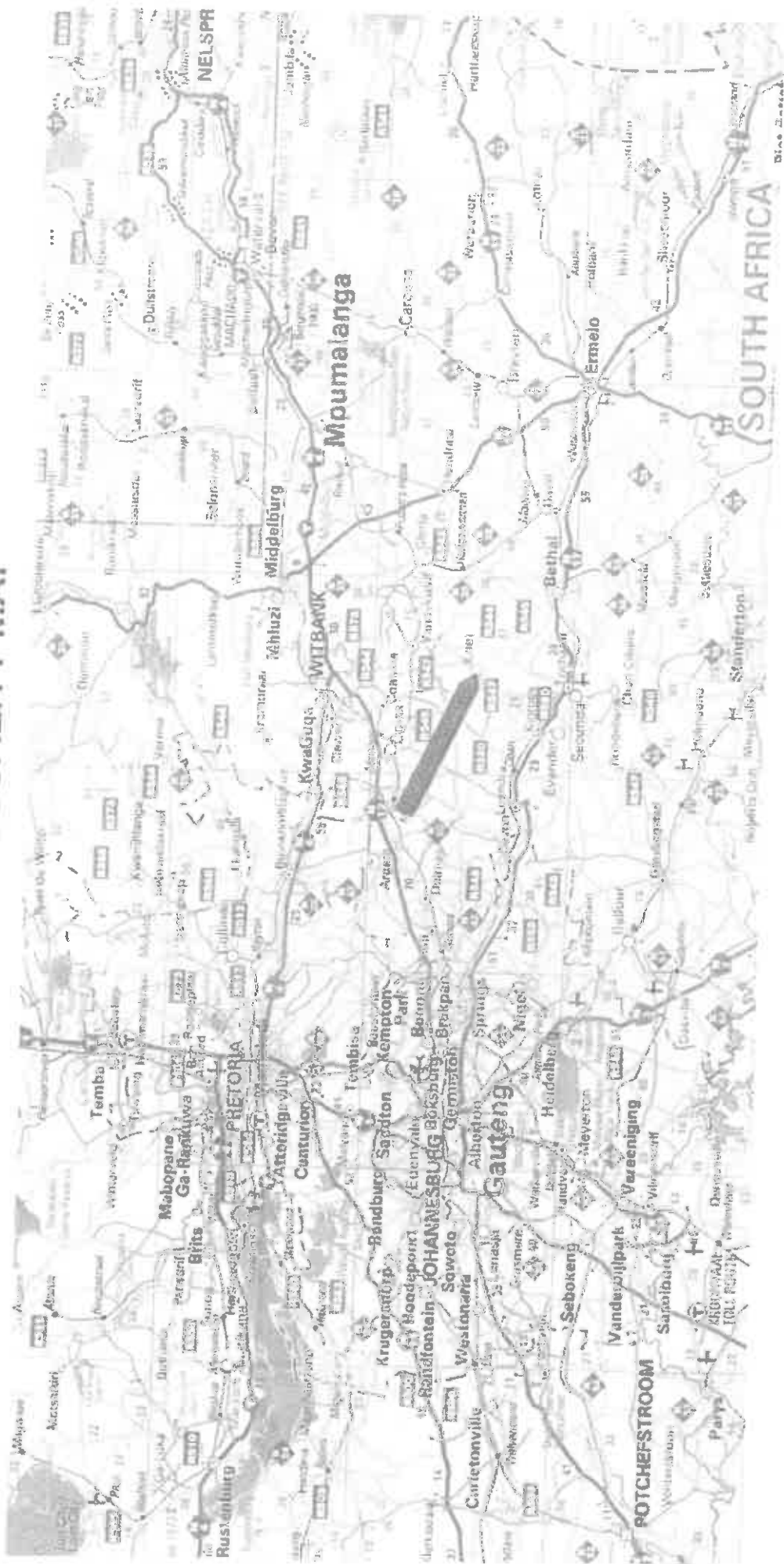
- Arrange with Broker to finalise all the business insurance.
 - Arrange business cards, stationery, and promotion pamphlets.
 - Follow up on Telkom to arrange installation and connection date of telephones and extra lines for speedpoint, Internet and fax.
 - Pay water & lights deposit and arrange for final water and electricity connection at Municipality.
-

ANNEXURE "A"

LOCALITY MAPS OF PROPOSED SERVICE STATION SITE

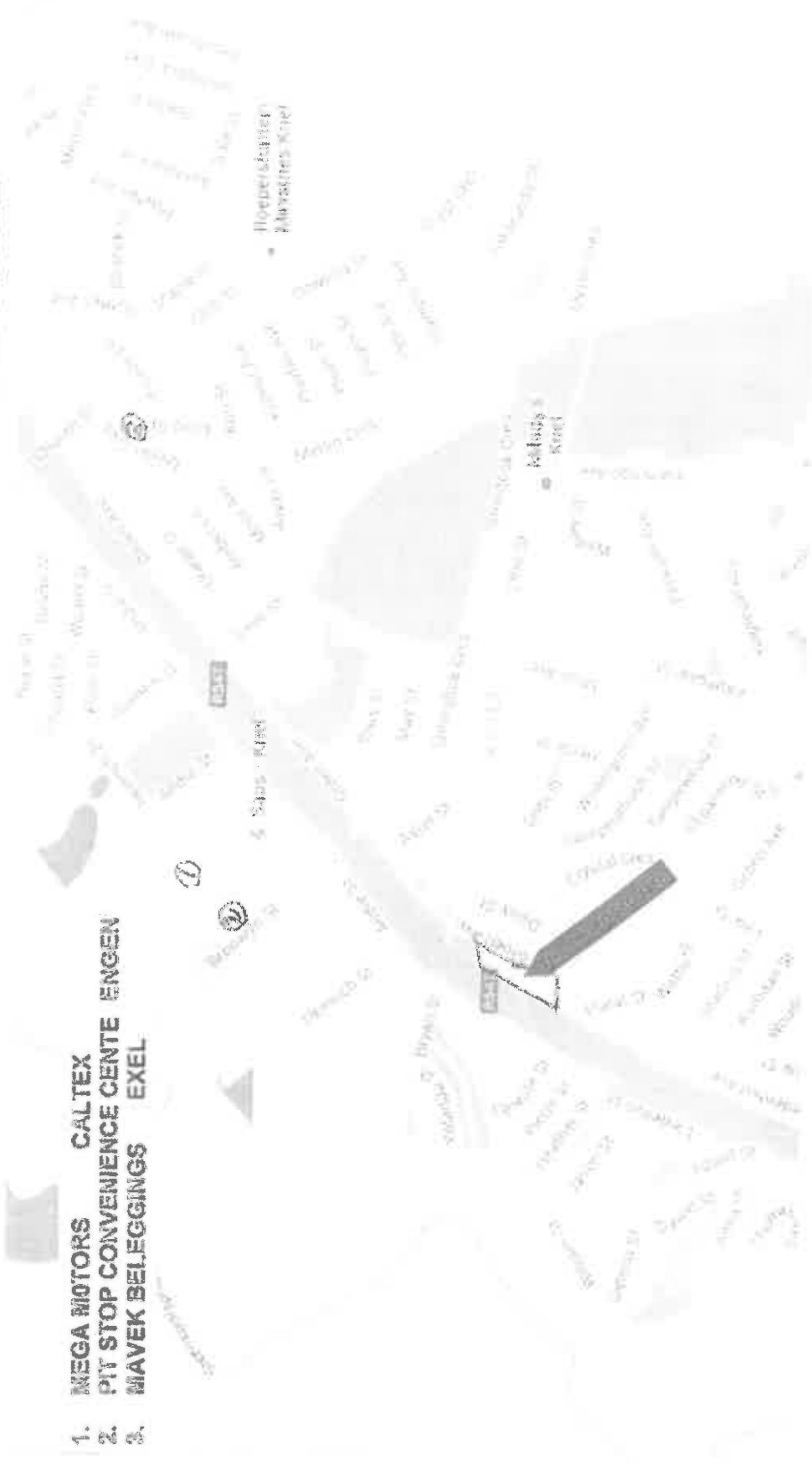
- A.1. MACRO LOCALITY MAP OF KRIEL**
- A.2. STREET MAP & SERVICE STATIONS IN KRIEL**
- A.3. AERIAL PHOTO AND GPS COORDINATES**

CALTEX KRIEL SERVICE STATION
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL
MACRO LOCALITY MAP



ANNEXURE "A"1

CALTEX KRIEL SERVICE STATION
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL
STREET MAP & SERVICE STATIONS IN KRIEL



- 1. MEGA MOTORS
- 2. CALTEX
- 3. PIT STOP CONVENIENCE CENTRE

CALTEX KRIEL SERVICE STATION STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL AERIAL PHOTO AND GPS COORDINATES

Spot Information
 Click on the map to view detailed geographical information on that point on the map

Coordinates, Minutes, Seconds
 26°15'22.5" S , 29°15'25.7" E

Coordinates, Decimal Minutes
 26°15.369° S , 29°15.424° E

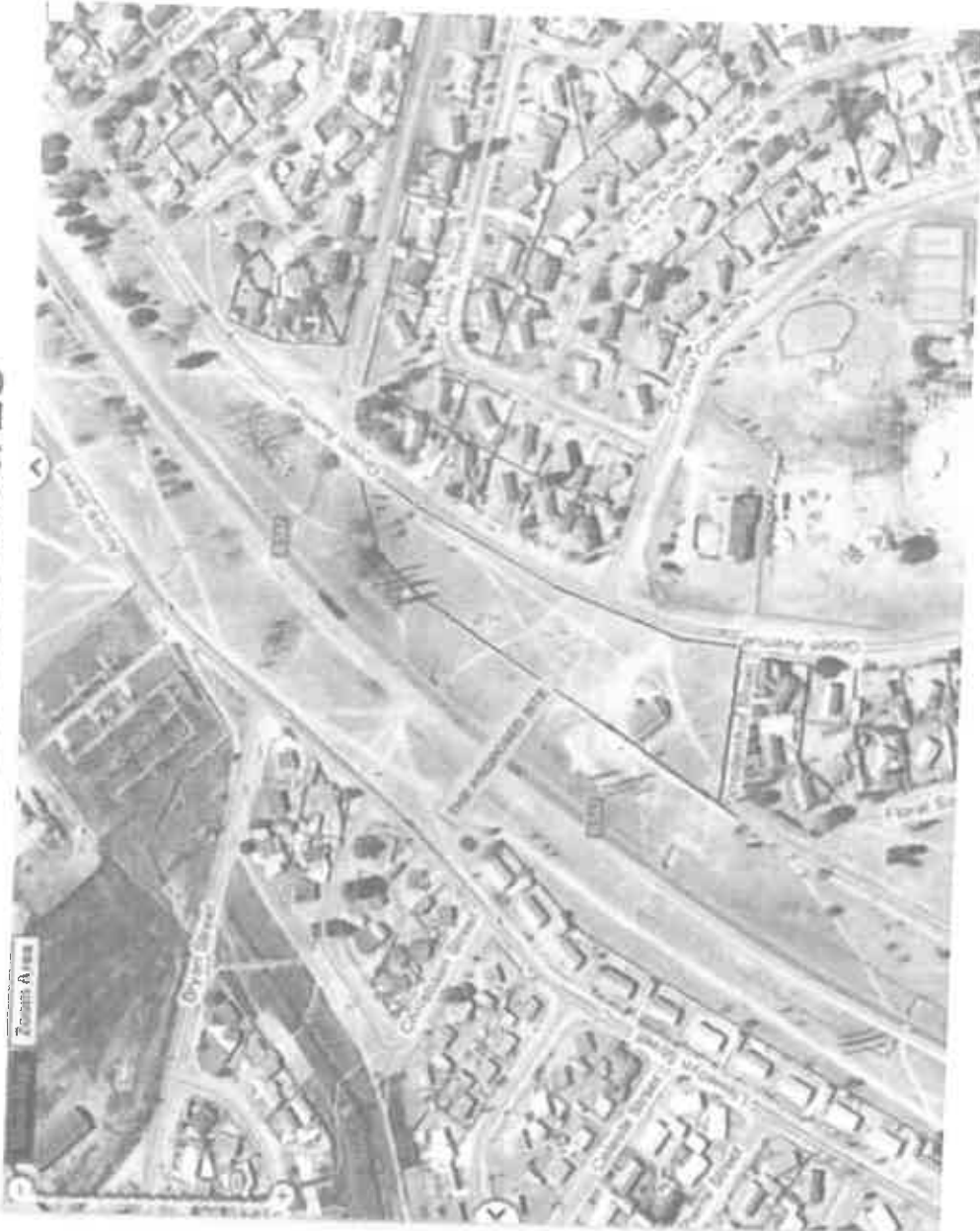
Decimal Coordinates
 26.256154° S , 29.257074° E

Elevation
 1550m

Location
 Groen Avenue , Kriel
 Mpumalanga
 South Africa

ERF Information
 Erf 1685, (Township 0150)
 Registered In: Pretoria
 SCA Key: T01S00150000168500000

For information on Coordinates, see the wikipedia entry on the [Geographic coordinates](http://en.wikipedia.org/wiki/Geographic_coordinates) (http://en.wikipedia.org/wiki/Geographic_coordinates)



ANNEXURE "B"

PHOTOS OF PROPOSED CALTEX KRIEL SERVICE STATION SITE

- B.1. THE PROPOSED SITE AS SEEN FROM VREDENHOF STREET**
- B.2. THE PROPOSED SITE AS SEEN FROM R547 ROAD**
- B.3. THE R547 ROAD TOWARDS WITBANK (NORTH)**
- B.4. THE R547 ROAD TOWARDS KINROSS (SOUTH)**
- B.5. ADVERT BORD ON THE SITE**

**CALTEX KRIEL SERVICE STATION KRIEL
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL
THE PROPOSED SITE AS SEEN FROM VREDENHOF STREET**



ANNEXURE "B"1

**CALTEX KRIEL SERVICE STATION KRIEL
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL
THE PROPOSED SITE AS SEEN FROM R547 ROAD**



ANNEXURE "B"2

CALTEX KRIEL SERVICE STATION KRIEL
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL
THE R547 ROAD TOWARDS WITBANK (NORTH)



**CALTEX KRIEL SERVICE STATION KRIEL
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL
THE R547 ROAD TOWARDS KINROSS (SOUTH)**



ANNEXURE "B"4

**CALTEX KRIEL SERVICE STATION KRIEL
STAND 1685 EXTENSION 5, GROEN AVENUE KRIEL**

ADVERT BORD ON THE SITE



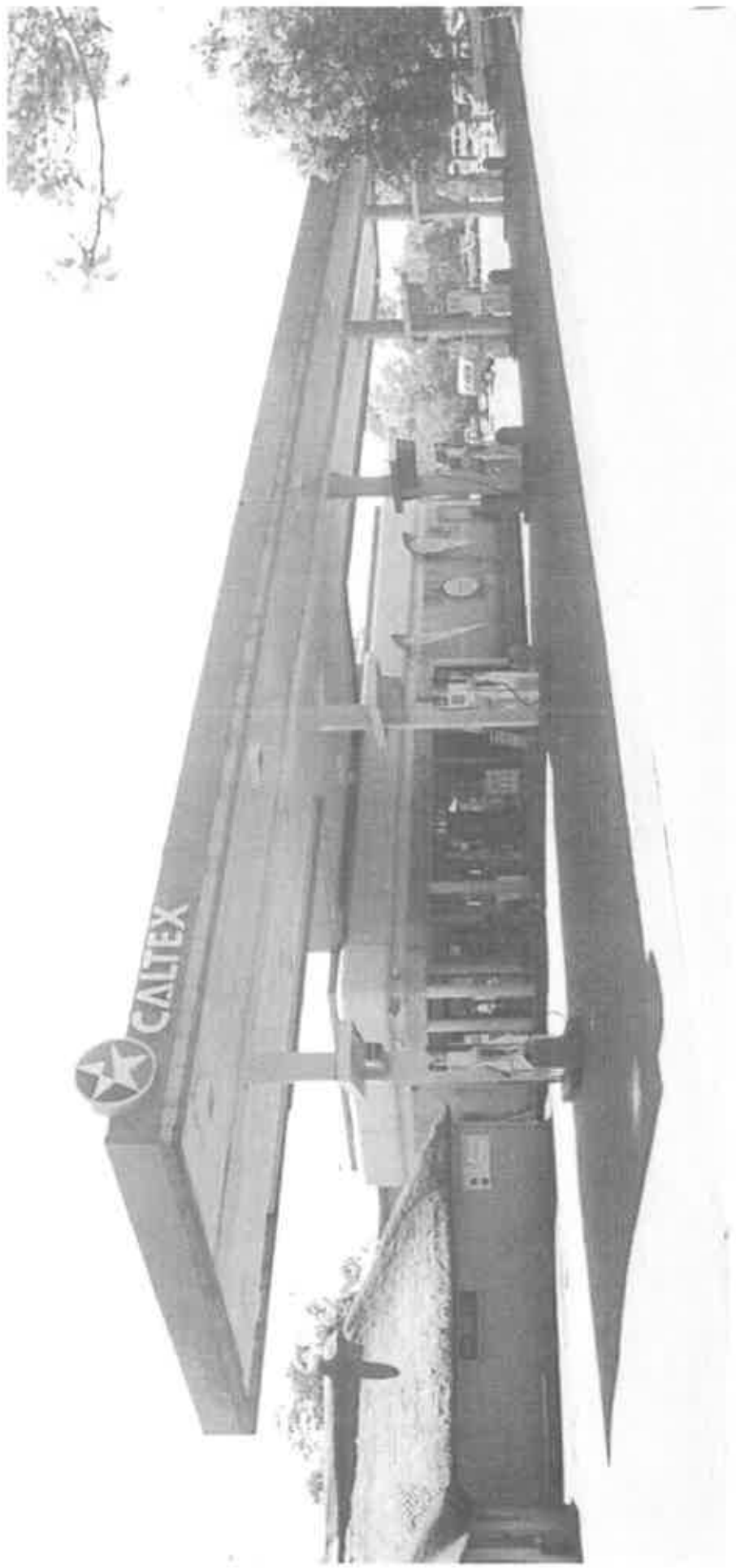
ANNEXURE "C"

PHOTOS OF SERVICE STATIONS IN KRIEL

- | | |
|---|---------------|
| C.1. MEGA MOTORS | CALTEX |
| C.2. PIT STOP CONVENIENCE CENTRE | ENGEN |
| C.3. MAVEK BELEGGINGS | EXEL |

MEGA MOTORS CALTEX

WALTER STREET, KRIEL
DRIVEWAY CANOPY AND BUILDING



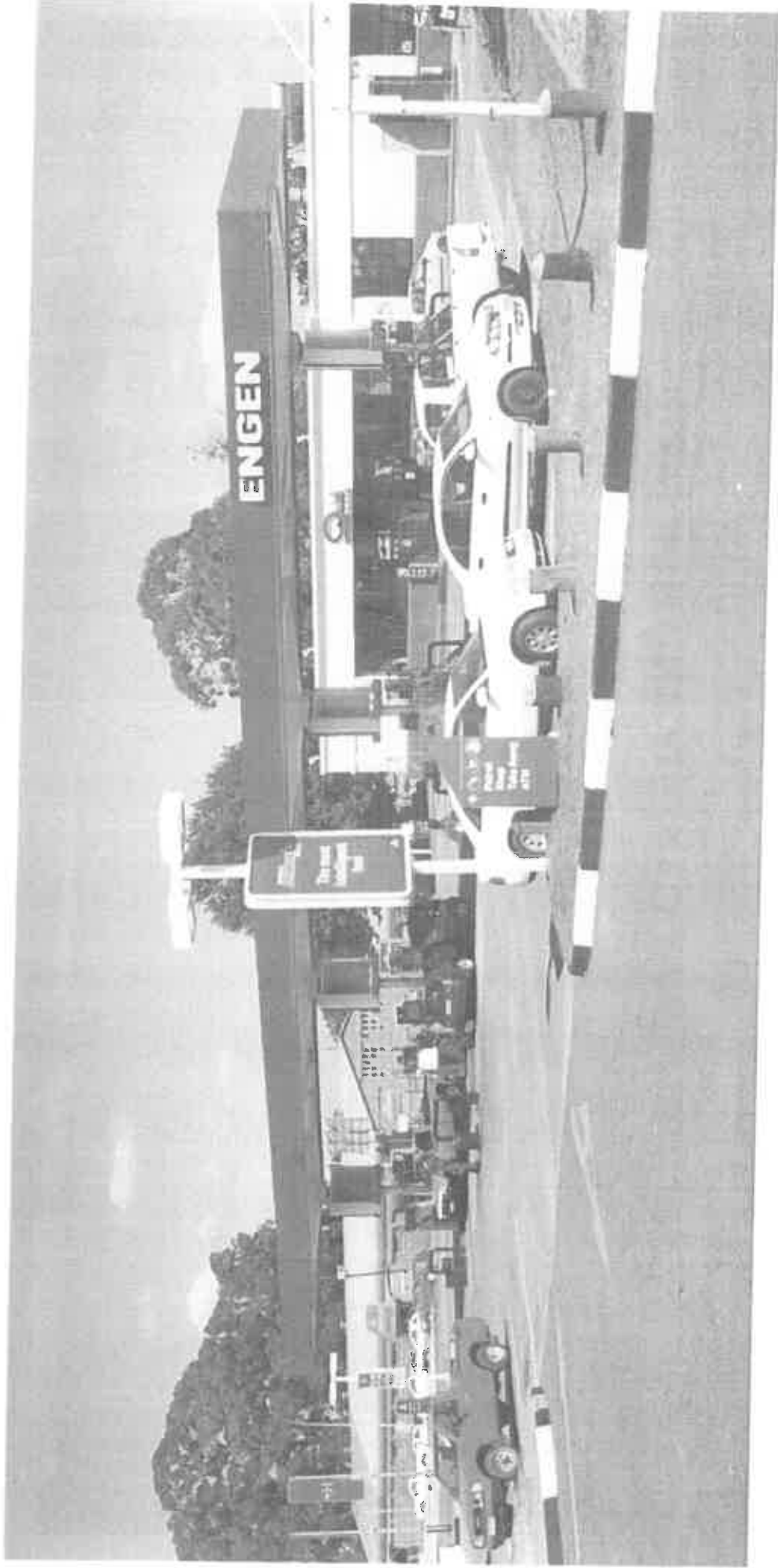
ANNEXURE "C"1

PIT STOP CONVENIENCE CENTRE

ENGEN

BRONWYN STREET

KRIEL



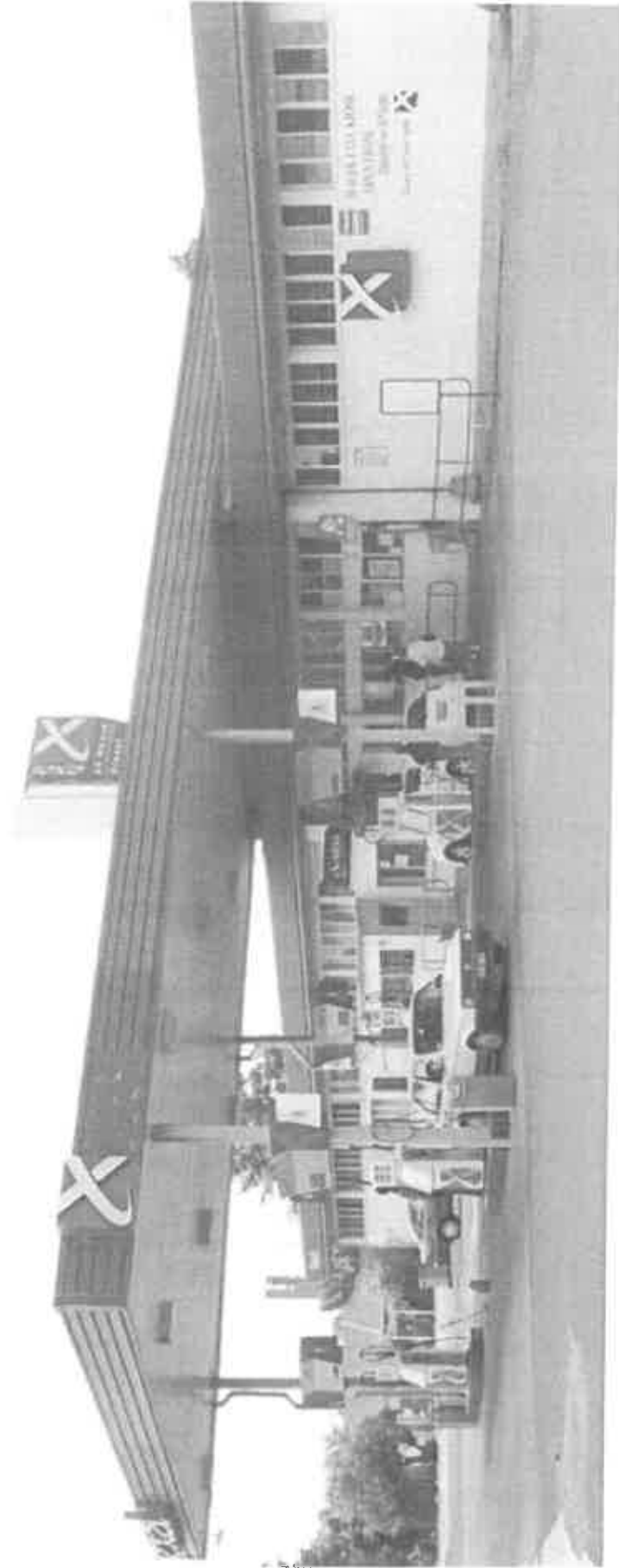
ANNEXURE "C"2

MAVEK BELEGGINGS

EXEL

C/O ARCADE STREET AND MERLIN CRESCENT, KRIEL

DRIVEWAY CANOPY AND BUILDING



ANNEXURE "C"3

ANNEXURE "D"
PROPERTY ENQUIRY IN DEEDS REGISTRY
ERF 1685 KRIEL EXT 5, MPUMALANGA

Property	Owner	Deed/Document	LPI Enquiry	Interdict	Document Request	Transfers	Bulk Properties	User Admin	Billing	
Property Enquiry Details										



Property enquiry results for "kriel" in the Deeds Registry at "MPUMALANGA"

Property detail:

Deeds registry	MPUMALANGA
Property type	ERF
Township	KRIEL EXT 5
Erf number	1685
Portion	0
Province	MPUMALANGA
Registration division/Administrative district	IS
Local authority	EMALAHLENI LOCAL MUNICIPALITY
Previous description	-
Diagram deed number	T55326/988
Extent	9272.0000 SQM
LPI Code	T0IS00150000168500000

Title Deeds detail:

Document	Registration date	Purchase date	Amount	Image Scanned reference	Document copy?
T42835/1993	19930604	19920228	R130000.00	19940101 15:31:23	Yes

Owners detail:

Document	Full name	Identity Number	Share	Person Enquiry?
T42835/1993	GANI SIKANDAR ALLI	4712135141055	-	Yes
T42835/1993	GANI BELKISBANOO	4907100139056	-	Yes

Endorsements / Encumbrances:

Endorsement / Encumbrance	Holder	Amount	Image Scanned reference	Document copy?
B100756/1994	STANDARD BANK	R50000.00	19940101 15:31:23	Yes
B42951/1993	STANDARD BANK	R150000.00	1993 0531 3749	Yes

http://www.deeds.gov.za/ITSODeedsWebB/deedsweb/propd_erf_results.jsp?office=11&... 10/18/2013

History:

Document	Holder	Amount	Image Scanned reference	Document copy?
T1531/1988	ESKOM T/T	T/T	20120120 10:42:16	Yes
T55326/1988	KRIEL CHRISTIAN CENTRE NIL	NIL	19910101 00:09:03	Yes
T83468/1990	NEDCOR BANK LTD 100000	R100000.00	19910101 00:09:03	Yes

[Back to top of page](#)

Requested by A0006268 with user reference None on: Friday, 18 October 2013 15:29

DeedsWeb Version 4.0.1

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ANNEXURE "E"

DETAILED TRAFFIC COUNT ON THE R547 ROAD BY FINLAND CONSULTANTS

- E.1. TRAFFIC COUNT - 30 OCTOBER 2013 (WEDNESDAY)**
- E.2. CHART - TRAFFIC COUNT PER LANE PER HOUR**
- E.3. CHART - CUMULATIVE TRAFFIC COUNT PER LANE PER HOUR**

TRAFFIC COUNT

PROPOSED KRIEL SERVICE STATION

LOCATION

ROAD 547 (OPPOSITE PROPOSED SITE)

DATE

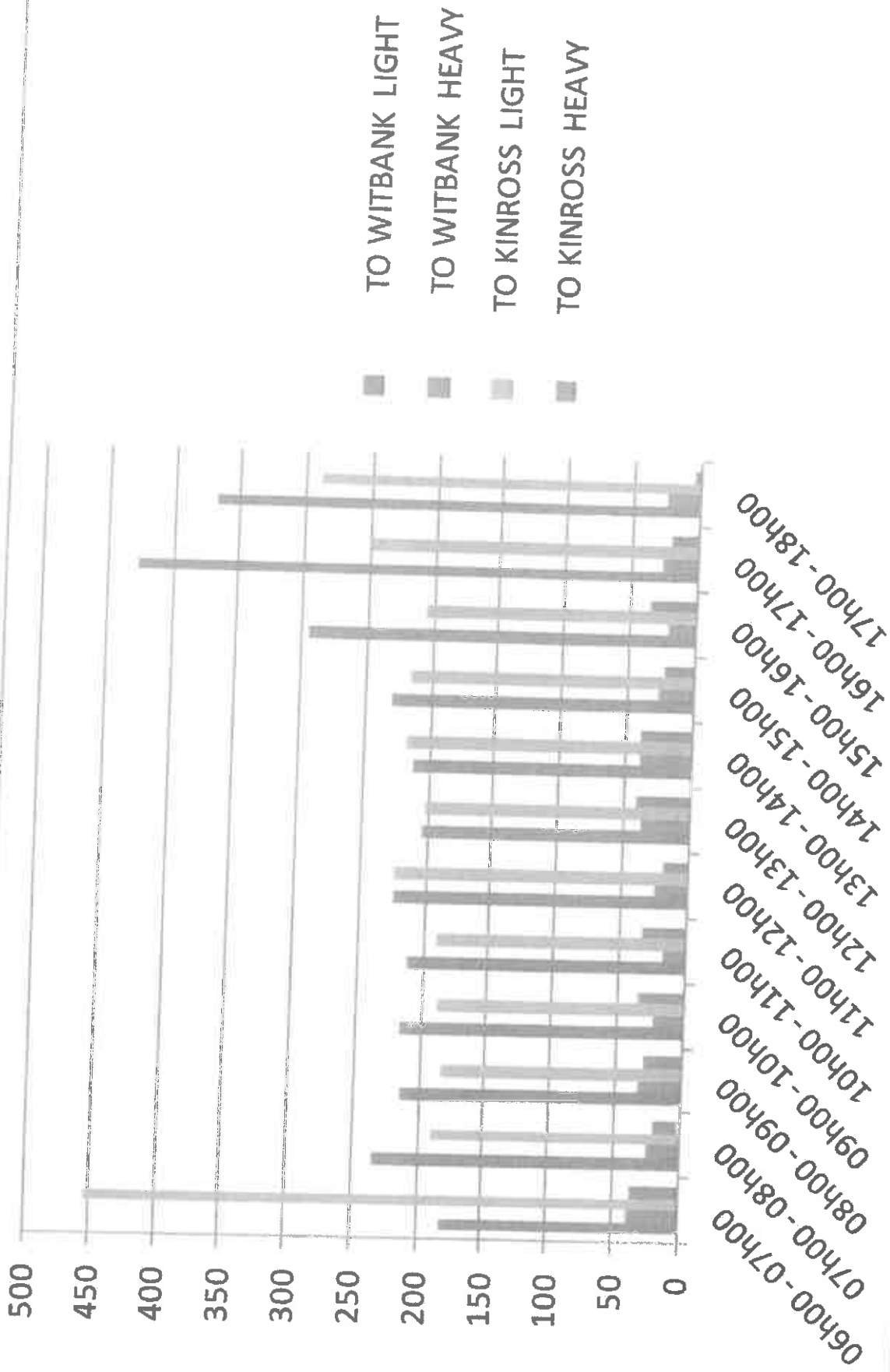
30 OCTOBER 2013 (WEDNESDAY)

ALL VEHICLES

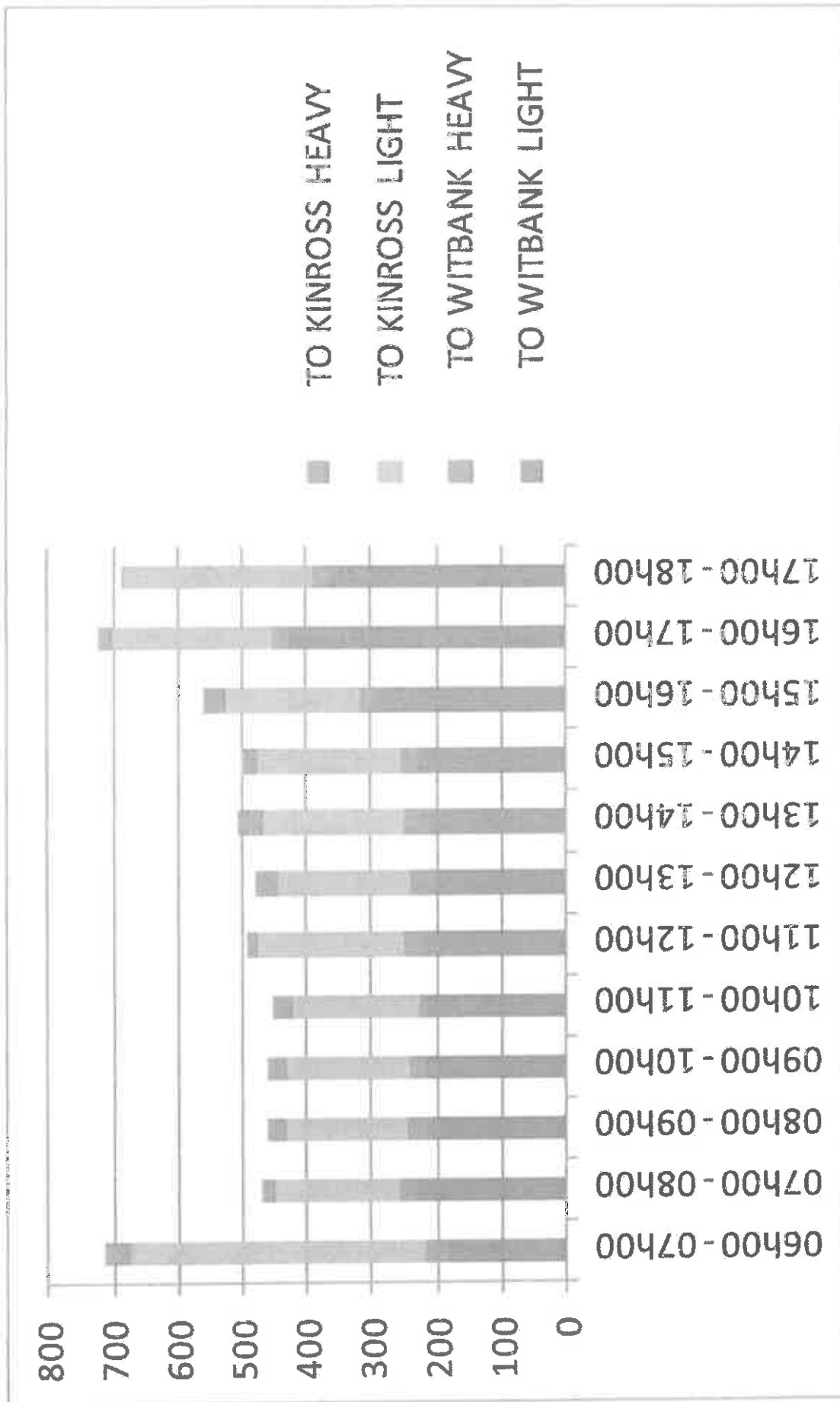
DIRECTION	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
06h00 - 07h00	182	38	455	37	712
07h00 - 08h00	234	25	191	20	470
08h00 - 09h00	215	33	184	28	460
09h00 - 10h00	217	23	189	35	464
10h00 - 11h00	213	17	191	32	453
11h00 - 12h00	225	25	224	18	492
12h00 - 13h00	204	36	202	40	482
13h00 - 14h00	212	38	218	38	506
14h00 - 15h00	230	27	217	23	497
15h00 - 16h00	296	21	207	35	559
16h00 - 17h00	427	26	249	20	722
17h00 - 18h00	368	24	290	4	686
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,682	429	8,454

24 HOUR COUNT = 12 HOUR COUNT x 1.3

ANNEXUR "E"1



ANNEXURE "E"2



ANNEXURE "E"3

ANNEXURE "F"
VOLUMETRIC ANALYSIS OF
PROPOSED CALTEX KRIEL SERVICE STATION

ANNEXURE "F"

EXPECTED FUEL SALES FOR PROPOSED CALTEX KRIEL SERVICE STATION

The amount of litres pumped by a Service Station is determined mainly by the following factors:

- ⇒ **Traffic passing the Service Station.** Between 2% and 5% of the of the passing traffic stream will fill up at the Service Station (Guidelines for access to filling stations)
- ⇒ **Convenience of the motorist to put petrol in at the Service Station.** This is influenced by ease of access, travelling speed of traffic at the service station site and visibility of service station.
- ⇒ **The availability of ancillary facilities at the Service Station** such as Convenience Store, car wash, Auto-bank and others increases the use of the Service Station
- ⇒ **Other Service Stations.** The number of Service Stations in area, the ancillary facilities available and the level of service at the other Service Stations in the area.
- ⇒ **Locality of Service Station.** Is the Service Station located in a residential area, near or close to a shopping centre, before or after a traffic controlled intersection or 4-way stop.
- ⇒ **Security at the Service station.** The perceived danger or safety at the Service Station by the motorist. If the Service Station is not well illuminated the motorist will tend not to visit the Service Station.
- ⇒ **The price of the diesel sold.** The price of diesel is not regulated or controlled by Government. The Caltex Kriel Service Station owner can ask any price for the diesel to be sold.

In this document we will evaluate the proposed Service Station in terms of the above attributes. The level of service at the proposed Service Station is very important and play a role in the selection of the Service Station, especially by regular customers. The level of service is determined by the potential operator of the Service Station and that cannot be evaluated at this stage.

- ⇒ **The availability of ancillary facilities at the Service Station;**
The following facilities and services will be available at the Caltex Kriel Service Station:
 - Fuel Sales
 - 93 Octane Unleaded Petrol
 - 95 Octane Unleaded Petrol
 - 50 ppm Diesel.
 - 500 ppm Diesel
 - Lubricant sales
 - FreshStop
 - Grocery Section – all daily essentials
 - Fresh Produce Section stocked by Fruit & Veg City
 - Pitstop Café – Take-away dishes and Breakfast Buns
 - Prepaid Phone Cards
 - Nedbank ATM - Auto-bank
 - Public telephones
 - Clean restroom/toilette facilities, and
 - Ample parking.
- ⇒ **Locality of Service Station;**
The Proposed Service Station site is located on Stand 1685 Extension 5, Groen Avenue, Kriel. The Proposed Site is located on the R547 road.

- ⇒ **Speed Limit;**
The speed limit on the road at the proposed Service Station site is 60 kilometres per hour.
- ⇒ **Convenience of the Service Station;**
The Proposed Service Station will have full access from the R547 road.
- ⇒ **Security at the Service station;**
The Service Station will be well illuminated and there will also be full time security guards on the site.
- ⇒ **Other Service Stations;**
There are no service stations on the R547 road from Witbank to Kinross. The nearest Service Stations are in Kriel. None of these Service Stations will have much influence on the Proposed Service Station. (Refer Annexure "B" AND "C")

- | | | | |
|----|-----------------------------|---------|---------------------|
| 1. | MEGA MOTORS | CALTEX | WALTER STREET |
| 2. | PIT STOP CONVENIENCE CENTRE | ENGEN | BRONWYN STREET |
| 3. | MAVEK BELEGGINGS | EXELC/O | ARCADE STR & MERLIN |

1. LOCAL MARKET

The local market for the proposed Caltex Kriel Service Station would be the residents and business in Kriel, employees (workers) at the Kriel Power Station and the farmers in the district.

There are 4,304 households in Kriel (Ga-Nala) (Refer Annexure "I")

2. TRANSIENT TRADE

Finland Consultants did a comprehensive and detailed traffic count on the R547 road opposite the proposed Site on 30 October 2013 (Wednesday)

DIRECTION TRAFFIC FLOW	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
06h00 - 07h00	182	38	455	37	712
07h00 - 08h00	234	25	191	20	470
08h00 - 09h00	215	33	184	28	460
09h00 - 10h00	217	23	189	35	464
10h00 - 11h00	213	17	191	32	453
11h00 - 12h00	225	25	224	18	492
12h00 - 13h00	204	36	202	40	482
13h00 - 14h00	212	38	218	38	506
14h00 - 15h00	230	27	217	23	497
15h00 - 16h00	296	21	207	35	559
16h00 - 17h00	427	26	249	20	722
17h00 - 18h00	368	24	290	4	686
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,662	429	8,454

24 HOUR COUNT = 12 HOUR COUNT x 1.3

3. CALCULATIONS OF PETROL VOLUMES – YEAR 1

3.1. LOCAL MARKET

The local market for the proposed Caltex Kriel Service Station was excluded from the calculations.

3.2. TRANSIENT TRADE LIGHT VEHICLES

(Formula : Light vehicles x turn in ratio (support) x average fill x days
= litres per month)

DIRECTION	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
VEHICLE TYPE					
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,662	429	8,454
% USE PETROL	90%	0%	90%	0%	
VEHICLES USE PETROL	3,537	0	3,296		6,833
% SUPPORT	5.0%	0%	4%	0.0%	
SUPPORT - VEHICLES	176.8	0.0	131.8	0.0	308.7
LITRES PER FILL	28	0	28		
LITRES / DAY	4,952	0	3,691	0	8,643
LITRES / MONTH	148,550	0	110,742	0	259,292

TOTAL PETROL LITRES PER MONTH = 259,292 LITRES

According to "Guidelines for Access to Filling Stations of 1993" between 2% and 5% of the passing traffic stream will fill up at Filling Stations.

The southbound traffic (Witbank to Kinross) (Positive Traffic Flow) will have a bigger turn in ratio than the northbound traffic (Negative Traffic Flow)

The southbound traffic a turn in ratio (Support) of 5% was used for light vehicles

The northbound traffic (Kinross to Witbank) (Negative Traffic Flow) a turn in ratio (Support) of 4% was used for light vehicles

It is important to note that approximately 90% of light vehicles use petrol.

The visibility of the proposed Service Station site for traffic travelling in both directions on the R547 road is good (Refer Annexure "B"3 and "B"4)

The speed limit on the Road, at the proposed site, is 60 kilometres per hour.

The Proposed Service Station will have full access roads from the R547 Road

4. CALCULATIONS OF DIESEL VOLUMES – YEAR 1

4.1. LOCAL MARKET

The local market for the proposed Caltex Kriel Service Station was excluded from the calculations.

4.2. TRANSIENT TRADE DIESEL

(Formula : Vehicles x turn in ratio (support) x average fill x days
= litres per month)

DIRECTION	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
12 HOUR TOTAL	3,023	333	2,817	330	6,503
24 HOUR TOTAL	3,930	433	3,662	429	8,454
% USE DIESEL	10%	100%	10%	100%	
VEHICLES USE DIESEL	393	433	366	429	
% SUPPORT	5.0%	2.0%	4.0%	1.0%	
SUPPORT - VEHICLES	19.65	8.66	14.65	4.29	
LITRES PER FILL	28	150	28	150	
LITRES / DAY	550	1,299	410	644	2,903
LITRES / MONTH	16,506	38,961	12,305	19,305	87,076

TOTAL DIESEL LITRES PER MONTH = 87,076 LITRES

The southbound traffic (Witbank to Kinross) (Positive Traffic Flow) will have a bigger turn in ratio than the northbound traffic (Negative Traffic Flow)

The southbound traffic a turn in ratio (Support) of 2% was used for heavy vehicles

The northbound traffic (Kinross to Witbank) (Negative Traffic Flow) a turn in ratio (Support) of 1% was used for heavy vehicles

It is important to note that approximately 10% of light vehicles use diesel.

The visibility of the proposed Service Station site for traffic travelling in both directions on the R547 road is good (Refer Annexure "B"3 and "B"4)

The speed limit on the Road, at the proposed site, is 60 kilometres per hour.

The Proposed Service Station will have full access roads from the R547 Road

5. TOTAL FUEL SALES PER MONTH – YEAR 1

ESTIMATED LITRES PER MONTH	TO WITBANK		TO KINROSS		TOTAL
	LIGHT	HEAVY	LIGHT	HEAVY	
TOTAL PETROL LITRES / MONTH	148,550	0	110,742	0	259,292
DIESEL TRANSIENT TRADE	16,506	38,961	12,305	19,305	87,076
TOTAL PETROL + DIESEL / MONTH	165,056	38,961	123,047	19,305	346,368

TOTAL FUEL LITRES PER MONTH = PETROL + DIESEL:
= 259,292 + 87,076
= 346,368 LITRES

6. PROJECTED FUEL SALES FOR 10 YEARS

FUEL SALES PER MONTH	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / MONTH	259,292	267,071	275,083	283,336	291,835	300,590	309,608	318,896	328,463	338,317
TOTAL DIESEL LITRES / MONTH	97,076	99,688	92,379	95,150	98,005	100,945	103,973	107,092	110,305	113,614
TOTAL PETROL + DIESEL / MONTH	346,368	356,759	367,462	378,486	389,840	401,535	413,582	425,989	438,769	451,932
FUEL SALES PER YEAR	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / YEAR	3,111,504	3,204,849	3,300,995	3,400,024	3,502,025	3,607,086	3,715,298	3,826,757	3,941,560	4,059,807
TOTAL DIESEL LITRES / YEAR	1,044,912	1,076,259	1,108,547	1,141,804	1,176,058	1,211,339	1,247,680	1,285,110	1,323,663	1,363,373
TOTAL PETROL + DIESEL / YEAR	4,156,416	4,281,108	4,409,542	4,541,828	4,678,083	4,818,425	4,962,978	5,111,867	5,265,223	5,423,180

An annual growth rate of 3% was used in the calculation of the sales volume projections year 1 to year 10.

ANNEXURE "G"
FINANCIAL BUDGETS AND PROJECTIONS

NOTES TO FINANCIAL STATEMENTS
YEAR 1

- G.1. BUDGETED INCOME STATEMENT**
- G.2. BUDGETED EXPENSE STATEMENT**
- G.3. PROJECTED CASH FLOW STATEMENT**
- G.4. PROJECTED BALANCE STATEMENT**

YEAR 2 AND 3

- G.5. BUDGETED INCOME STATEMENTS**
- G.6. BUDGETED EXPENSE STATEMENTS**
- G.7. PROJECTED CASH FLOW STATEMENTS**
- G.8. PROJECTED BALANCE STATEMENTS**

CALTEX KRIEL SERVICE STATION

NOTES TO THE FINANCIAL STATEMENTS

INCOME STATEMENTS

INTRODUCTION

For the purpose of this document the financial statements of the Property Owning Company and the Operating Company, were incorporated into one set of financial statements.

PROJECTED FUEL SALES (Refer Annexure "F")

FUEL SALES PER MONTH	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / MONTH	259,292	267,071	275,083	283,336	291,836	300,590	309,608	318,896	328,483	338,317
TOTAL DIESEL LITRES / MONTH	87,076	89,688	92,379	95,150	98,005	100,945	103,973	107,092	110,305	113,614
TOTAL PETROL + DIESEL / MONTH	346,368	356,759	367,462	378,486	389,840	401,535	413,582	425,989	438,789	451,932
FUEL SALES PER YEAR	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
TOTAL PETROL SALES / YEAR	3,111,504	3,204,849	3,300,996	3,400,024	3,502,026	3,607,088	3,715,298	3,826,757	3,941,560	4,059,807
TOTAL DIESEL LITRES / YEAR	1,044,912	1,076,269	1,103,547	1,141,804	1,178,058	1,211,339	1,247,880	1,285,110	1,323,883	1,363,373
TOTAL PETROL + DIESEL / YEAR	4,156,416	4,281,108	4,404,542	4,541,828	4,678,083	4,818,426	4,962,978	5,111,867	5,265,223	5,423,180

ALL FIGURES EXCLUDE V A T.

PETROL SALES

The gross profit margin is currently R1.041per litre. The Service Station will only start operating in ± one year's time. The GP (Gross profit) margin is increased by 8% per annum for YEAR 1. The gross profit margin during YEAR 1 will be R1.124 per litre. The GP margin of petrol is increased by 8% per annum for the remaining years.

An annual growth rate of 3% was used in the calculation of the petrol sales volume from year 1 to year 10 projections.

DIESEL SALES

The price of diesel is not controlled and the proposed gross profit margin on diesel is 80.0 cents per litre during the first year. The GP margin of diesel is increased by 8% per annum for the remaining years.

An annual growth rate of 3% was used in the calculation of the diesel sales volume from year 1 to year 10 projections.

LUBRICANT SALES

For every 300 litres of fuel sold 1 litre of oil will be sold. The gross profit margin on oil is 33%

FRESH STOP SALES (CONVENIENCE STORE)

The Convenience Store will generate at least R1-50 for every litre of fuel sold. The gross profit margin on Convenience Store sales is 28%.

PREPAID CARD SALES

The prepaid card sales will generate at least 25 cents for every litre of fuel sold. The gross profit margin on Prepaid Card sales is 9%.

PITSTOP CAFÉ (BAKERY / FAST FOOD) SALES

The Pitstop Café (bakery / fast food) will generate at least 35 cents for every litre of fuel sold. The gross profit margin on Pitstop Café sales is 53%.

BUDGETED EXPENSE STATEMENTS**ALL FIGURES EXCLUDE V A T.**

Expenses escalated at 8% per annum except for expenses that are pre-determined.

ACCOUNTING AND AUDIT FEES

The accounting fees payable by the Service Station is R3,000 per month, during the first year

ADMINISTRATIVE ASSISTANTS

Provision has been made for two administrative assistants

ADVERTISING AND PROMOTION

Advertising and promotion expenses payable, average per month for the first year, will be R6,000

BANK AND CREDIT CARD CHARGES

The bank and credit card charges, during the first year will be R14,904 average per month

CASH IN TRANSIT

Provision has been made for cash in transit to the amount of R9,000 per month, during the first year

CLEANING AND CONSUMABLE EXPENSES

Provision has been made for cleaning expenses payable by the Service Station to the amount of R6,500 per month, during the first year

COMPENSATION COMMISSIONER

Compensation commissioner insurance rate of 0.75% are based on wages and salaries

ENTERTAINMENT

Provision has been made for entertainment to the amount of R1,500 per month, during the first year

INSURANCE

The insurance for the Service Station will be R12,000 per month, during the first year

MAINTENANCE, REPAIRS AND GARDEN

The maintenance, repairs and garden expenses, during the first year will be R4,000 average per month.

MANAGEMENT FEES

The management fees will be R20,000 per month, during the first year

MIBCO (MOTOR INDUSTRY BARGAINING COUNCIL)

Fees payable to MIBCO are as follow:

Council Levy	Employer R2.35 per week	Employee Contribution R2.35 per week
Provident Fund	Employer 8% of wages	Employee 7.5% of wages

The Council levy and provident fund is compulsory. Medical aid is optional

MOTOR VEHICLE EXPENSES

The office and motor vehicle expenses, during the first year will be R2,200 average per month,

OFFICE AND COMPUTER EXPENSES

The office and computer expenses, during the first year will be R3,500 average per month,

PEST CONTROL

Provision has been made for pest control expenses to the amount of R275 per month, during the first year

RATES AND TAXES

Provision has been made for rates and taxes to the amount of R5,500 per month, during the first year

SECURITY

Provision has been made for security to the amount of R12,000 per month, during the first year

SHRINKAGE

Provision has been made for shrinkage at 2% of shop sales

SKILLS DEVELOPMENT LEVY

Skills development levy at the rate of 1% of wages is payable by the employer

STAFF TRAINING

Provision has been made for staff training to the amount of R520 per month, during the first year

TELEPHONE, FAXES AND INTERNET

Provision has been made for telephone, faxes and internet to the amount of R4,500 per month, during the first year

UIF

Unemployment fund at the rate of 1% of wages, payable by the employer

UNIFORMS / PROTECTIVE CLOTHING

The uniform / protective clothing expenses, during the first year will be R4,000 average per month

WAGES CASHIERS

Provision has been made for seven cashiers.

WAGES PITSTOP (BAKERY AND FAST FOODS)

Provision has been made for four attendants at the Pitstop (bakery and fast food) department.

WAGES MERCHANDISERS

Provision has been made for five merchandisers

WAGES FORECOURT ATTENDANTS

A petrol attendant should pump between 25,000 and 30,000 litres per month.

WATER AND ELECTRICITY

Provision has been made for Water and electricity to the amount of R14,000 per month, during the first year

INTEREST ON BANK LOAN

The interest portion of the instalment payable to the Bank is shown in the expense statement. The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

PROJECTED CASH FLOWS**CASH INFLOW****OPERATING PROFIT**

The net operating profit (gross operating profit - operating expenses) is a net cash inflow in the cash flow statements

CORRECTIONS PREPAID PETROL ACCOUNTS

Provision has been made for sales on credit and payments (Prepaid fuel accounts).

DEBTORS DEPOSITS (Pre-paid fuel accounts)

Provision has been made for deposits (prepaid fuel accounts) payments.

OWNERS LOAN (CONTRIBUTION)

Owners loan (contribution) will be R500,000

FINANCIAL INSTITUTION LOAN

The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

CASH OUTFLOW**PROPERTY COST**

The property cost is R130,000 (Refer Annexure "D")

**CONSTRUCTION AND DEVELOPMENT COST OF CALTEX KRIEL SERVICE STATION
(Refer Annexure "H")**

The estimated construction & development cost of the proposed Service Station will be R7,392,500

CASH ON HAND

Provision has been made for "cash on hand" to the amount of R6,000

COST OF INVENTORY

The inventory is:

FUEL	R	800,000
FRESH STOP	R	200,000
PITSTOP CAFÉ	R	100,000

INVENTORY	R	1,100,000
------------------	----------	------------------

CAPITAL REQUIRED TO DEVELOP AND OPERATE CALTEX KRIEL SERVICE STATION
(Refer Annexure "G")

PROPERTY COST		130,000
CONSTRUCTION & DEVELOPMENT COST		7,392,500
	INVENTORY	1,100,000
		1,100,000
FUEL		800,000
FRESH STOP		200,000
PITSTOP CAFÉ		100,000
CASH ON HAND		6,000
TOTAL CAPITAL REQUIRED		8,628,500

CAPITAL PAYMENT ON LOAN

The capital portion of the instalment payable to the Bank is shown in the cash flow statement. The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

TRANSFER TO RETAINED INCOME

All surplus capital is transferred to RETAINED INCOME in the Balance Statements

PROJECTED BALANCE STATEMENTS

EMPLOYMENT OF CAPITAL

PROPERTY COST

The property cost is R130,000 (Refer Annexure "D")

CONSTRUCTION AND DEVELOPMENT COST OF CALTEX KRIEL SERVICE STATION
(Refer Annexure "H")

The estimated construction & development cost of the proposed Service Station will be R7,392,500

DEBTORS DEPOSITS (Pre-paid petrol accounts)

Provision has been made for deposits (Prepaid petrol accounts).

COST OF INVENTORY

FUEL	800,000
FRESH STOP	200,000
PITSTOP CAFÉ	100,000

INVENTORY	1,100,000
------------------	------------------

The levels of stock of Fuel, Fresh Stop and Pitstop Café (bakery & fast foods) are kept on the same amount for the purpose of the financial statements, although it is recognised that higher stock levels will have to be kept due to price increases.

BANK BALANCE (CURRENT ACCOUNT)

A credit balance in the current account will be shown as (-)

CAPITAL EMPLOYED

OWNERS LOAN (CONTRIBUTION)

Owners loan (contribution) will be R500,000

BANK LOAN

The bank loan is R8,000,000 at an interest rate of 9% repayable over a period of 10 years (Refer Annexure "G")

RETAINED INCOME

All surplus capital is shown as "Retained Income" in the Balance Statements and can be utilised to pay shareholders loans or increased stock levels or pay dividends to shareholders

Analysis	
Amount financed	8,000,000
Annual interest (e.g., 8.25)	9.00
Duration of loan (In years)	10
Start date of loan	
Monthly payments	101,341
Total number of payments	120
Yearly principal + interest	1,216,087
Principal amount	8,000,000
Finance charges	4,160,874
Total cost	12,160,874

CALTEX KRIEL SERVICE STATION
 STAND 1685 EXTENSION 5,
 GROEN AVENUE KRIEL

Pmt No.	Payment Date	Beginning Balance	Interest	Principal	Balance	Accumulative Interest	Accumulative Principal
1		8,000,000	60,000	41,341	7,958,659	60,000	41,341
2		7,958,659	59,690	41,651	7,917,009	119,690	82,991
3		7,917,009	59,378	41,963	7,875,046	179,068	124,954
4		7,875,046	59,063	42,278	7,832,768	238,130	167,232
5		7,832,768	58,746	42,595	7,790,173	296,876	209,827
6		7,790,173	58,426	42,914	7,747,259	355,302	252,741
7		7,747,259	58,104	43,236	7,704,023	413,407	295,977
8		7,704,023	57,780	43,560	7,660,462	471,187	339,538
9		7,660,462	57,453	43,887	7,616,575	528,640	383,425
10		7,616,575	57,124	44,216	7,572,359	585,765	427,641
11		7,572,359	56,793	44,548	7,527,811	642,557	472,189
12		7,527,811	56,459	44,832	7,482,929	699,016	517,071
13		7,482,929	56,122	45,219	7,437,710	755,138	562,290
14		7,437,710	55,783	45,558	7,392,152	810,921	607,848
15		7,392,152	55,441	45,899	7,346,253	866,362	653,747
16		7,346,253	55,097	46,244	7,300,009	921,459	699,991
17		7,300,009	54,750	46,591	7,253,418	976,209	746,582
18		7,253,418	54,401	46,940	7,206,478	1,030,610	793,522
19		7,206,478	54,049	47,292	7,159,186	1,084,658	840,814
20		7,159,186	53,694	47,647	7,111,540	1,138,352	888,460
21		7,111,540	53,337	48,004	7,063,536	1,191,689	936,464
22		7,063,536	52,977	48,364	7,015,172	1,244,665	984,828
23		7,015,172	52,614	48,727	6,966,445	1,297,279	1,033,555
24		6,966,445	52,248	49,092	6,917,352	1,349,527	1,082,648
25		6,917,352	51,880	49,460	6,867,892	1,401,407	1,132,108
26		6,867,892	51,509	49,831	6,818,061	1,452,917	1,181,939
27		6,818,061	51,135	50,205	6,767,855	1,504,052	1,232,145
28		6,767,855	50,759	50,582	6,717,274	1,554,811	1,282,726
29		6,717,274	50,380	50,961	6,666,313	1,605,191	1,333,687
30		6,666,313	49,997	51,343	6,614,969	1,655,188	1,385,031
31		6,614,969	49,612	51,728	6,563,241	1,704,800	1,436,759

699,016
 517,071

650,511
 565,576

32		6,563,241	49,224	52,116	6,511,125	1,754,024	1,488,875
33		6,511,125	48,833	52,507	6,458,617	1,802,858	1,541,383
34		6,458,617	48,440	52,901	6,405,716	1,851,298	1,594,284
35		6,405,716	48,043	53,298	6,352,419	1,899,340	1,647,581
36		6,352,419	47,643	53,697	6,298,721	1,946,984	1,701,279
37		6,298,721	47,240	54,100	6,244,621	1,994,224	1,755,379
38		6,244,621	46,835	54,506	6,190,115	2,041,059	1,809,885
39		6,190,115	46,426	54,915	6,135,200	2,087,484	1,864,800
40		6,135,200	46,014	55,327	6,079,874	2,133,498	1,920,126
41		6,079,874	45,599	55,742	6,024,132	2,179,098	1,975,868
42		6,024,132	45,181	56,160	5,967,973	2,224,279	2,032,027
43		5,967,973	44,760	56,581	5,911,392	2,269,038	2,088,608
44		5,911,392	44,335	57,005	5,854,386	2,313,374	2,145,614
45		5,854,386	43,908	57,433	5,796,954	2,357,282	2,203,046
46		5,796,954	43,477	57,863	5,739,090	2,400,759	2,260,910
47		5,739,090	43,043	58,297	5,680,793	2,443,802	2,319,207
48		5,680,793	42,606	58,735	5,622,058	2,486,408	2,377,942
49		5,622,058	42,165	59,175	5,562,883	2,528,573	2,437,117
50		5,562,883	41,722	59,619	5,503,264	2,570,295	2,496,736
51		5,503,264	41,274	60,066	5,443,198	2,611,569	2,556,802
52		5,443,198	40,824	60,517	5,382,681	2,652,393	2,617,319
53		5,382,681	40,370	60,971	5,321,711	2,692,764	2,678,289
54		5,321,711	39,913	61,428	5,260,283	2,732,676	2,739,717
55		5,260,283	39,452	61,888	5,198,394	2,772,128	2,801,606
56		5,198,394	38,988	62,353	5,136,042	2,811,116	2,863,958
57		5,136,042	38,520	62,820	5,073,221	2,849,637	2,926,779
58		5,073,221	38,049	63,291	5,009,930	2,887,686	2,990,070
59		5,009,930	37,574	63,766	4,946,164	2,925,260	3,053,836
60		4,946,164	37,096	64,244	4,881,919	2,962,357	3,118,081
61		4,881,919	36,614	64,726	4,817,193	2,998,971	3,182,807
62		4,817,193	36,129	65,212	4,751,982	3,035,100	3,248,018
63		4,751,982	35,640	65,701	4,686,281	3,070,740	3,313,719
64		4,686,281	35,147	66,194	4,620,087	3,105,887	3,379,913
65		4,620,087	34,651	66,690	4,553,397	3,140,538	3,446,603
66		4,553,397	34,150	67,190	4,486,207	3,174,688	3,513,793
67		4,486,207	33,647	67,694	4,418,513	3,208,335	3,581,487
68		4,418,513	33,139	68,202	4,350,311	3,241,473	3,649,689
69		4,350,311	32,627	68,713	4,281,598	3,274,101	3,718,402
70		4,281,598	32,112	69,229	4,212,369	3,306,213	3,787,631
71		4,212,369	31,593	69,748	4,142,622	3,337,806	3,857,378
72		4,142,622	31,070	70,271	4,072,351	3,368,875	3,927,649
73		4,072,351	30,543	70,798	4,001,553	3,399,418	3,998,447
74		4,001,553	30,012	71,329	3,930,224	3,429,430	4,069,776
75		3,930,224	29,477	71,864	3,858,360	3,458,906	4,141,640
76		3,858,360	28,938	72,403	3,785,957	3,487,844	4,214,043
77		3,785,957	28,395	72,946	3,713,011	3,516,239	4,286,989
78		3,713,011	27,848	73,493	3,639,518	3,544,086	4,360,482
79		3,639,518	27,296	74,044	3,565,474	3,571,383	4,434,526

597,456
618,631

539,424
676,663

475,949
740,139

406,519
809,569

80		3,565,474	26,741	74,600	3,490,874	3,598,124	4,509,126
81		3,490,874	26,182	75,159	3,415,715	3,624,305	4,584,285
82		3,415,715	25,618	75,723	3,339,992	3,649,923	4,660,008
83		3,339,992	25,050	76,291	3,263,702	3,674,973	4,736,298
84		3,263,702	24,478	76,863	3,186,839	3,699,451	4,813,161
85		3,186,839	23,901	77,439	3,109,399	3,723,352	4,890,601
86		3,109,399	23,320	78,020	3,031,379	3,746,672	4,968,621
87		3,031,379	22,735	78,605	2,952,774	3,769,408	5,047,226
88		2,952,774	22,146	79,195	2,873,579	3,791,554	5,126,421
89		2,873,579	21,552	79,789	2,793,790	3,813,105	5,206,210
90		2,793,790	20,953	80,387	2,713,403	3,834,059	5,286,597
91		2,713,403	20,351	80,990	2,632,413	3,854,409	5,367,587
92		2,632,413	19,743	81,598	2,550,816	3,874,153	5,449,184
93		2,550,816	19,131	82,210	2,468,606	3,893,284	5,531,394
94		2,468,606	18,515	82,826	2,385,780	3,911,798	5,614,220
95		2,385,780	17,893	83,447	2,302,333	3,929,692	5,697,667
96		2,302,333	17,267	84,073	2,218,260	3,946,959	5,781,740
97		2,218,260	16,637	84,704	2,133,556	3,963,596	5,866,444
98		2,133,556	16,002	85,339	2,048,217	3,979,598	5,951,783
99		2,048,217	15,362	85,979	1,962,238	3,994,959	6,037,762
100		1,962,238	14,717	86,624	1,875,614	4,009,676	6,124,386
101		1,875,614	14,067	87,274	1,788,341	4,023,743	6,211,659
102		1,788,341	13,413	87,928	1,700,413	4,037,156	6,299,587
103		1,700,413	12,753	88,588	1,611,825	4,049,909	6,388,175
104		1,611,825	12,089	89,252	1,522,573	4,061,998	6,477,427
105		1,522,573	11,419	89,921	1,432,652	4,073,417	6,567,348
106		1,432,652	10,745	90,596	1,342,056	4,084,162	6,657,944
107		1,342,056	10,065	91,275	1,250,781	4,094,227	6,749,219
108		1,250,781	9,381	91,960	1,158,821	4,103,608	6,841,179
109		1,158,821	8,691	92,649	1,066,172	4,112,299	6,933,828
110		1,066,172	7,996	93,344	972,827	4,120,295	7,027,173
111		972,827	7,296	94,044	878,783	4,127,592	7,121,217
112		878,783	6,591	94,750	784,033	4,134,183	7,215,967
113		784,033	5,880	95,460	688,573	4,140,063	7,311,427
114		688,573	5,164	96,176	592,396	4,145,227	7,407,604
115		592,396	4,443	96,898	495,499	4,149,670	7,504,501
116		495,499	3,716	97,624	397,874	4,153,386	7,602,126
117		397,874	2,984	98,357	299,518	4,156,370	7,700,482
118		299,518	2,246	99,094	200,424	4,158,617	7,799,576
119		200,424	1,503	99,837	100,586	4,160,120	7,899,414
120		100,586	754	100,586	0	4,160,874	8,000,000

330,575

885,512

247,508

988,579

156,649

1,059,438

57,266

1,158,821

CALTEX KRIEL SERVICE STATION BUDGETED INCOME STATEMENT YEAR 1

INCOME / MONTH / YEAR	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12	YEAR 1	AVGMTH
PETROL SALES LITRES	269,292	269,292	269,292	269,292	269,292	269,292	269,292	269,292	269,292	269,292	269,292	269,292	3,111,604	269,292
PETROL GROSS PROFIT PER LITRE	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124	1.124
PETROL GROSS PROFIT	291,444	291,444	291,444	291,444	291,444	291,444	291,444	291,444	291,444	291,444	291,444	291,444	3,487,330	291,444
DIESEL SALES LITRES	87,076	87,076	87,076	87,076	87,076	87,076	87,076	87,076	87,076	87,076	87,076	87,076	1,044,912	87,076
DIESEL GROSS PROFIT PER LITRE	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800	0.800
DIESEL GROSS PROFIT	69,661	69,661	69,661	69,661	69,661	69,661	69,661	69,661	69,661	69,661	69,661	69,661	835,930	69,661
LUBRICANT SALES RAND	32,328	32,328	32,328	32,328	32,328	32,328	32,328	32,328	32,328	32,328	32,328	32,328	387,932	32,328
LUBRICANT GROSS PROFIT %	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%	33%
LUBRICANT GROSS PROFIT	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	10,668	128,018	10,668
FRESH STOP SALES - RAND	519,552	519,552	519,552	519,552	519,552	519,552	519,552	519,552	519,552	519,552	519,552	519,552	6,234,624	519,552
FRESH STOP GROSS PROFIT %	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%	28%
FRESH STOP GROSS PROFIT	145,475	145,475	145,475	145,475	145,475	145,475	145,475	145,475	145,475	145,475	145,475	145,475	1,745,686	145,475
PREPAID CARD SALES - RAND	138,547	138,547	138,547	138,547	138,547	138,547	138,547	138,547	138,547	138,547	138,547	138,547	1,662,568	138,547
PREPAID CARD SALES GROSS PROFIT %	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%	9%
PREPAID CARD SALES GROSS PROFIT	12,469	12,469	12,469	12,469	12,469	12,469	12,469	12,469	12,469	12,469	12,469	12,469	149,631	12,469
PITSTOP CAFE (BAKERY / FAST FOOD) SALES	121,229	121,229	121,229	121,229	121,229	121,229	121,229	121,229	121,229	121,229	121,229	121,229	1,454,746	121,229
PITSTOP CAFE SALES GROSS PROFIT %	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%	53%
PITSTOP CAFE SALES GROSS PROFIT	64,251	64,251	64,251	64,251	64,251	64,251	64,251	64,251	64,251	64,251	64,251	64,251	771,016	64,251

GROSS OPERATING PROFIT	693,968	693,968	693,968	693,968	693,968	693,968	693,968	693,968	693,968	693,968	693,968	693,968	7,177,619	693,968
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ANNEXURE "G"1

CALTEX KRIEL SERVICE STATION BUDGETED EXPENSE STATEMENT YEAR 1

EXPENSES / YEAR / MONTH	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12	YEAR 1	AVG/MTH
ACCOUNTING & AUDIT FEES	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	3,000	36,000	3,000
ADMINISTRATIVE ASSISTANTS	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	240,000	20,000
ADVERTISING AND PROMOTION	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	72,000	6,000
BANK & CREDIT CARD CHARGES	14,904	14,904	14,904	14,904	14,904	14,904	14,904	14,904	14,904	14,904	14,904	14,904	178,851	14,904
CASH IN TRANSIT	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	9,000	108,000	9,000
CLEANING & CONSUMABLES	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	78,000	6,500
COMPENSATION COMMISSIONER	896	896	896	896	896	896	896	896	896	896	896	896	10,748	896
ENTERTAINMENT	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	1,500	18,000	1,500
INSURANCE	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	144,000	12,000
MAINTENANCE, REPAIRS & GARDEN	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000	4,000
MANAGEMENT FEES	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	240,000	20,000
MIBCO	12,008	12,008	12,008	12,008	12,008	12,008	12,008	12,008	12,008	12,008	12,008	12,008	144,092	12,008
MOTOR VEHICLE EXPENSES	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	2,200	26,400	2,200
OFFICE, & COMPUTER EXPENSES	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	3,500	42,000	3,500
PEST CONTROL	275	275	275	275	275	275	275	275	275	275	275	275	3,300	275
RATES AND TAXES	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	6,500	66,000	5,500
SECURITY	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	144,000	12,000
SHRINKAGE 2%	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	10,391	124,892	10,391
SKILLS & DEVELOPMENT LEVY 1%	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	14,330	1,194
STAFF TRAINING	520	520	520	520	520	520	520	520	520	520	520	520	6,240	520
TELEPHONE, FAXES & INTERNET	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	4,500	54,000	4,500
U I F 1%	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	1,194	14,330	1,194
UNIFORMS / PROTECTIVE CLOTHING	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000	48,000	4,000
WAGES CASHIERS	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	28,000	336,000	28,000
WAGES PITSTOP (BAKERY / FAST FOOD)	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	16,000	192,000	16,000
WAGES MERCHANDISERS	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	20,000	240,000	20,000
WAGES PETROL ATTENDANTS	55,419	55,419	55,419	55,419	55,419	55,419	55,419	55,419	55,419	55,419	55,419	55,419	665,027	55,419
WATER & ELECTRICITY	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	14,000	168,000	14,000
INTEREST ON BANK LOAN	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	60,000	720,000	60,000
OPERATING EXPENSES	348,601	348,191	347,879	347,566	347,247	346,927	346,606	346,281	345,954	345,625	345,304	344,980	4,161,026	348,752
NET OPERATING PROFIT	246,467	246,777	246,089	246,404	246,721	247,041	247,363	247,687	248,014	248,343	248,674	249,008	2,866,592	247,216
CUMULATIVE OPERATING PROFIT	246,467	491,246	737,334	983,738	1,230,460	1,477,501	1,724,865	1,972,552	2,220,566	2,468,910	2,717,084	2,966,592		

CALTEX KRIEL SERVICE STATION PROJECTED CASHFLOW YEAR 1

CASHFLOW / MONTH / YEAR	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12	YEAR 1
CASH INFLOW	8,746,467	246,777	246,089	246,404	246,721	247,041	247,363	247,687	248,014	248,343	248,674	249,008	11,466,692
OPERATING PROFIT (LOSS)	246,467	246,777	246,089	246,404	246,721	247,041	247,363	247,687	248,014	248,343	248,674	249,008	2,966,692
CORRECTIONS													
CREDIT SALES (- OUTFLOW)	0	0	0	0	0	0	0	0	0	0	0	0	0
DEBTORS PAYMENTS													
DEBTORS DEPOSITS	0												0
OWNERS CONTRIBUTION	600,000												600,000
FINANCIAL INSTITUTION LOAN	8,000,000												8,000,000
CASH OUTFLOW	8,669,841	211,651	211,963	212,278	212,595	212,914	213,236	213,560	213,887	214,216	214,548	214,882	11,016,571
PROPERTY COST	130,000												130,000
CONSTRUCTION & DEVELOPMENT COST	7,392,500												7,392,500
COST OF INVENTORY	1,100,000												1,100,000
CASH ON HAND	6,000												6,000
CAPITAL PAYMENT ON BANK LOAN	41,341	41,651	41,963	42,278	42,595	42,914	43,236	43,560	43,887	44,216	44,548	44,882	517,071
TRANSFER TO RETAINED INCOME		170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	170,000	1,870,000
NET CASHFLOW (- NEG)	76,626	34,126	34,126	34,126	34,126	34,127	34,127	34,127	34,127	34,127	34,126	34,126	451,021
CUM. CASHFLOW (- NEG)	76,626	109,753	143,879	178,005	212,132	246,259	280,387	314,514	348,641	382,769	416,895	451,021	451,021

CALTEX KRIEL SERVICE STATION PROJECTED BALANCE STATEMENTS YEAR 1

BALANCE STATEMENT END OF PERIOD	MONTH 1	MONTH 2	MONTH 3	MONTH 4	MONTH 5	MONTH 6	MONTH 7	MONTH 8	MONTH 9	MONTH 10	MONTH 11	MONTH 12
PROPERTY COST	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000	130,000
CONSTRUCTION & DEVELOPMENT COST	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500	7,392,500
CURRENT ASSETS	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000	1,106,000
DEBTORS	0	0	0	0	0	0	0	0	0	0	0	0
FUEL ACCOUNTS	0	0	0	0	0	0	0	0	0	0	0	0
CASH ON HAND	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
PETTY CASH	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000
CASH	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000	6,000
INVENTORY	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000	1,100,000
FUEL	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000	800,000
FRESH STOP	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000	200,000
PITSTOP CAFE (BAKERY / FAST FOODS)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
CURRENT LIABILITIES (- ASSETS)	-75,626	-108,753	-143,879	-178,006	-212,132	-246,269	-280,387	-314,514	-348,641	-382,769	-416,896	-451,021
FUEL DEPOSITS (CREDITORS)	0	0	0	0	0	0	0	0	0	0	0	0
BANKBALANCE DT (- KT)	-75,626	-108,753	-143,879	-178,006	-212,132	-246,269	-280,387	-314,514	-348,641	-382,769	-416,896	-451,021
TOTAL CURRENT ASSETS (- LIABILITIES)	1,181,626	1,248,753	1,249,879	1,284,006	1,318,132	1,352,269	1,386,387	1,420,514	1,454,641	1,488,769	1,522,896	1,557,021
EMPLOYMENT OF CAPITAL	8,704,126	8,738,263	8,772,379	8,806,505	8,840,632	8,874,759	8,908,887	8,943,014	8,977,141	9,011,269	9,045,396	9,079,521
CAPITAL EMPLOYED	8,704,126	8,738,263	8,772,379	8,806,505	8,840,632	8,874,759	8,908,887	8,943,014	8,977,141	9,011,269	9,045,396	9,079,521
FINANCIAL INSTITUTION LOAN	7,968,669	7,917,008	7,875,045	7,832,787	7,790,472	7,747,268	7,704,022	7,660,462	7,616,576	7,572,369	7,527,811	7,482,929
OWNERS CONTRIBUTION	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000	500,000
PROFIT TO DATE	245,467	491,245	737,334	983,738	1,230,460	1,477,501	1,724,866	1,972,552	2,220,566	2,468,910	2,717,584	2,966,592
RETAINED INCOME (-)	0	-170,000	-340,000	-510,000	-680,000	-850,000	-1,020,000	-1,190,000	-1,360,000	-1,530,000	-1,700,000	-1,870,000

CALTEX KRIEL SERVICE STATION BUDGETED INCOME STATEMENT YEAR 2 & YEAR 3

INCOME / MONTH / YEAR	YEAR 2	YEAR 3	AVG/MTH
PETROL SALES LITRES	3,204,849	3,300,396	276,083
PETROL GROSS PROFIT PER LITRE	1,214	1,311	1,311
PETROL GROSS PROFIT	3,880,430	4,327,715	360,843
DIESEL SALES LITRES	1,076,259	1,108,547	92,379
DIESEL GROSS PROFIT PER LITRE	0,864	0,933	0,933
DIESEL GROSS PROFIT	928,888	1,034,408	86,201
LUBRICANT SALES RAND	399,670	411,657	34,296
LUBRICANT GROSS PROFIT %	33%	33%	33%
LUBRICANT GROSS PROFIT	131,868	136,814	11,318
FRESH STOP SALES - RAND	6,421,663	6,614,313	551,193
FRESH STOP GROSS PROFIT %	28%	28%	28%
FRESH STOP GROSS PROFIT	1,798,066	1,862,008	154,334
PREPAID CARD SALES - RAND	1,712,443	1,763,817	146,986
PREPAID CARD SALES GROSS PROFIT %	9%	9%	9%
PREPAID CARD SALES GROSS PROFIT	154,120	158,744	13,229
PITSTOP CAFE (BAKERY / FAST FOOD) SALES	1,498,388	1,543,340	128,612
PITSTOP CAFE SALES GROSS PROFIT %	53%	53%	53%
PITSTOP CAFE SALES GROSS PROFIT	794,146	817,970	68,164
GROSS OPERATING PROFIT			
	7,458,508	8,326,567	693,888

GROSS OPERATING PROFIT 8,326,567 693,888

ANNEXURE "G"5

CALTEX KRIEL SERVICE STATION BUDGETED EXPENSE STATEMENTS YEAR 2 & YEAR 3

EXPENSES / YEAR / MONTH	YEAR 2	AVG / MTH
ACCOUNTING & AUDIT FEES	38,880	3,240
ADMINISTRATIVE ASSISTANTS	269,200	21,600
ADVERTISING AND PROMOTION	77,760	6,480
BANK & CREDIT CARD CHARGES	184,216	15,351
CASH IN TRANSIT	116,640	9,720
CLEANING & CONSUMABLES	84,240	7,020
COMPENSATION COMMISSIONER	11,368	947
ENTERTAINMENT	19,440	1,620
INSURANCE	165,620	12,960
MAINTENANCE, REPAIRS & GARDEN	51,840	4,320
MANAGEMENT FEES	269,200	21,600
MIBCO	162,627	12,719
MOTOR VEHICLE EXPENSES	28,512	2,376
OFFICE, & COMPUTER EXPENSES	45,360	3,780
PEST CONTROL	3,684	297
RATES AND TAXES	71,280	5,940
SECURITY	166,620	12,960
SHRINKAGE 2%	128,433	10,703
SKILLS & DEVELOPMENT LEVY 1%	15,144	1,262
STAFF TRAINING	6,736	562
TELEPHONE, FAXES & INTERNET	58,320	4,860
UIF 1%	16,144	1,262
UNIFORMS / PROTECTIVE CLOTHING	51,840	4,320
WAGES CASHIERS	362,880	30,240
WAGES PITSTOP (BAKERY / FAST FOOD)	207,360	17,280
WAGES MERCHANDISERS	258,200	21,600
WAGES PETROL ATTENDANTS	694,977	57,081
WATER & ELECTRICITY	181,440	15,120
INTEREST ON BANK LOAN	680,511	54,209
OPERATING-EXPENSES	4,337,167	361,426
NET OPERATING PROFIT	3,361,361	280,113
CUMULATIVE OPERATING PROFIT	6,327,964	

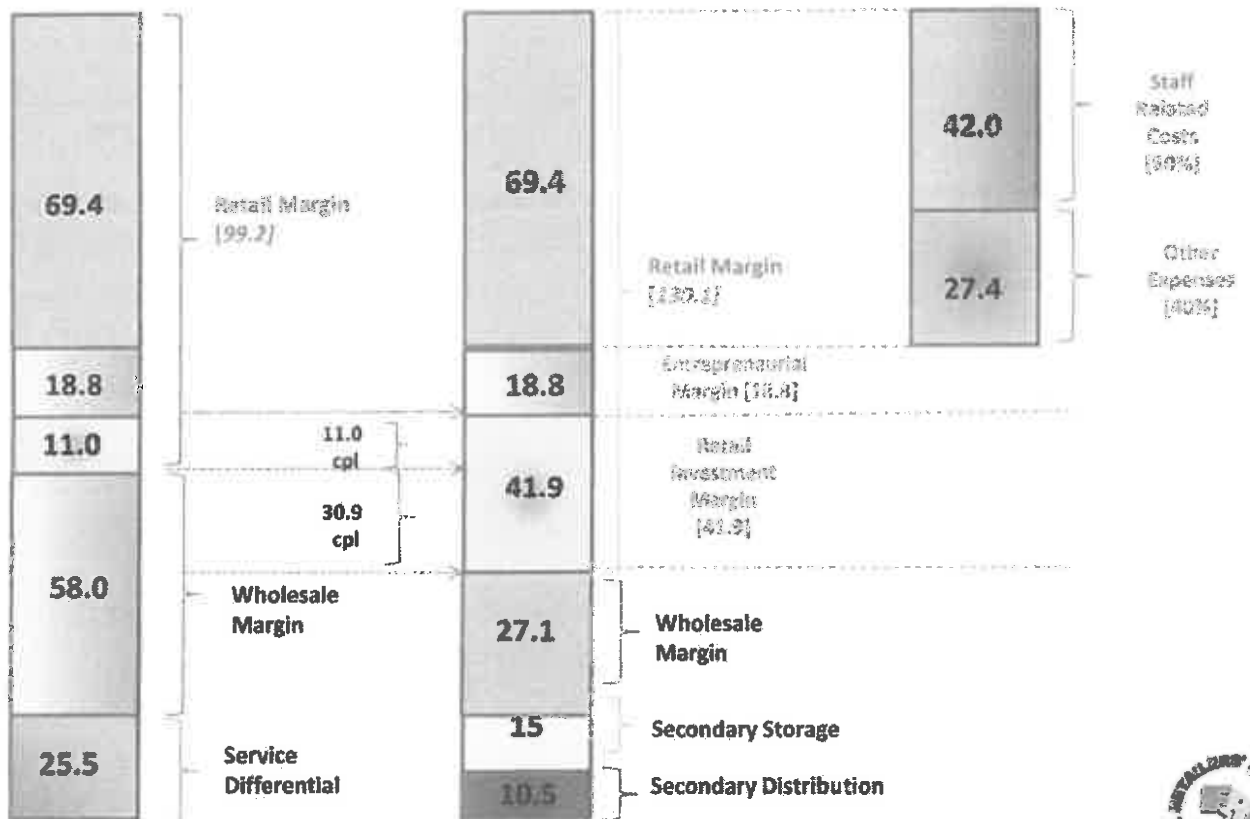
EXPENSES / YEAR / MONTH	YEAR 3	AVG / MTH
ACCOUNTING & AUDIT FEES	41,990	3,499
ADMINISTRATIVE ASSISTANTS	279,936	23,328
ADVERTISING AND PROMOTION	83,981	6,998
BANK & CREDIT CARD CHARGES	189,743	15,812
CASH IN TRANSIT	125,971	10,498
CLEANING & CONSUMABLES	90,979	7,582
COMPENSATION COMMISSIONER	12,010	1,001
ENTERTAINMENT	20,985	1,760
INSURANCE	187,962	13,997
MAINTENANCE, REPAIRS & GARDEN	66,987	4,866
MANAGEMENT FEES	279,936	23,328
MIBCO	161,755	13,480
MOTOR VEHICLE EXPENSES	30,793	2,566
OFFICE, & COMPUTER EXPENSES	48,989	4,082
PEST CONTROL	3,849	321
RATES AND TAXES	76,982	6,418
SECURITY	167,962	13,997
SHRINKAGE 2%	132,286	11,024
SKILLS & DEVELOPMENT LEVY 1%	16,013	1,334
STAFF TRAINING	7,278	607
TELEPHONE, FAXES & INTERNET	62,986	5,249
UIF 1%	16,013	1,334
UNIFORMS / PROTECTIVE CLOTHING	66,987	4,666
WAGES CASHIERS	391,910	32,659
WAGES PITSTOP (BAKERY / FAST FOOD)	223,949	18,662
WAGES MERCHANDISERS	279,936	23,328
WAGES PETROL ATTENDANTS	706,527	58,794
WATER & ELECTRICITY	196,966	16,330
INTEREST ON BANK LOAN	697,466	49,788
OPERATING-EXPENSES	4,526,117	377,693
NET OPERATING PROFIT	3,901,640	316,796
CUMULATIVE OPERATING PROFIT	10,129,494	

ANNEXURE "G" 6

DECEMBER 2012 ADJUSTED RAS FIGURES

Current Margins Build-up

Post RAS Margins Make-Up



ANNEXURE "J"
REGULATORY ACCOUNTING SYSTEM (RAS)

Census 2011 — Main Place “Ga-Nala”

[Top](#) > [Moumalanga](#) > [Nkangala](#) > [Emalahleni](#) >

Ga-Nala

Main Place 868025 from Census 2011

Area: 8.55 km²

Population: 15,237 (1,783.06 per km²)

Households: 4,304 (503.66 per km²)

Gender	People	Percentage
Male	8,037	52.75%
Female	7,200	47.25%

Population group	People	Percentage
Black African	8,119	53.28%
White	6,608	43.37%
Coloured	316	2.07%
Indian or Asian	171	1.12%
Other	24	0.16%

[view larger map](#) • [download KML file](#)

First language	People	Percentage
Afrikaans	5,953	39.81%
isiZulu	3,432	22.95%
English	1,600	10.70%
isiNdebele	867	5.80%
SiSwati	742	4.96%
Sepedi	699	4.67%
isiXhosa	589	3.94%
Sesotho	426	2.85%
Setswana	224	1.50%
Xitsonga	200	1.34%
Other	121	0.81%
Tshivenda	67	0.45%
Sign language	35	0.23%
<i>Not applicable</i>	285	

Made up of:

Name	Type	Population	Area (km ²)
Ga-Nala SP	Sub Place	15,237	8.55

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ANNEXURE "I"
CENSUS 2011 GA-NALA (KRIEL)

	<i>b/f</i>	R 5,950,000
Escalation 15%		R 892,500
Approvals - (Professional Fees allowances)		R 350,000
Sub-total		R 7,192,500
Contingencies		R 200,000
ESTIMATED DEVELOPMENT COST OF CALTEX KRIEL SERVICE STATION		R 7,392,500

ESTIMATED DEVELOPMENT COST CALTEX KRIEL SERVICE STATION

The development in this estimate includes for a generic type service station with a main building of approximately 200m², incorporating admin section, toilets, kitchen prep area, storeroom and a convenience store

All associated site works, driveway paving, etc. and all installations associated with a typical service station development.

1. Main Building:

- Foundation structure	R 75,000	
- Concrete floor	R 50,000	
- Brickwork	R 150,000	
- Ceiling (offices)	R 30,000	
- Sisalation ceiling (convenience store)	R 50,000	
- Roof structure complete	R 100,000	
- Floor finish (tinted concrete)	R 25,000	
- Wall finish (fairface stock and sealing)	R 30,000	
- External wall finish (tinted plaster - no paint)	R 20,000	
- Plumbing complete	R 75,000	
- Structural steelwork	R 50,000	
- Doors, locks, etc.	R 25,000	
- Aluminium windows, shopfronts, entrance door, glass, etc.	R 100,000	
- Electrical to building (allowance)	R 150,000	
- Slatted benches, shelving to office, etc.	R 20,000	
- External façade features, etc.	R 25,000	
- Sundries	R 25,000	
	<hr/>	R 1,000,000

2. External works:

- Earthworks, driveway paving, etc.	R 1,500,000	
- Yard walls, gates, etc.	R 25,000	
- Walkway paving	R 25,000	
- Landscaping (allowance)	R 25,000	
- Sundry siteworks	R 25,000	
	<hr/>	R 1,600,000

3. Specialist Installation:

- Canopy	R 500,000	
- Forecourt electrical	R 130,000	
- Site lighting, electrical, etc.	R 25,000	
- Air-conditioning to building	R 140,000	
- Lightning protection installation	R 25,000	
- Pump & Tank Installation (including dispensers, electrical, etc.)	R 1,500,000	
- Compressed air installation	R 35,000	
- CCTV Installation	R 75,000	
- Sundry items (dip sticks, etc.)	R 15,000	
- Builders attendance, etc.	R 75,000	
	<hr/>	R 2,520,000

4. Shopfitting Equipment, etc.:

- Kitchen equipment (oven, shelving, etc.)	R 75,000	
- Computerized till system complete	R 160,000	
- Coldroom, freezers, etc.	R 180,000	
- Ice machine, chillers, deli-fridge, etc.	R 120,000	
- Timber shelving, counters, etc.	R 235,000	
- Microwave, toasters, coffee machine, etc.	R 50,000	
- Sundries	R 10,000	
	<hr/>	R 830,000

c/f

R 5,950,000

ANNEXURE "H"
ESTIMATED DEVELOPMENT COST
CALTEX KRIEL SERVICE STATION

Heritage Impact Assessment

HERITAGE IMPACT ASSESSMENT: PROPOSED SERVICE STATION AND ACCESS ON ERVEN 1685 & 1729, KRIEL, BETHAL MAGISTERIAL DISTRICT, MPUMALANGA

Required under Section 38 (8) of the National Heritage Resources Act (No. 25 of 1999).

Report for:

Sillito Environmental Consulting
P.O. Box 30134
Tel: (021) 712 5060
Email: jako@environmentalconsultants.co.za

On behalf of:

Royale Energy



Dr Jayson Orton
ASHA Consulting (Pty) Ltd
40 Brassie Street, Lakeside, 7945
Tel: (021) 788 8425 | 083 272 3225
Email: jayson@asha-consulting.co.za

27 July 2017

EXECUTIVE SUMMARY

ASHA Consulting (Pty) Ltd was appointed by Sillito Environmental Consulting to conduct an assessment of the potential impacts to heritage resources that might occur through the proposed development of a vehicle service station on erven 1685 and 1729 in Kriel, Mpumalanga. The service station itself would be situated on erf 1685, while the entrance and exit roads from the southbound carriageway of the R547 would be constructed across erf 1729. Access would also be taken from Green Avenue to the east of the site.

The site is gently sloping. It is covered in grass and has several trees on it. A modern structure is present on erf 1685 and would be demolished to allow for the proposed project to proceed.

The desktop study suggested that no significant heritage resources are likely to occur on the site. The only possible heritage resources identified were isolated archaeological artefacts (either Stone Age or Iron Age) and fossils. However, it is unlikely that significant fossils would be impacted since the uppermost deposits are likely somewhat disturbed from past agriculture and road development (the R547 used to run through the site) and the next few meters of sediment is likely to be weathered. This results in poor preservation of fossils. The structure on site (which will be demolished) is less than 60 years of age and the landscape is a modern urban landscape (post-1973) in which a service station is seen as an appropriate development.

The proposed service station is unlikely to have any significant impacts on heritage resources. As such, there can be no objection on heritage grounds to the project proceeding.

It is recommended that the proposed development of a service station on erven 1685 and 1729, Kriel, be allowed to proceed. The following condition should be included in the environmental authorisation should one be issued:

- If any archaeological material, fossils, or human burials are uncovered during the course of development then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist or palaeontologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

Glossary

Iron Age: Period of prehistory occurring during the last 1800 years in South Africa during which metal artefacts were made from locally sourced iron. It is divided into the periods as follows:

- Early Iron Age: c AD200-900
- Middle Iron Age: c. AD900-1300
- Late Iron Age: c. AD1300-colonial times

Stone Age: Period of prehistory extending from more than 2 million years ago to within about 100 ago.

Abbreviations

APHP: Association of Professional Heritage Practitioners

ASAPA: Association of Southern African Professional Archaeologists

BAR: Basic Assessment Report

CRM: Cultural Resources Management

DARDLEA: Department of Agriculture, Rural Development, Land and Environmental Affairs

EIA: Environmental Impact Assessment

EMPr: Environmental Management Program

GPS: global positioning system

HIA: Heritage Impact Assessment

MPHRA: Mpumalanga Heritage Resources Authority

NEMA: National Environmental Management Act (No. 107 of 1998)

NHRA: National Heritage Resources Act (No. 25) of 1999

SAHRA: South African Heritage Resources Agency

SAHRIS: South African Heritage Resources Information System

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1. INTRODUCTION

ASHA Consulting (Pty) Ltd was appointed by Sillito Environmental Consulting to conduct an assessment of the potential impacts to heritage resources that might occur through the proposed development of a vehicle service station on erven 1685 and 1729 in Kriel, Mpumalanga (Figures 1 to 3). The service station itself would be situated on erf 1685, while the entrance and exit roads from the southbound carriageway of the R547 would be constructed across erf 1729. Access would also be taken from Green Avenue to the east of the site.

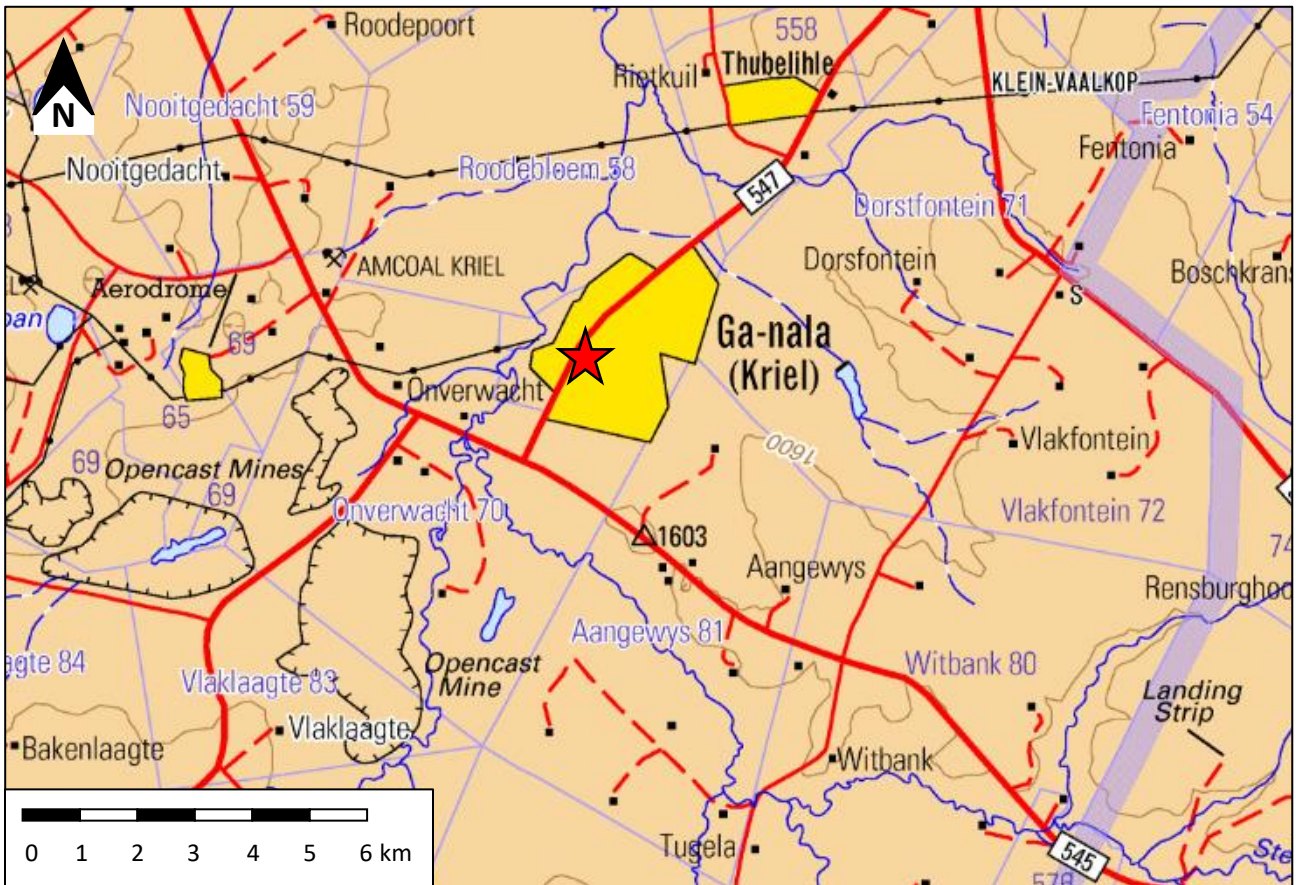


Figure 1: Extract from 1:250 000 mapsheet 2628 showing the location of Kriel near the intersection of the R545 and R547. The proposed development site is indicated by the red star.

1.1. Project description

The applicant, Royale Energy (Pty) Ltd proposes to develop a service station and associated infrastructure on erven 1685 and 1729, Kriel next to the R547, Mpumalanga Province. Part of Erf 1685 is currently used as a repair workshop for vehicles and the other part is vacant land; the proposed development will be built on the vacant land. Erf 1729 is located between the proposed development and the R547 and will be used as a thoroughfare for vehicles. The structure presently occupying the site will be demolished to make way for the proposed development.

The service station will provide road users on the R547 and the surrounding road network with service station facilities and associated retail amenities, including a convenience store. Figure 4 shows the proposed layout.

Below is a summary of the development proposal:

- Five 30m³ capacity underground fuel storage tanks for the storage of Diesel and Unleaded Petrol
- Five pump dispensers
- Fuel tank filler points
- Separator system for surface runoff
- Associated underground fuel and filler lines
- A forecourt canopy covering the forecourt area
- A convenience store
- ATM's.

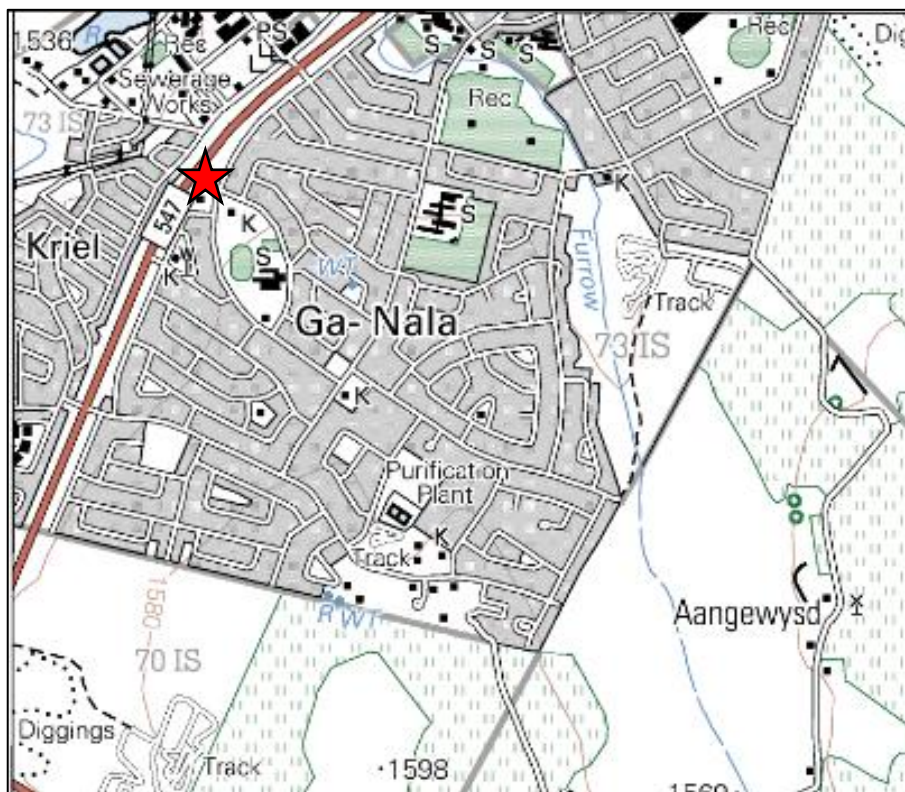


Figure 2: Extract from 1:50 000 mapsheet 2629AD showing the location of the site (red star) along the R547.

1.1.1. Aspects of the project relevant to the heritage study

All aspects of the proposed development are relevant since excavations for foundations and/or services may impact on archaeological and/or palaeontological remains, while all above-ground aspects create potential visual (contextual) impacts to the cultural landscape and any significant heritage sites that might be visually sensitive.



Figure 3: Aerial view of the study area (erf 1685 = red polygon, erf 1729 = orange polygon) showing the local context of the proposed development site. Source: Google Earth.

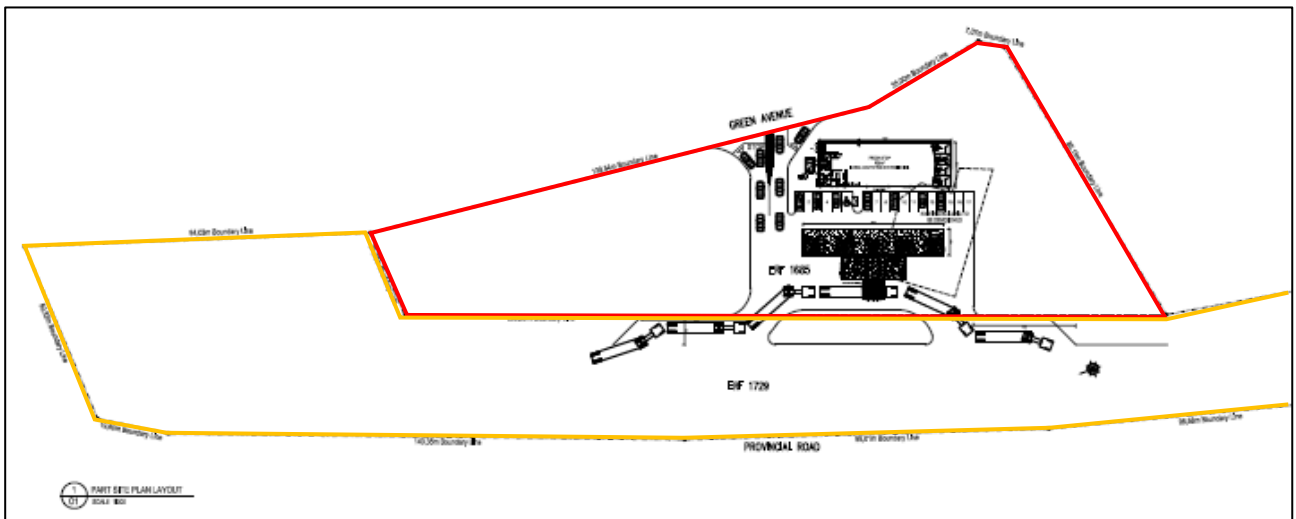


Figure 4: Spatial development plan for the proposed service station (erf 1685 = red polygon, erf 1729 = orange polygon). See detail in Figure 5.

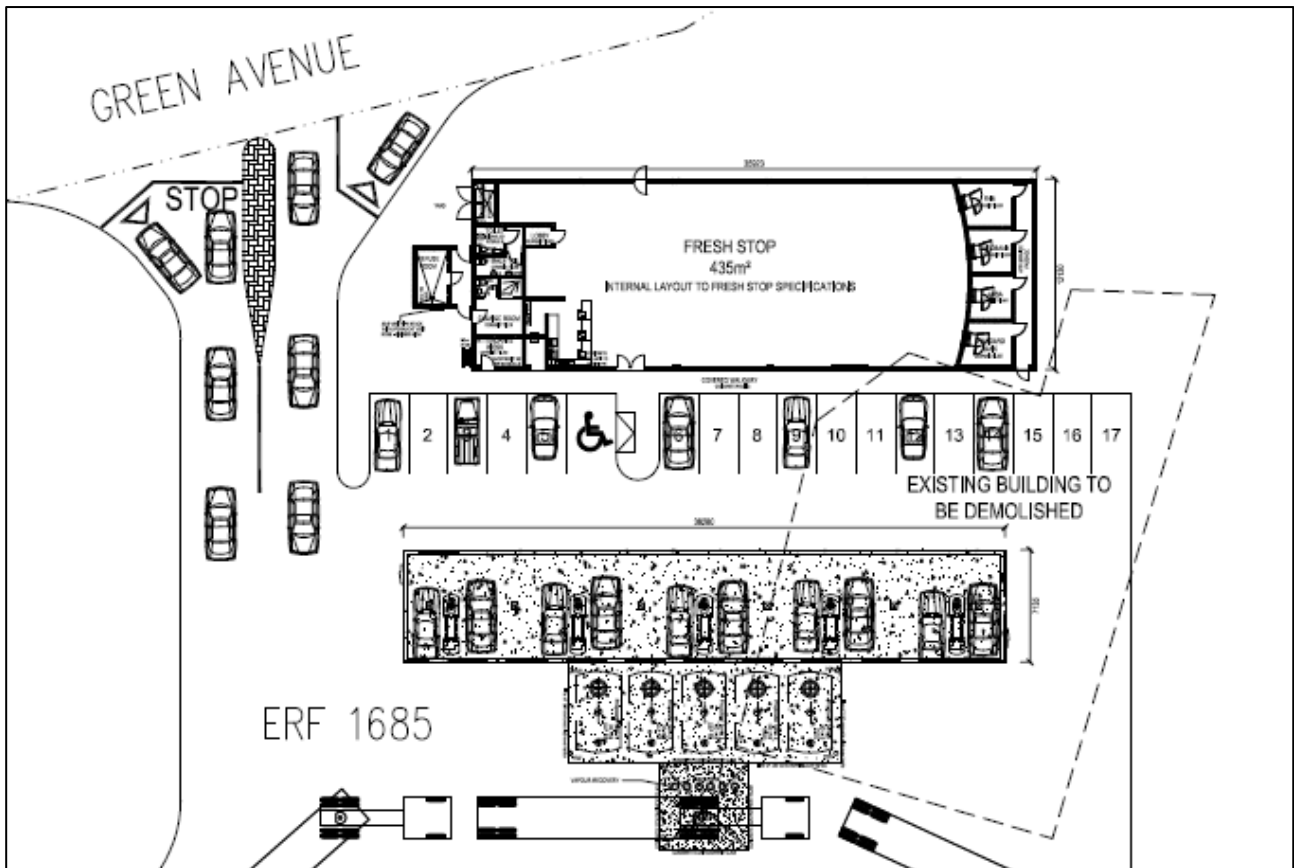


Figure 5: Detail of Figure 4 showing the built component of the proposed development.

1.2. Terms of reference

ASHA Consulting was asked to prepare a Heritage Impact Assessment (HIA) that assessed all relevant aspects of heritage and would meet the requirements of the South African Heritage Resources Agency.

1.3. Scope and purpose of the report

An HIA is a means of identifying any significant heritage resources before development begins so that these can be managed in such a way as to allow the development to proceed (if appropriate) without undue impacts to the fragile heritage of South Africa. This HIA report aims to fulfil the requirements of the heritage authorities such that a comment can be issued by them for consideration by Provincial Department of Agriculture, Rural Development, Land and Environmental Affairs (DARDLEA) who will review the Basic Assessment Report (BAR) and grant or refuse authorisation. The HIA report will outline any management and/or mitigation requirements that will need to be complied with from a heritage point of view and that should be included in the conditions of authorisation should this be granted.

1.4. The author

Dr Jayson Orton has an MA (UCT, 2004) and a D.Phil (Oxford, UK, 2013), both in archaeology, and has been conducting Heritage Impact Assessments and archaeological specialist studies in the

Western Cape and Northern Cape provinces of South Africa since 2004 (Please see curriculum vitae included as Appendix 1). He has also conducted research on aspects of the Later Stone Age in these provinces and published widely on the topic. He is an accredited heritage practitioner with the Association of Professional Heritage Practitioners (APHP) and also holds archaeological accreditation with the Association of Southern African Professional Archaeologists (ASAPA) CRM section (Member #233) as follows:

- Principal Investigator: Stone Age, Shell Middens & Grave Relocation; and
- Field Director: Colonial Period & Rock Art.

1.5. Declaration of independence

ASHA Consulting (Pty) Ltd and its consultants have no financial or other interest in the proposed development and will derive no benefits other than fair remuneration for consulting services provided.

2. HERITAGE LEGISLATION

The National Heritage Resources Act (NHRA) No. 25 of 1999 protects a variety of heritage resources as follows:

- Section 34: structures older than 60 years;
- Section 35: palaeontological, prehistoric and historical material (including ruins) more than 100 years old;
- Section 36: graves and human remains older than 60 years and located outside of a formal cemetery administered by a local authority; and
- Section 37: public monuments and memorials.

Following Section 2, the definitions applicable to the above protections are as follows:

- Structures: “any building, works, device or other facility made by people and which is fixed to land, and includes any fixtures, fittings and equipment associated therewith”;
- Palaeontological material: “any fossilised remains or fossil trace of animals or plants which lived in the geological past, other than fossil fuels or fossiliferous rock intended for industrial use, and any site which contains such fossilised remains or trace”;
- Archaeological material: a) “material remains resulting from human activity which are in a state of disuse and are in or on land and which are older than 100 years, including artefacts, human and hominid remains and artificial features and structures”; b) “rock art, being any form of painting, engraving or other graphic representation on a fixed rock surface or loose rock or stone, which was executed by human agency and which is older than 100 years, including any area within 10m of such representation”; c) “wrecks, being any vessel or aircraft, or any part thereof, which was wrecked in South Africa, whether on land, in the internal waters, the territorial waters or in the maritime culture zone of the Republic, as defined respectively in sections 3, 4 and 6 of the Maritime Zones Act, 1994 (Act No. 15 of 1994), and any cargo, debris or artefacts found or associated therewith, which is older than 60 years or which SAHRA considers to be worthy of conservation”; and d) “features, structures and artefacts associated with military history which are older than 75 years and the sites on which they are found”;

- Grave: “means a place of interment and includes the contents, headstone or other marker of such a place and any other structure on or associated with such place”; and
- Public monuments and memorials: “all monuments and memorials a) “erected on land belonging to any branch of central, provincial or local government, or on land belonging to any organisation funded by or established in terms of the legislation of such a branch of government”; or b) “which were paid for by public subscription, government funds, or a public-spirited or military organisation, and are on land belonging to any private individual.”

While landscapes with cultural significance do not have a dedicated Section in the NHRA, they are protected under the definition of the National Estate (Section 3). Section 3(2)(c) and (d) list “historical settlements and townscapes” and “landscapes and natural features of cultural significance” as part of the National Estate. Furthermore, Section 3(3) describes the reasons a place or object may have cultural heritage value; some of these speak directly to cultural landscapes.

Section 38 (2a) states that if there is reason to believe that heritage resources will be affected then an impact assessment report must be submitted. This report fulfils that requirement.

Under the National Environmental Management Act (No. 107 of 1998; NEMA), as amended, the project is subject to a BAR. The Mpumalanga Heritage Resources Authority (MPHRA; for built environment and landscapes) and the South African Heritage Resources Agency (SAHRA; for archaeology and palaeontology) are required to provide comment on the proposed project in order to facilitate final decision making by DARDLEA.

3. METHODS

3.1. Literature survey and information sources

A survey of available literature was carried out to assess the general heritage context into which the development would be set. This literature included published material, unpublished commercial reports and online material, including reports sourced from the South African Heritage Resources Information System (SAHRIS). The 1:50 000 map and historical aerial images were sourced from the Chief Directorate: National Geo-Spatial Information.

3.2. Field survey

Because of the apparent lack of surface heritage resources, no ground survey was undertaken. The report produced exclusively from the desktop.

3.3. Specialist studies

Because of the high palaeontological sensitivity of the site, a specialist palaeontological study was conducted by Dr John Almond of Natura Viva cc. While no specialist archaeological study was commissioned, the author did seek advice from Jaco van der Walt to ensure that the Iron Age aspects of the desktop study were adequately addressed.

3.4. Impact assessment

For consistency, the impact assessment was conducted through application of a scale supplied by SEC.

3.5. Grading

S.7(1) of the NHRA provides for the grading of heritage resources into those of National (Grade I), Provincial (Grade II) and Local (Grade III) significance. Grading is intended to allow for the identification of the appropriate level of management for any given heritage resource. Grade I and II resources are intended to be managed by the national and provincial heritage resources authorities respectively, while Grade III resources would be managed by the relevant local planning authority. These bodies are responsible for grading, but anyone may make recommendations for grading.

It is intended under S.7(2) that the various provincial authorities formulate a system for the further detailed grading of heritage resources of local significance but this is generally yet to happen. SAHRA (2007) has formulated its own system¹ for use in provinces where it has commenting authority. In this system sites of high local significance are given Grade IIIA (with the implication that the site should be preserved in its entirety) and Grade IIIB (with the implication that part of the site could be mitigated and part preserved as appropriate) while sites of lesser significance are referred to as having 'General Protection' and rated with an A (high/medium significance, requires mitigation), B (medium significance, requires recording) or C (low significance, requires no further action).

3.6. Consultation

The NHRA requires consultation as part of an HIA but, since the present study falls within the context of an EIA which includes a public participation process (PPP), no dedicated consultation was undertaken as part of the HIA. Interested and affected parties would have the opportunity to provide comment on the heritage aspects of the project during the PPP.

3.7. Assumptions and limitations

Although the study was carried out from the desktop, this is not considered to be a serious limitation because the study area is largely coated with grass and paving and archaeological and palaeontological heritage resources are highly unlikely to be visible on the surface.

4. PHYSICAL ENVIRONMENTAL CONTEXT

4.1. Site context

The site lies within a developed urban context along the eastern side of the R547 in the town of Kriel. The two erven under consideration are fairly large and mostly undeveloped. A single structure occurs on erf 1685.

¹ The system is intended for use on archaeological and palaeontological sites only.

4.2. Site description

The site is gently sloping with the lower edge being along the R547. The surface is largely covered in grass and a number of small trees are present, including a stand of poplar trees close to the R547 (Figures 6 & 7).



Figure 6: View of the site facing towards the east from the R547. Source: Google Earth Street View. Image dated February 2010.



Figure 7: View of the site facing towards the southeast from the R547. Source: Google Earth Street View. Image dated February 2010.

5. HERITAGE CONTEXT

This section of the report contains the desktop study and establishes what is already known about the archaeological heritage in the vicinity of the study area. This will assist in the assessment of any impacts that might occur through implementation of the proposed development.

5.1. Palaeontology

The site is located within an area shown as being of very high palaeontological sensitivity on the SAHRIS Palaeosensitivity Map (Figure 8). Almond (2017) notes that the town is underlain by Middle Permian fluvio-deltaic sediments of the Vryheid Formation (Ecca Group, Karoo Supergroup) which is largely important because of the coal present within it. These sediments overlie igneous rocks. Late Caenozoic alluvium associated with the Steenkoolspruit and its palaeo-meanders lies immediately to the west of Kriel.

Although the Vryheid Formation is well-known to contain a rich assemblage of fossils (see Almond 2017 for details) and the site is regarded as potentially fossiliferous (Figure 8), the uppermost deposits are likely to be weathered with the surface disturbed by earlier agriculture and road development (the R547 used to run through the site – see below). More recent surficial deposits are likely to be of low palaeontological sensitivity.



Figure 8: Extract from the SAHRIS Palaeosensitivity map showing the site (red star) and surrounds to be of very high palaeontological sensitivity (red shading).

5.2. Archaeology

No Early or Middle Iron Age sites have thus far been located on the Highveld. However, Late Iron Age stone walled sites do occur in the area. Several large Late Iron Age settlement complexes occur in this region, especially to the south of Kriel (Van Schalkwyk 2003) and on the farm Wildebeestkuil, close to Kinross, 24km south west of Kriel (Taylor 1979). This site was probably occupied at a very late stage in the Iron Age, after the Hlubi attack on the Tlokoa which marked the start of the Difaqane in 1821 (Maggs 1976). Ceramics from these Late Iron Age sites are part of the Uitkoms Facies of the Blackburn Branch, while the site layout type is referred to as Klipriviersberg/Group III. They were most likely occupied between AD 1650 and AD 1820 (Huffman 2007).

A number of battles were fought in the area between the various local populations, both before the Mfecane (a.k.a. Difaqane; late 18th century), and during the Mfecane period itself (early 19th century). They led to the displacement of large numbers of Sotho-Tswana clans on the Highveld where, particularly during the decade from 1826 to 1836, Mzilikazi's Ndebele tribe caused widespread devastation (Huffman 2007).

Many of the cultural resources management (CRM) surveys carried out in the vicinity of Kriel have been related to coal mining. Van Schalkwyk (2003) notes that Stone Age artefacts are commonly encountered in the area but he is of the opinion that they are all in secondary contexts and of little heritage value. Van Vollenhoven (2016), on the other hand, suggests that Stone Age occupation is not known from the area, but that local research has been minimal. Van Schalkwyk (2003) notes that Iron Age occupation only commenced *circa* AD1500 in the vicinity of Kriel and that settlement tended to be near to water sources and rock outcrops. He maps a number of Iron Age sites about 10 km south of Kriel. Van Vollenhoven (2016) reported two Late Iron Age sites to the southeast of Kriel. Huffman and Calabrese (1996) located just three Iron Age (Moloko) pot sherds during their survey some 5 km northeast of the present study area but no sites. Van Vollenhoven (2015) conducted a survey just 2 km northeast of the present study area on the northern edge of Kriel. He identified no archaeological material at all. Murimbika (2006) also found no archaeological material in a small survey 3 km to the east of the study area just outside Kriel.

A number of Anglo-Boer War battles took place in the broader region. Only one was in close proximity to Kriel and this was the Battle of Baakenlaagte which took place on 30th October 1901 some 15 km to the southwest of the study area. In this battle the British troops under Colonel George Benson were defeated by the Boers under Generals Sarel Grobler and Louis Botha. The former was killed during the battle and buried in the area (12.8 km northwest of the study area). His grave has since been exhumed and moved to Primrose Cemetery in Germiston (Von der Heyde 2013) as the site is now a coal mine.

5.3. Graves

Huffman and Calabrese (1996) recorded some informal graves located close to the remnants of a 'black homestead' 5 km northeast of the present study area. One of them bore a date of 1955 but due to the poor condition of the headstones further information could not be gleaned. Van Schalkwyk and Naude (1992) recorded numerous graves in a survey around the southern outskirts of Kriel, but locations and mapping are not available in the report as lodged on SAHRIS. They do mention that the graves are in farm contexts and are likely to be the graves of farm labourers.

5.4. Built environment

Although Van Schalkwyk (2003) notes that many historical buildings were destroyed by the British in the aftermath of the South African War (2nd Anglo-Boer War), Huffman and Calabrese (1996) recorded a house dating to approximately 1896 just north of Kriel. It had been modified in more recent times. Karodia (2013) notes the general presence of early 20th century farm houses in the area.

The modern town of Kriel only dates back to the mid-1970s when it was proclaimed to service three large coal mines and two power stations being developed in the immediate area. ESKOM obtained permission to develop a village on a portion of the farm Roodebloem in 1973. Figures 9 and 10 show

aerial views of the study from 1954 and 1975 showing that there were no structures on the site at the time. The latter view in fact shows that the original alignment of the R547 likely passed through the study area.



Figure 9: Identical aerial views from 1954 (Job 340, strip 007, photograph 16847) and 2016 (Google Earth) showing the site to have been free of buildings in 1954. The white star shows a common point in each image for orientation. Note that in 1954 the R547 had not yet had its bend ‘smoothed’. Three small farm structures are visible in the upper right hand corner of the 1954 image.



Figure 10: Identical aerial views from 1975 (Job 750, strip 004, photograph 0146) and 2016 (Google Earth) showing the site to have been free of buildings in 1975. Note that the old and new (‘smoothed’) alignments of the R547 are visible.

5.5. Cultural landscape

It has already been noted that the town of Kriel was only developed after 1973. Figure 11 shows comparative identical views of the area of Kriel from just before and just after development of the initial township. It also shows a modern view indicating that the area around the study area has developed in more recent years. By 1984 the town had developed to its current extent. Since the site is completely enclosed by urban development there are no cultural landscape issues of significance. The proposed land use is deemed compatible with the town and its placement along the edge of a main road is appropriate.



Figure 11: Identical 1968 (Job 548, strip 006, photograph 0351) and 1975 (Job 750, strip 004, photograph 0146) aerial views of Kriel showing the very rapid development of Kriel by ESKOM. The inset shows an identical modern aerial view with further development having taken place towards the south.

5.6. Summary of heritage indicators

While there is perhaps a very small chance of intersecting unweathered fossiliferous bedrock at depth during excavation for the fuel storage tanks, this potential impact is not considered significant by Almond (2017). There is always a small chance that Stone Age or Iron Age artefacts could be present within the surface soil. Such isolated artefacts have no scientific value. There are no other heritage resources of concern in or close to the study area.

5.7. Statement of significance and provisional grading

Section 38(3)(b) of the NHRA requires an assessment of the significance of all heritage resources. In terms of Section 2(vi), “cultural significance” means aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance.

Any palaeontological and/or archaeological resources present are deemed to have low to very low cultural significance for their scientific value. No other heritage resources are deemed to be present.

6. ASSESSMENT OF IMPACTS

6.1. Impacts to heritage resources

Because the only potential impacts identified are to palaeontological and/or archaeological resources, the impacts would occur during the construction phase only when the fuel storage tanks and building foundations are excavated. Only the tanks might possibly penetrate deep enough to reach unweathered fossiliferous bedrock, but all works could impact on isolated archaeological artefacts. Impacts would be direct and, because heritage resources are unique, the impacts are irreversible. However, the probability of impacts occurring is deemed to be improbable. Because similar development in the area (i.e. urban development of Kriel) would have impacted on very similar surficial deposits and the local coal mines are exploiting fossil-rich sediments on a massive scale, the cumulative impacts on palaeontology are deemed to be miniscule and of low significance. Similarly, isolated archaeological artefacts are likely to have been impacted by local development but such material is of low significance and the cumulative impacts to them are also of low significance. The overall impact rating is **low** and no mitigation is required. There are thus no fatal flaws.

Table 1: Assessment of heritage impacts for the construction phase.

Potential impacts on heritage aspects:	
Nature of impact:	Direct destruction of fossils and/or isolated archaeological artefacts
Extent and duration of impact:	Local & permanent
Probability of occurrence:	Improbable
Degree to which the impact can be reversed:	Low
Degree to which the impact may cause irreplaceable loss of resources:	High
Cumulative impact prior to mitigation:	Low
Significance rating of impact prior to mitigation (Low, Medium, Medium-High, High, or Very-High)	Low
Degree to which the impact can be mitigated:	n/a
Proposed mitigation:	n/a
Cumulative impact post mitigation:	n/a
Significance rating of impact after mitigation (Low, Medium, Medium-High, High, or Very-High)	n/a

7. INPUT TO THE ENVIRONMENTAL MANAGEMENT PROGRAM

The only management measure that should be included in the Environmental Management Program (EMPr) is as follows:

- If any substantial fossil material is encountered during subsurface excavations then the finds should be reported to SAHRA or an appropriate heritage practitioner. The find may need to be inspected and possibly mitigated by a palaeontologist with a permit issued by SAHRA.

8. EVALUATION OF IMPACTS RELATIVE TO SUSTAINABLE SOCIAL AND ECONOMIC BENEFITS

Section 38(3)(d) of the NHRA requires an evaluation of the impacts on heritage resources relative to the sustainable social and economic benefits to be derived from the development. The proposed project will provide some new jobs in the area and due to the very low significance of any heritage impacts it can be concluded that the social and economic benefits far outweigh any heritage impacts.

9. CONCLUSIONS

The proposed service station is unlikely to have any significant impacts on heritage resources. As such, there can be no objection on heritage grounds to the project proceeding without any further heritage-related work being required.

10. RECOMMENDATIONS

It is recommended that the proposed development of a service station on erven 1685 and 1729, Kriel, be allowed to proceed. The following condition should be included in the environmental authorisation should one be issued:

- If any archaeological material, fossils, or human burials are uncovered during the course of development then work in the immediate area should be halted. The find would need to be reported to the heritage authorities and may require inspection by an archaeologist or palaeontologist. Such heritage is the property of the state and may require excavation and curation in an approved institution.

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APPENDIX 1 – Curriculum Vitae



Curriculum Vitae

Jayson David John Orton

ARCHAEOLOGIST AND HERITAGE CONSULTANT

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Birth date and place: 22 June 1976, Cape Town, South Africa
Citizenship: South African
ID no: 760622 522 4085
Driver's License: Code 08
Marital Status: Married to Carol Orton
Languages spoken: English and Afrikaans

Education:

SA College High School	Matric	1994
University of Cape Town	B.A. (Archaeology, Environmental & Geographical Science)	1997
University of Cape Town	B.A. (Honours) (Archaeology)*	1998
University of Cape Town	M.A. (Archaeology)	2004
University of Oxford	D.Phil. (Archaeology)	2013

*Frank Schweitzer memorial book prize for an outstanding student and the degree in the First Class.

Employment History:

Spatial Archaeology Research Unit, UCT	Research assistant	Jan 1996 – Dec 1998
Department of Archaeology, UCT	Field archaeologist	Jan 1998 – Dec 1998
UCT Archaeology Contracts Office	Field archaeologist	Jan 1999 – May 2004
UCT Archaeology Contracts Office	Heritage & archaeological consultant	Jun 2004 – May 2012
School of Archaeology, University of Oxford	Undergraduate Tutor	Oct 2008 – Dec 2008
ACO Associates cc	Associate, Heritage & archaeological consultant	Jan 2011 – Dec 2013
ASHA Consulting (Pty) Ltd	Director, Heritage & archaeological consultant	Jan 2014 –

Memberships and affiliations:

South African Archaeological Society Council member	2004 –
Assoc. Southern African Professional Archaeologists (ASAPA) member	2006 –
ASAPA Cultural Resources Management Section member	2007 –
UCT Department of Archaeology Research Associate	2013 –
Heritage Western Cape APM Committee member	2013 –
UNISA Department of Archaeology and Anthropology Research Fellow	2014 –
Fish Hoek Valley Historical Association	2014 –

Professional Accreditation:

Association of Southern African Professional Archaeologists (ASAPA) membership number: 233

CRM Section member with the following accreditation:

- Principal Investigator: Coastal shell middens (awarded 2007)
 - Stone Age archaeology (awarded 2007)
 - Grave relocation (awarded 2014)
- Field Director: Rock art (awarded 2007)
 - Colonial period archaeology (awarded 2007)

Association of Professional Heritage Practitioners (APHP) membership number 43

- Accredited Professional Heritage Practitioner

Fieldwork and project experience:

Extensive fieldwork as both Field Director and Principle Investigator throughout the Western and Northern Cape, and also in the western parts of the Free State and Eastern Cape as follows:

Phase 1 surveys and impact assessments:

- Project types
 - Notification of Intent to Develop applications (for Heritage Western Cape)
 - Heritage Impact Assessments (largely in the Environmental Impact Assessment or Basic Assessment context under NEMA and Section 38(8) of the NHRA, but also self-standing assessments under Section 38(1) of the NHRA)
 - Archaeological specialist studies
 - Phase 1 test excavations in historical and prehistoric sites
 - Archaeological research projects
- Development types
 - Mining and borrow pits
 - Roads (new and upgrades)
 - Residential, commercial and industrial development
 - Dams and pipe lines
 - Power lines and substations
 - Renewable energy facilities (wind energy, solar energy and hydro-electric facilities)

Phase 2 mitigation and research excavations:

- ESA open sites
 - Duinefontein, Gouda
- MSA rock shelters
 - Fish Hoek, Yzerfontein, Cederberg, Namaqualand
- MSA open sites
 - Swartland, Bushmanland, Namaqualand
- LSA rock shelters
 - Cederberg, Namaqualand, Bushmanland
- LSA open sites (inland)
 - Swartland, Franschhoek, Namaqualand, Bushmanland
- LSA coastal shell middens
 - Melkbosstrand, Yzerfontein, Saldanha Bay, Paternoster, Dwarskersbos, Infanta, Knysna, Namaqualand
- LSA burials
 - Melkbosstrand, Saldanha Bay, Namaqualand, Knysna
- Historical sites
 - Franschhoek (farmstead and well), Waterfront (fort, dump and well), Noordhoek (cottage), variety of small excavations in central Cape Town and surrounding suburbs
- Historic burial grounds
 - Green Point (Prestwich Street), V&A Waterfront (Marina Residential), Paarl

APPENDIX 2 – Palaeontological study

RECOMMENDED EXEMPTION FROM FURTHER PALAEOLOGICAL STUDIES: PROPOSED KRIEL FUEL STATION, MPUMALANGA: PIA DESKTOP INPUT

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July 2017

The proposed fuel station will be situated in a highly disturbed urban setting on the east side of the R547 in Kriel (Ga-nala), c. 40 km south of Witbank, Mpumalanga. The development site lies some 600 m to the southeast of, and elevated c. 10 m above, the Steenkoolspruitrivier, a tributary of the Olifantsrivier. This is a highly meandering drainage system with abandoned palaeomeanders and oxbow lakes visible on satellite images. The Kriel area features gently hilly terrain with several large opencast coal mines to the southwest within a radius of some 10 km (Fig. 1).



Figure 1. Google earth© satellite image showing the location of the proposed fuel station in Kriel, some 40 km south of Witbank, Mpumalanga Province. Note the meandering Steenkoolspruit river to the west and the large opencast coal mines to the southwest.

GEOLOGICAL CONTEXT

The geology of the study area is shown on 1: 250 000 sheet 2628 East Rand (Council for Geoscience, Pretoria) (Fig. 2), for which a sheet explanation has not yet been published. The town of Kriel is underlain by Middle Permian fluviodeltaic sediments of the **Vryheid Formation** (Ecca Group, Karoo Supergroup). This formation contains important seams of coal near-surface in the Witbank region, as shown by the opencast mines in the Kriel area (Johnson *et al.* 2006). It is likely that the Vryheid sediments within the development footprint are weathered near-surface and disturbed at surface.

The Late Palaeozoic Ecca beds overlie Precambrian granites and volcanics of the Lebowa Granite Suite and Rooiberg Group respectively and are themselves intruded and baked in the region by Early Jurassic dolerites of the Karoo Dolerite Suite. A narrow strip of Late Caenozoic alluvium is associated with the Steenkoolspruit and its palaeomeanders to the west of town but is unlikely to extend into the fuel station footprint itself.

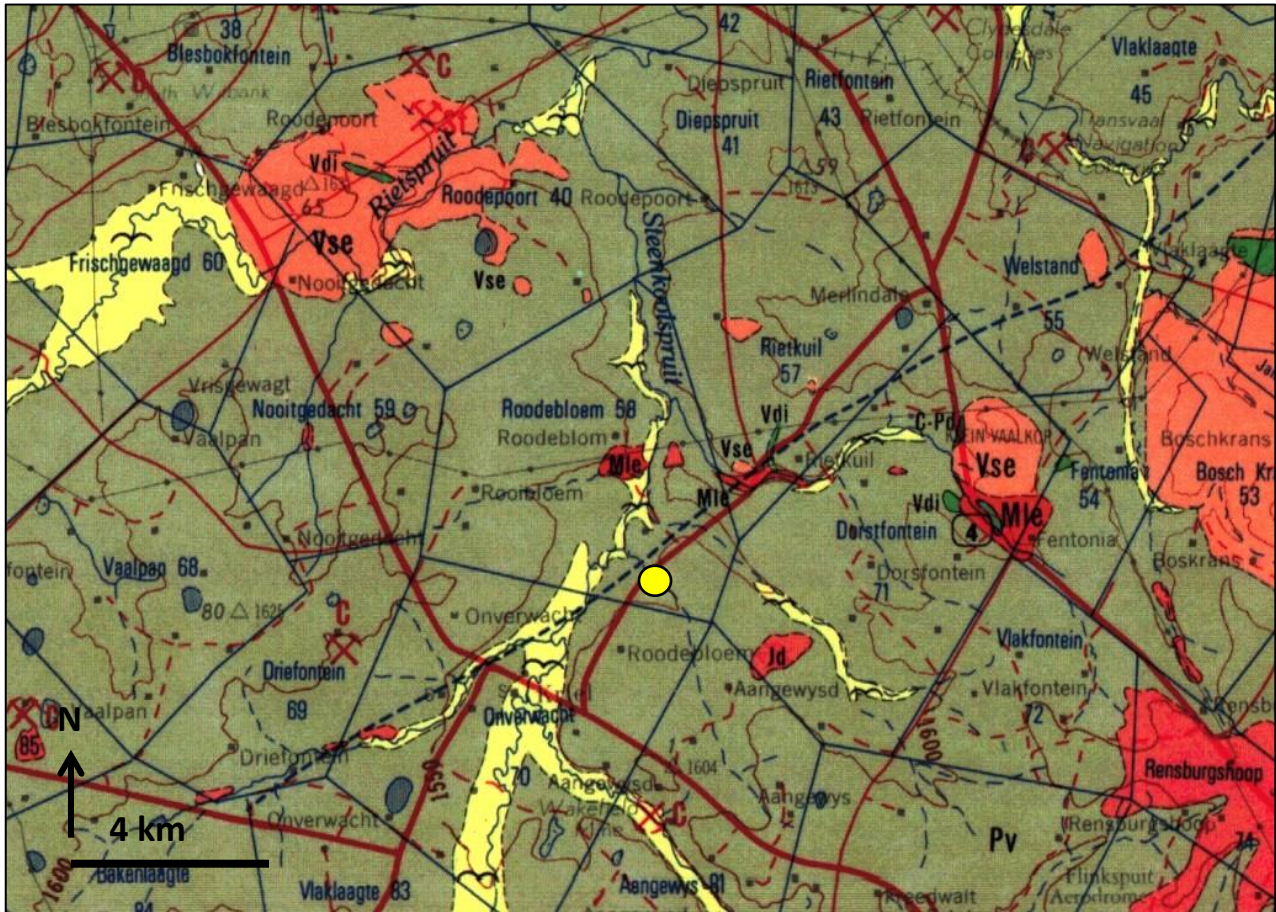


Figure 2. Extract from 1: 250 000 geology sheet 2626 East Rand showing the location of the fuel station study area at Kriel, Mpumalanga (yellow circle). The region is underlain by Middle Permian deltaic sediments of the Vryheid Formation (Ecca Group, Karoo Supergroup) (Pv, olive green) that are locally intruded by Early Jurassic intrusions of the Karoo Dolerite Suite (Jd, red). A narrow strip of Late Caenozoic alluvium (pale yellow) is associated with the Steenkoolspruit drainage system to the west.

PALAEONTOLOGICAL HERITAGE

The Vryheid Formation is internationally famous for its Middle Permian fossil plants of the *Glossopteris* Flora of Gondwana (e.g. Plumstead 1969, 1973, Anderson & Anderson 1985, MacRae 1999, McCarthy & Rubidge 2005, Johnson *et al.* 2006) and its palaeosensitivity is therefore generally rated as Very High (Groenewald & Groenewald 2014). Rich plant fossil assemblages – most notably well-preserved compression fossils preserved within shaley facies between coal seams - include rare mosses, lycopods and ferns (sphenophytes and others) as well as abundant and diverse representatives of the glossopterid “seed ferns”, cordaitaleans, conifers and ginkgoales. Other fossil groups represented include rich palynomorph assemblages (spores and pollens), leaf cuticles, algae, low-diversity non-marine trace fossils and sparse invertebrate faunas (e.g. non-marine bivalves,

insects, conchostracan crustaceans). Vertebrate fossils are very poorly represented, comprising disarticulated fish remains (e.g. scales) as well as unsubstantiated reports of occasional “labyrinthodont” amphibians.

Conclusions and recommendations

Although the Permian bedrocks (Vryheid Formation, Ecca Group) underlying the Kriel fuel station project area are potentially fossiliferous, they are likely to be weathered and disturbed in this urban setting. The fuel station footprint is minuscule compared with that of nearby open-cast mines that are exploiting local, highly-fossiliferous coal seams. Late Cenozoic superficial sediments in the area (e.g. soils, colluvium) are likely to be of low palaeontological sensitivity. The additional or cumulative impact on local heritage resources posed by the proposed fuel station development is considered to be negligible.

It is therefore recommended that exemption from further specialist palaeontological studies is granted for the proposed fuel station development at Kriel, Mpumalanga.

Any substantial fossil remains (e.g. vertebrate bones and teeth, shells, dense, well-preserved plant remains) encountered during excavation should be reported to SAHRA for possible mitigation by a professional palaeontologist (Contact details: SAHRA, 111 Harrington Street, Cape Town. PO Box 4637, Cape Town 8000, South Africa. Phone: +27 (0)21 462 4502. Fax: +27 (0)21 462 4509. Web: www.sahra.org.za).

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Traffic Impact Study

TRAFFIC IMPACT STUDY

Erf 1685 Kriel Ext 5

July 2016

Revised: July 2017



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ANNEXURES

Annexure A	Outputs of aaSIDRA Intersection Analyses
Annexure B	Queuing Analysis
Annexure C	Proposed Site Layout

1 INTRODUCTION

Route² – Transport Strategies have been appointed to undertake a pre-feasibility Traffic Impact Study for the proposed Petrol Filling Station and related uses on the Erf 1685 Kriel Ext 5 in Mpumalanga Province.

The site is located to the east of the R547 and south of the centre of the town.



The site

2 SCOPE OF THE REPORT

The purpose of this report is to identify the potential traffic impact of the Petrol Filling Station and what access requirements there will be. The study area, development trip generation, trip distribution, capacity analysis and site access requirements are assessed in the report.

2.1 Study Area

The extent of the study area is driven by an estimation of the traffic generated by the proposed development and the intersections likely to be affected. The Petrol Filling Station is expected to generate a **5% - 10%** pull off during the peak hours along both the R547 and Green Avenue. The study includes the intersections of:

- Green Avenue and Crystal Crescent
- Green Avenue and Vredenhof Avenue
- Proposed Access off the R547.

2.2 Peak Hours Analysed

Peak AM and PM traffic counts were conducted along the R547 and Green Avenue on Tuesday 14 June 2016.

The AM peak (07:00 – 08:00) and PM Peak (16:00 – 17:00) traffic are summarised in **Figure 2**.

2.3 Assessment Scenarios

To determine the likely impact of the proposed left-in and left-out along the R547 and the potential impact along Green Avenue the following two scenarios were analysed:

- **Base 2017** peak hour flows with PFS traffic; and
- **Future 2021**.

3 SURROUNDING ROAD NETWORK

As shown in **Figure 1** the proposed development is located to the east of the R547 a Provincial Road from which a left-in and left-out access is proposed.



Green Avenue is a Class 4b distributor road from which full access is proposed.



Green Avenue at Vredenhof Avenue

4 DEVELOPMENT

It is proposed to Rezone the site from for “Business” use including a Petrol Filling Station with related uses namely a Fresh Stop.

5 TRAFFIC FLOWS & TRIP GENERATION

5.1 Trip Generation

The trip generation for the PFS was derived by allowing for a 5% - 10% pull off from the existing peak hour traffic. If 10% of this traffic, make use of the PFS then it would be 100 vehicles in and out during the peak hours which is assessed in this report.

5.2 Trip Distribution

The following distribution was used:

- 35% from the south along R547
- 35% from the north along R547
- 20% from the north along Green Avenue
- 10% from the south along Green Avenue.

6 TRAFFIC IMPACT & CAPACITY ANALYSES

6.1 Assessment Criteria

The intersections have been analysed using aaSIDRA traffic analysis software. SIDRA is a computer program that provides several performance measures including v/c ratios, delays, level of service (LOS), etc.

When elements of a road network such as intersections are analyzed, their operating conditions are described in terms of LOS. The six letters from A to F are used to indicate different LOS. LOS A indicates very light traffic with correspondingly low delays. LOS E reflects capacity conditions, with high delays and unstable flow. LOS F reflects conditions where traffic demand exceeds capacity and traffic experiences congestion and delays. Generally, LOS A to D is considered acceptable in accordance with international standards. LOS E and F on the other hand are deemed unacceptable.

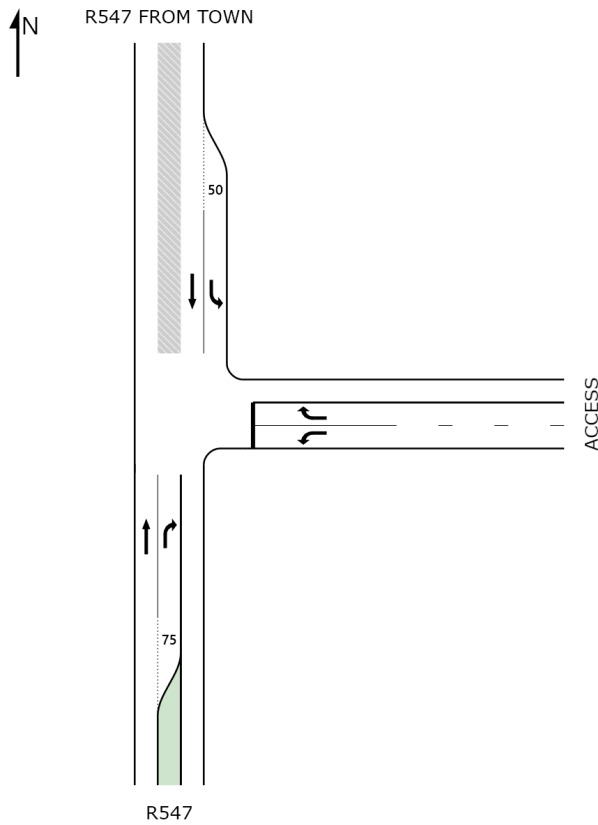
A further measure of the operating conditions prevailing at any one point in a road network is the volume to capacity ratio (v/c). As the name implies it is the traffic demand volume divided by the available capacity of the roadway element. Generally, ratios of up to approximately 0.9 are internationally deemed acceptable.

Results of the aaSIDRA capacity analyses at the intersections are discussed in the following sub sections, with details of the outputs enclosed in **Annexure A**.

6.2 Background Traffic

The analysis results of the background traffic with PFS traffic includes a 5% growth per annum.

6.3 Proposed R547 and Full Access Intersection

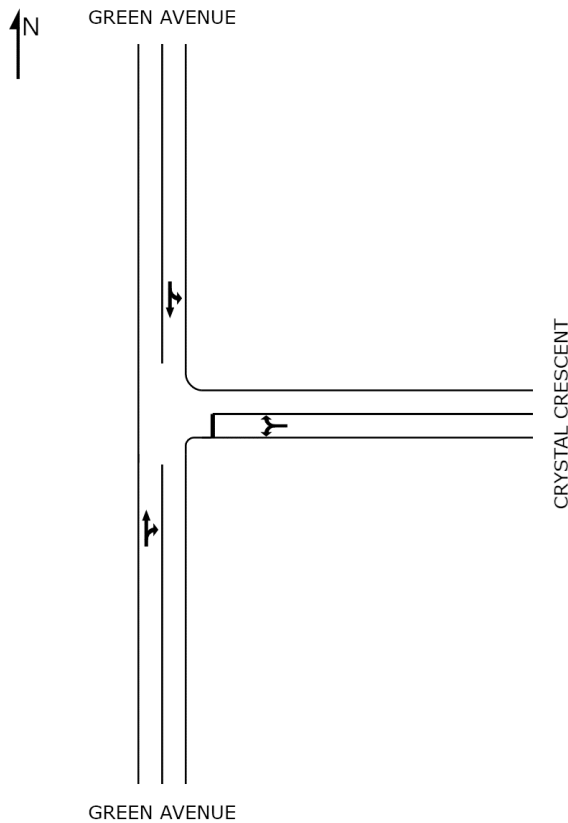


Results of Analysis:

Scenario	AM Peak Hour					PM Peak Hour				
	NB	WB	SB	EB	TOTAL	NB	WB	SB	EB	TOTAL
Base 2017 + PFS	N/A {0.23}	C {0.11}	N/A {0.12}		N/A {0.23}	N/A {0.17}	C {0.12}	N/A {0.21}		N/A {0.21}
Future 2021	N/A {0.28}	C {0.16}	N/A {0.15}		N/A {0.28}	N/A {0.21}	C {0.18}	N/A {0.26}		N/A {0.26}
Legend										
A	Level of Service									
(12.7)	Delay in Seconds									
{0.95}	Volume / Capacity									
[20]	Longest Average Queue in meters									

For the two scenarios, the results show that the proposed access off the R547 will operate sufficiently during the peak hours analysed.

6.4 Green Avenue and Crystal Crescent Intersection

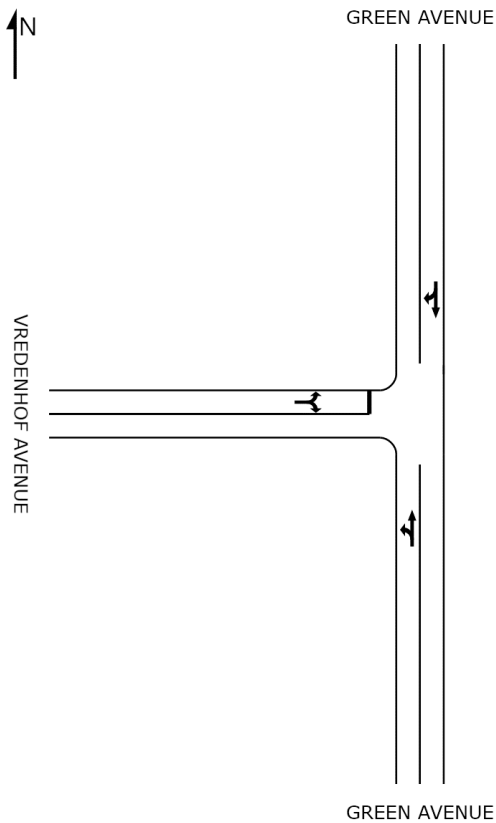


Results of Analysis:

Scenario	AM Peak Hour					PM Peak Hour				
	NB	WB	SB	EB	TOTAL	NB	WB	SB	EB	TOTAL
Base 2017 + PFS	N/A {0.05}	B {0.34}	N/A {0.18}		N/A {0.34}	N/A {0.06}	B {0.08}	N/A {0.05}		N/A {0.08}
Future 2021	N/A {0.05}	B {0.43}	N/A {0.21}		N/A {0.43}	N/A {0.07}	B {0.09}	N/A {0.06}		N/A {0.09}
Legend										
A	Level of Service									
(12.7)	Delay in Seconds									
{0.95}	Volume / Capacity									
[20]	Longest Average Queue in meters									

For the two scenarios, the results show that the intersection operates sufficiently during the peak hours analysed. No upgrades are proposed.

6.5 Green Avenue and Vredenhof Avenue Intersection



Results of Analysis:

Scenario	AM Peak Hour					PM Peak Hour				
	NB	WB	SB	EB	TOTAL	NB	WB	SB	EB	TOTAL
Base 2017 + PFS	N/A {0.03}		N/A {0.09}	B {0.03}	N/A {0.09}	N/A {0.04}		N/A {0.04}	B {0.04}	N/A {0.04}
Future 2021	N/A {0.04}		N/A {0.11}	B {0.03}	N/A {0.11}	N/A {0.04}		N/A {0.05}	B {0.05}	N/A {0.05}
Legend										
A	Level of Service									
(12.7)	Delay in Seconds									
{0.95}	Volume / Capacity									
[20]	Longest Average Queue in meters									

For the two scenarios, the results show that the intersection operates sufficiently during the peak hours analysed. No upgrades are proposed.

7 ACCESS REQUIREMENTS

7.1 Access Location

A full intersection is proposed off R547 as well as full access off Green Avenue. The expected peak hour flows through the access points are as follow:

- AM Peak Hour: 100 inbound and 100 outbound
- PM Peak Hour: 100 inbound and 100 outbound

The document COTO TMH 16 Volume 2 was used to guide the design of the access point. The following is therefore proposed for the access:

- Incoming lanes 2 x 3,5m (4,5m clearance).
- Outgoing lane 2 x 3,5m (4,5m clearance)

7.2 Sight Distance and Layout

The proposed accesses have sufficient sight distance in both directions.

7.3 Stacking Distance

Table 3 below gives a breakdown of the queuing analysis as per **Annexure C**.

Table 3: Queuing Analysis

Description	Access Controls
Peak Hour Inbound Traffic Volume	100
Service Rate per Hour	500
Service Rate per Second	7.2
Number of Entry Lanes	2
Number of Vehicles Waiting	0
Average Delay in Seconds	0.1
Stacking Required	N/A

8 CONCLUSION & RECOMMENDATIONS

The proposed development will comprise a Petrol Filling Station and related Retail uses.

With regards to traffic generation and impact, it is estimated that as a worst case that the PFS could generate up to 100 peak hour trips during a typical weekday inbound and outbound.

It is proposed and can be concluded:

- ***That the accesses into the PFS consists of two lanes in and two lanes out and is wide enough to cater for trucks to deliver fuel.***
- ***That a proper turning facilities are provided on the site.***
- ***That refuse removal should be on site.***
- ***That the required parking is provided on the site.***

Figures

Annexure A

OUTPUTS OF aaSIDRA INTERSECTION ANALYSES

Annexure B

QUEUING ANALYSIS

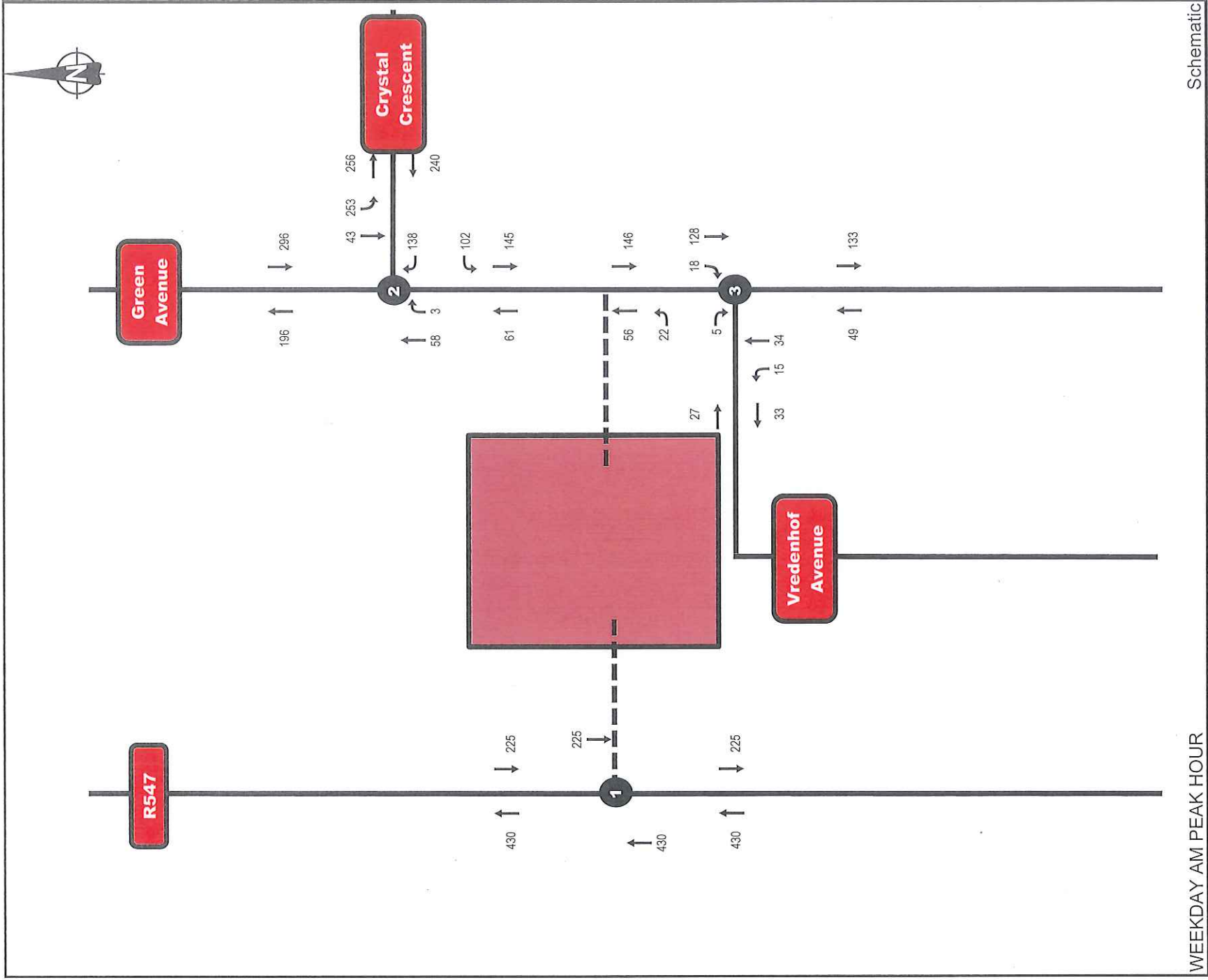
Erf 1685 Kriel

Analysis of queues at the Main Entrance for

		1 Gate		2 Gates		3 Gates		4 Gates	
Peak hour traffic volume	=	100 veh / h		100 veh / h		100 veh / h		100 veh / h	
Peak hour factor	=	1		1		1		1	
Average arrival rate at peak	Q =	100 veh / h		100 veh / h		100 veh / h		100 veh / h	
Average service rate		7.2 sec / veh		7.2 sec / veh		7.2 sec / veh		7.2 sec / veh	
	C =	500 services/h		500 services/h		500 services/h		500 services/h	
Traffic intensity	ϕ =	0.20		0.20		0.20		0.20	
Number of channels	N =	1 gate		2 gates		3 gates		4 gates	
Traffic intensity per service channel	θ =	na		0.10		0.07		0.05	
Probability that n vehicles will be in the system									
	n	$P(x=n)$	$P(x \leq n)$	$P(x=n)$	$P(x \leq n)$	$P(x=n)$	$P(x \leq n)$	$P(x=n)$	$P(x \leq n)$
	P_0 =	0.80	0.20	0.82	0.18	0.77	0.23	0.75	0.25
	P_1 =	0.16	0.84	0.16	0.84	0.15	0.85	0.15	0.85
	P_2 =	0.03	0.97	0.02	0.98	0.02	0.98	0.01	0.99
	P_3 =	0.01	0.99	0.00	1.00	0.00	1.00	0.00	1.00
	P_4 =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_5 =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_6 =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_7 =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_8 =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_9 =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_{10} =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
	P_{11} =	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Average number in the system E(n)	=	0.3 vehicles		0.0 vehicles		0.0 vehicles		0.0 vehicles	
Average delay	=	9.0 seconds		0.1 seconds		0.0 seconds		0.0 seconds	
Average Vehicles per gate	=	0.3 vehicles		0.0 vehicles		0.0 vehicles		0.0 vehicles	

Annexure C

PROPOSED SITE LAYOUT



WEEKDAY AM PEAK HOUR

Schematic

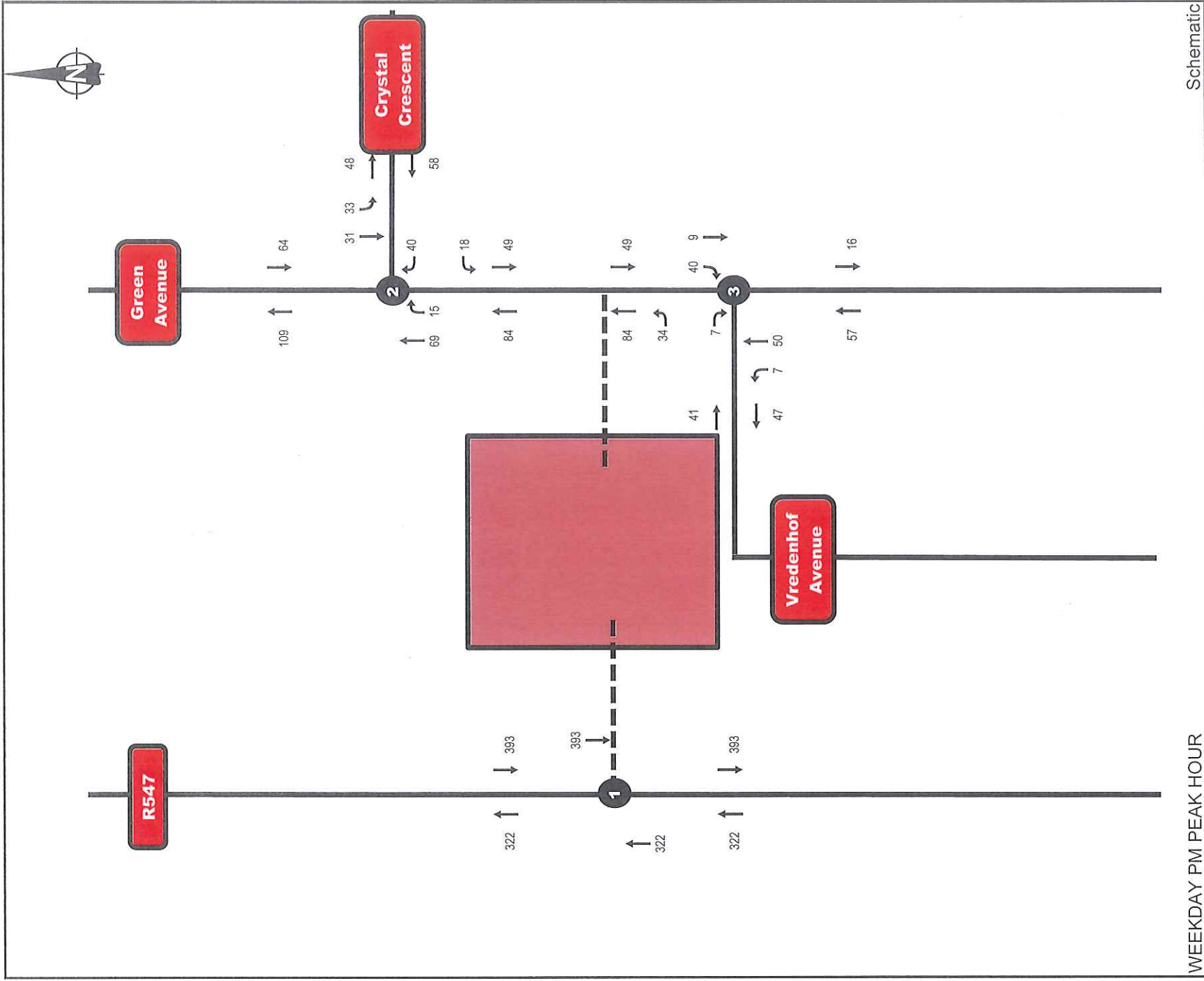
route 2
transport strategies

Erf 1685 Kriel

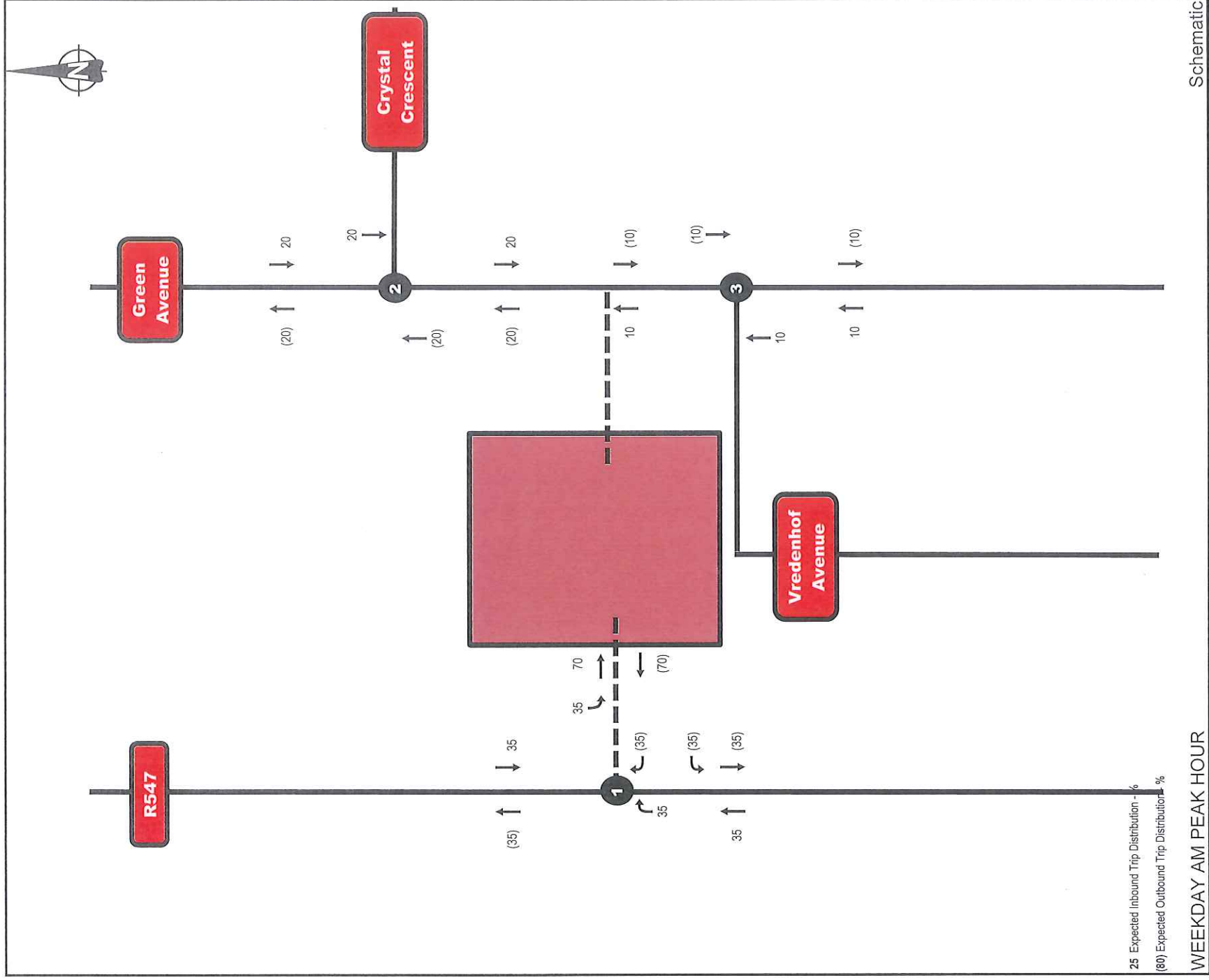
Job Ref No:
TRAF 1065

Present Traffic Demand (2016)

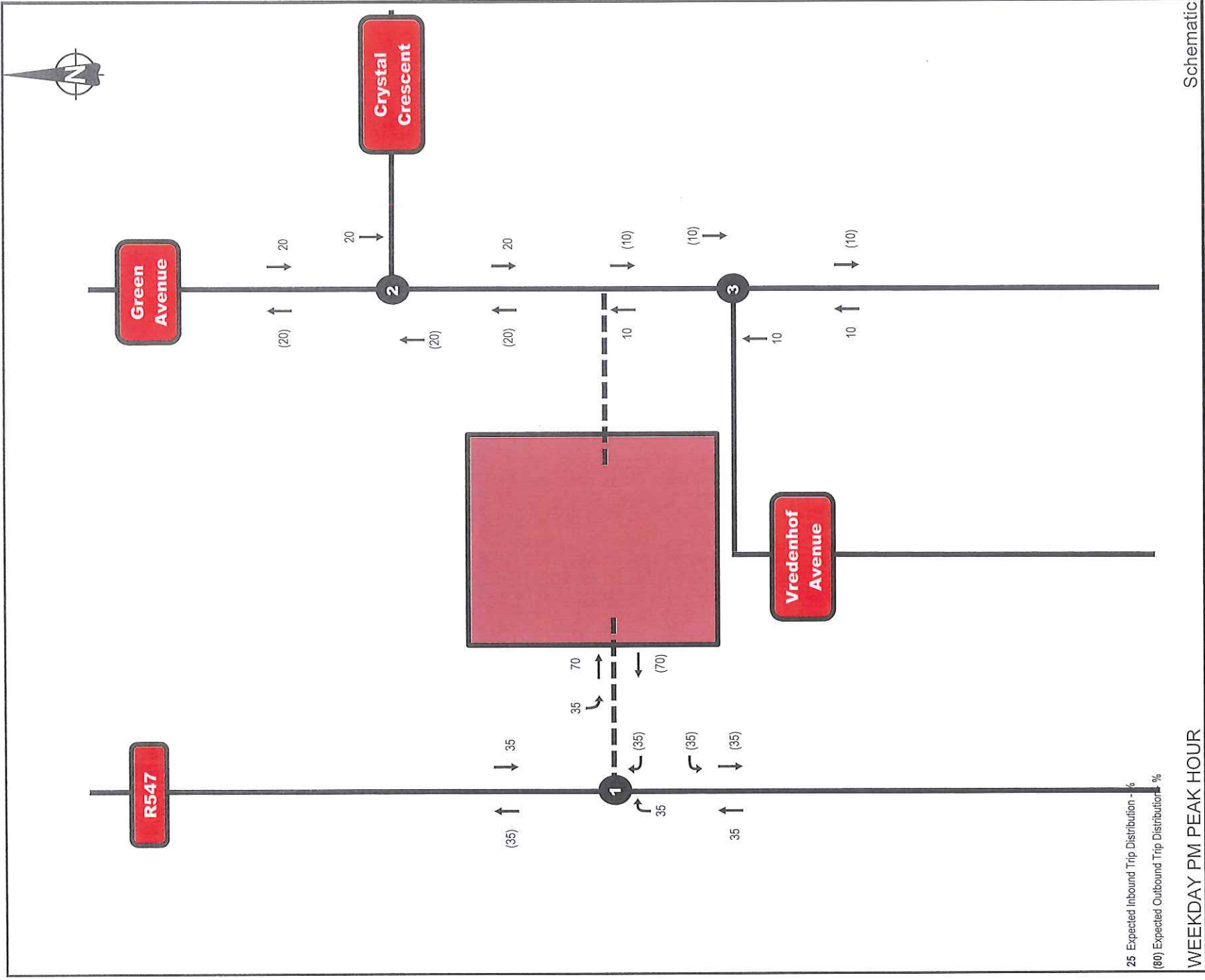
Fig:
2



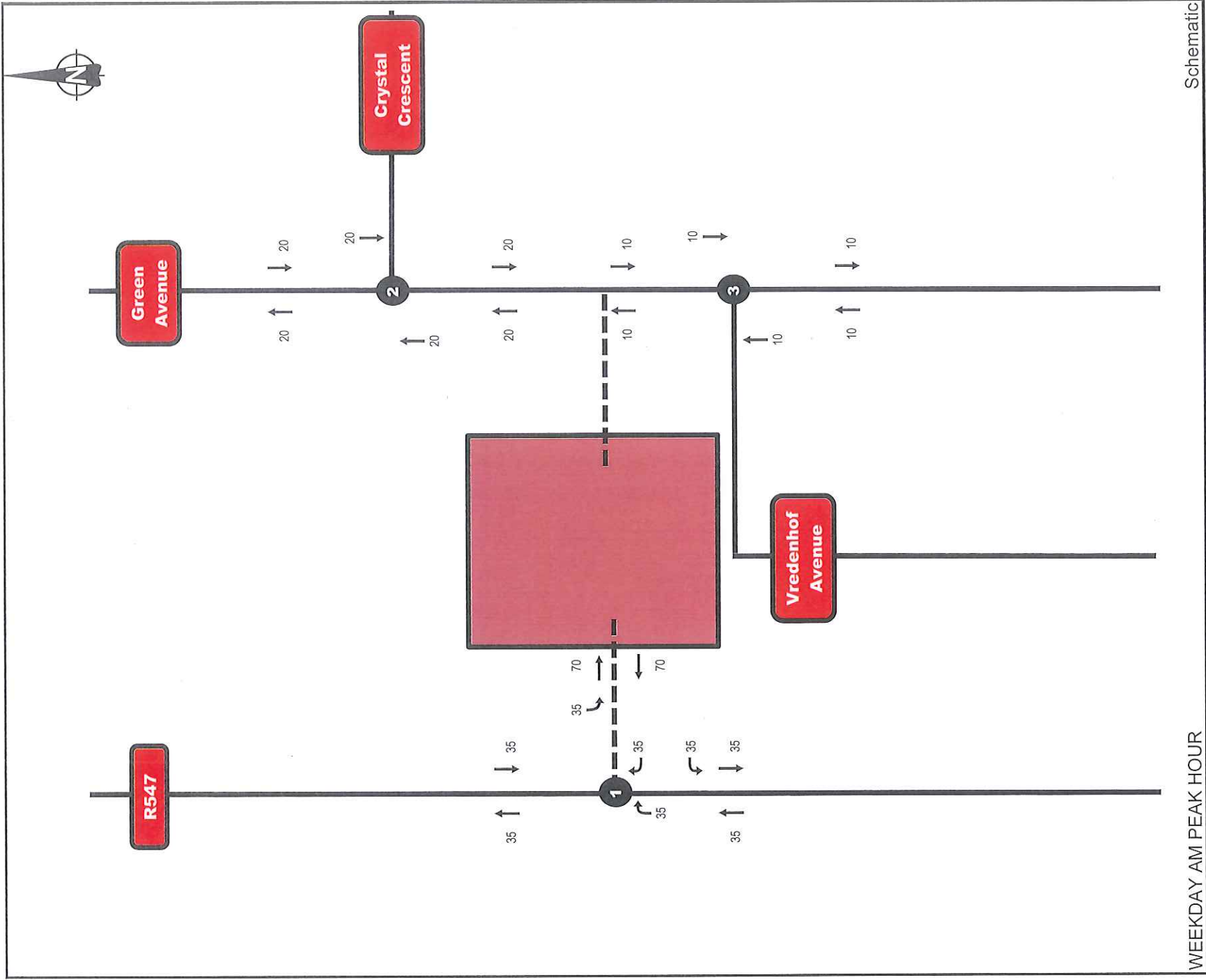
route 2 transport strategies	Erf 1685 Kriel	Job Ref No: TRAF 1065
Present Traffic Demand (2016)		Fig: 3



	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Expected Trip Distribution	Fig: 4



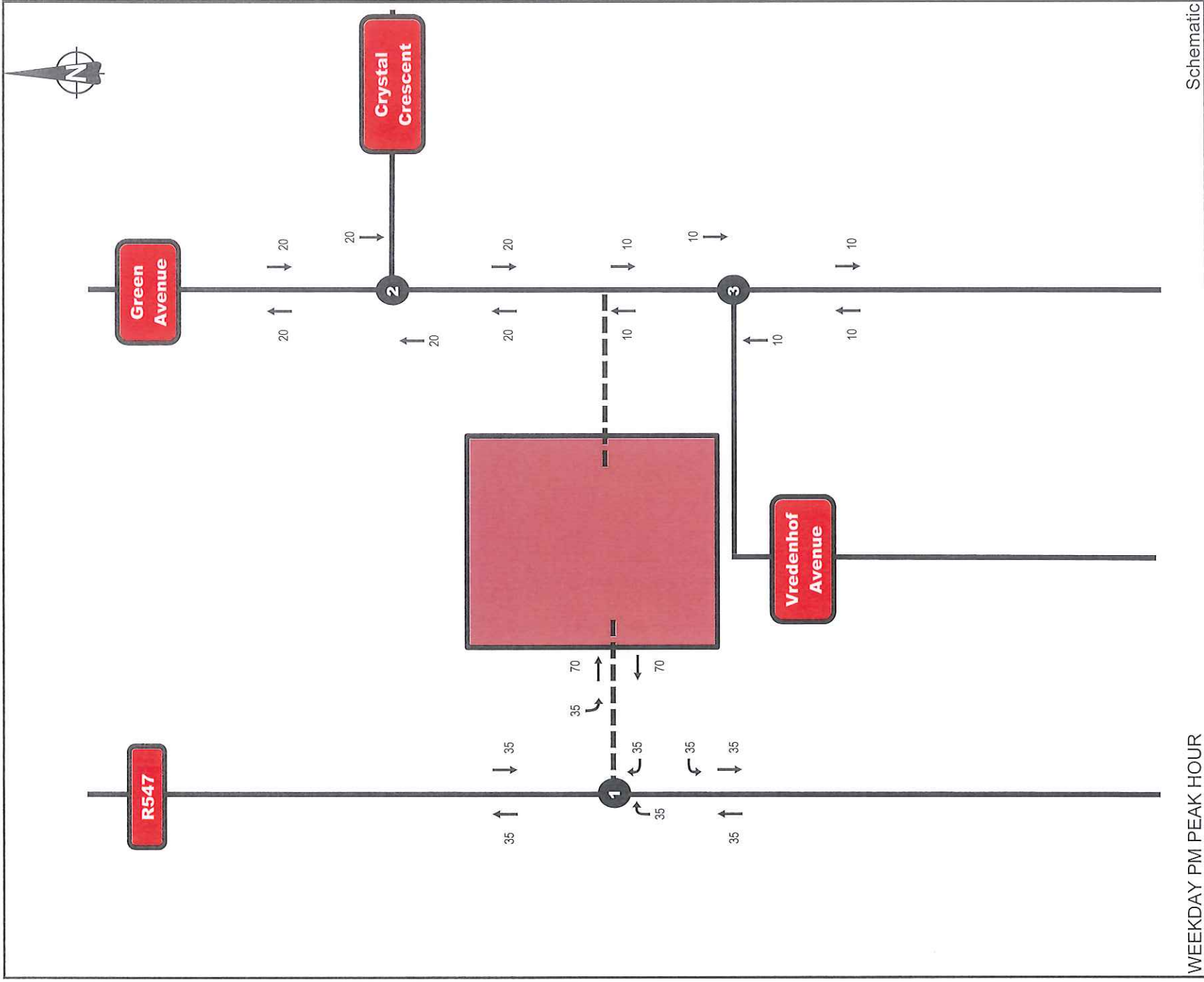
	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Expected Trip Distribution	Fig: 5



WEEKDAY AM PEAK HOUR

Schematic

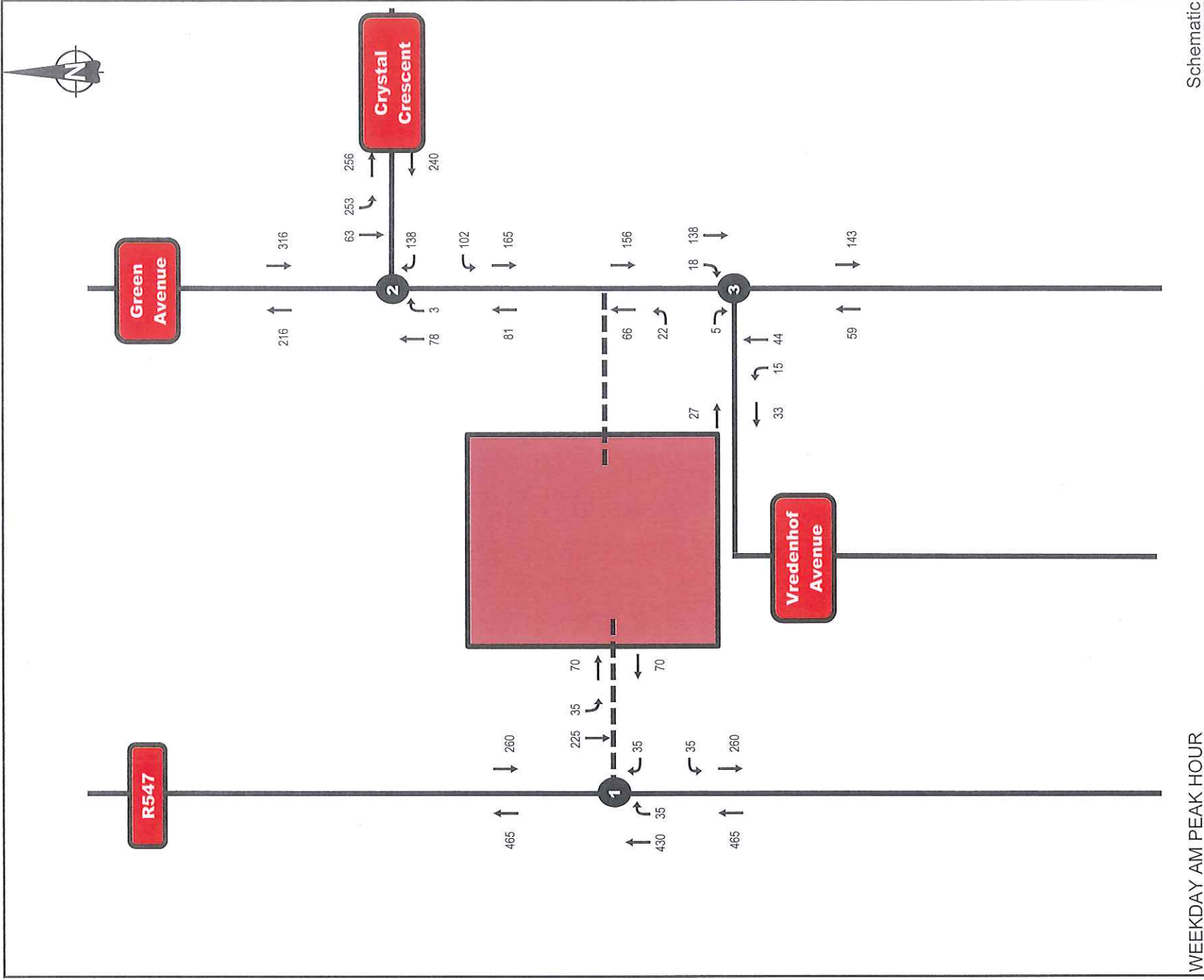
	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Development Traffic	Fig: 6




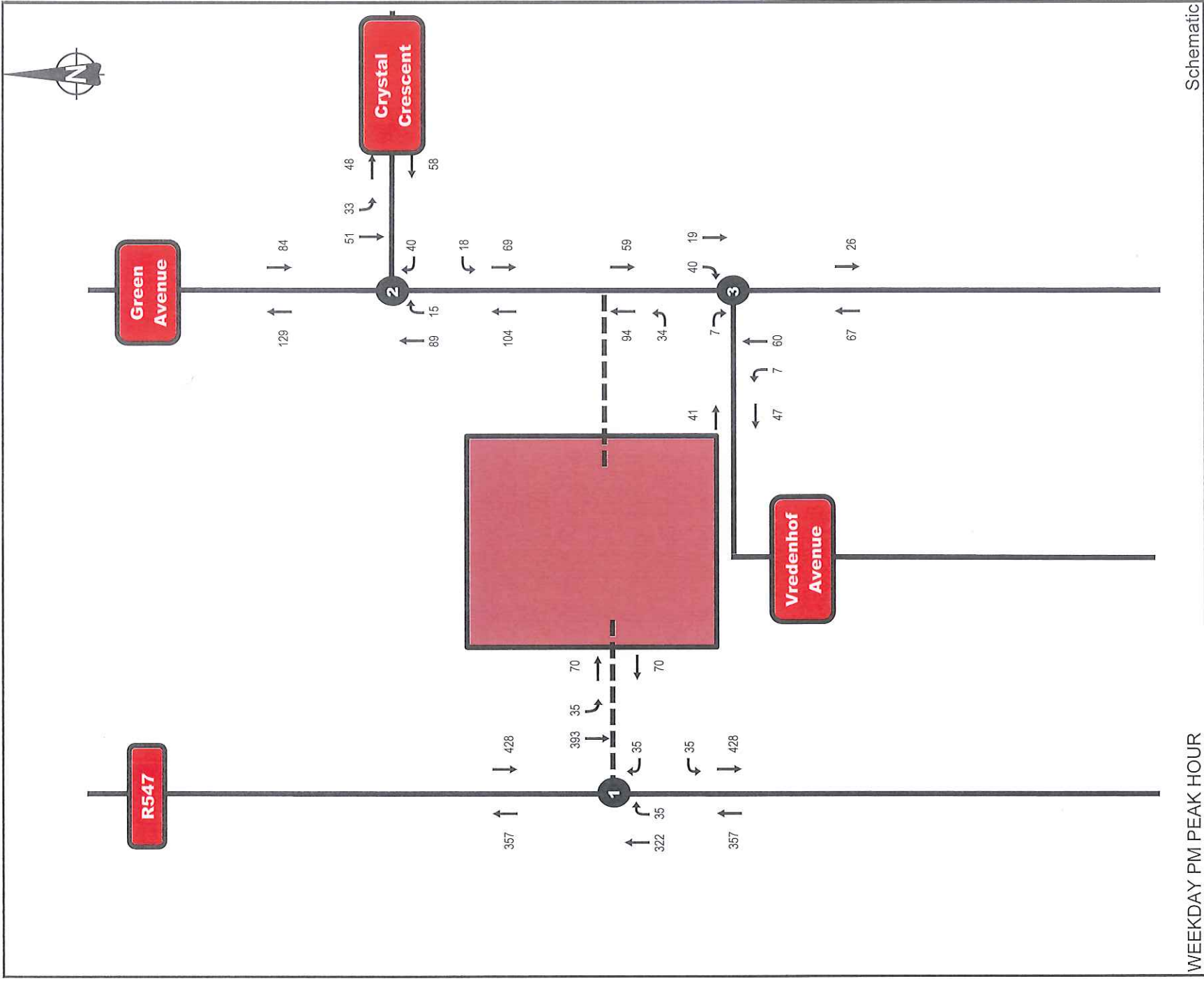
WEEKDAY PM PEAK HOUR

Schematic

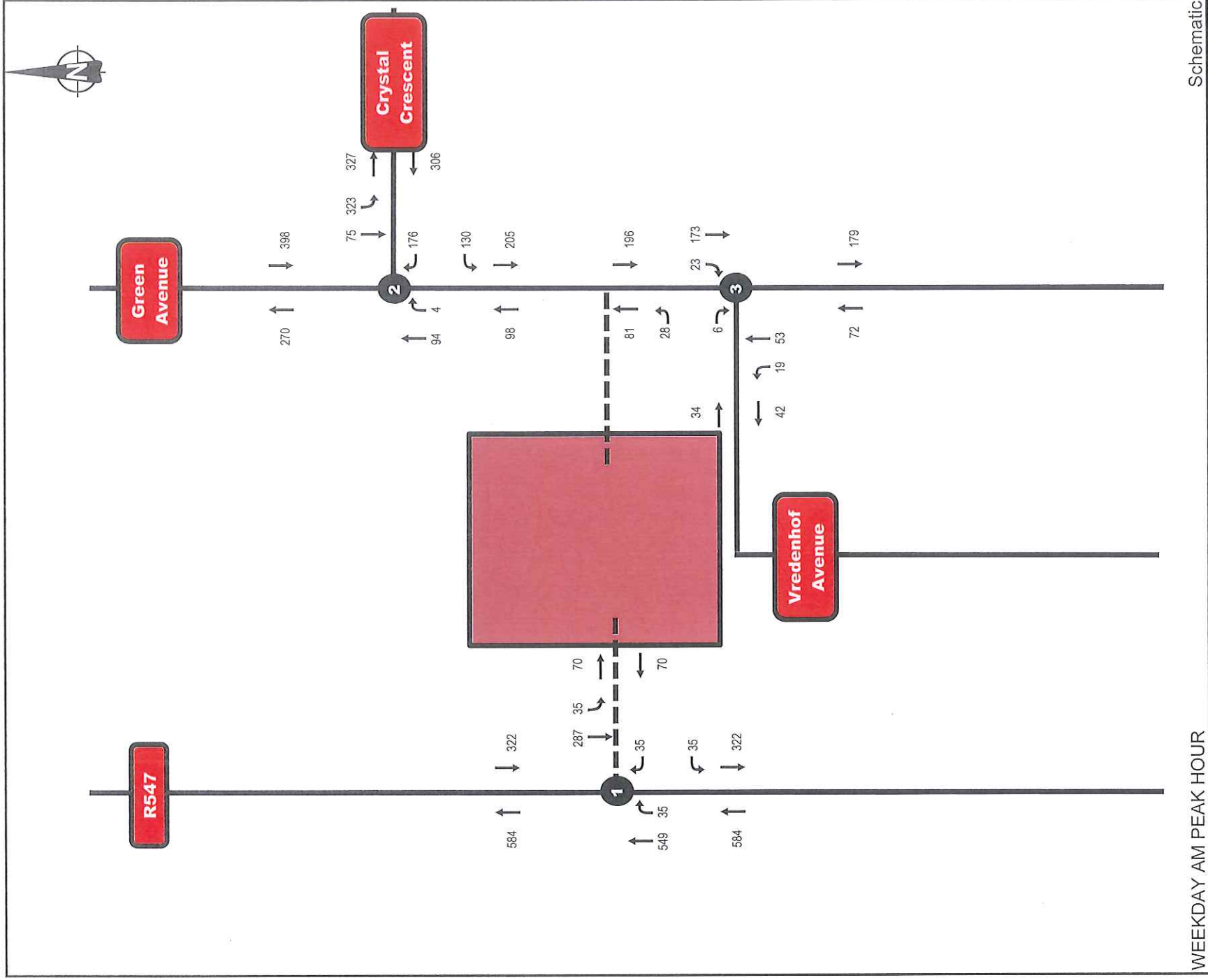
	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Development Traffic	Fig: 7



	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Present Traffic Demand plus Development	Fig: 8



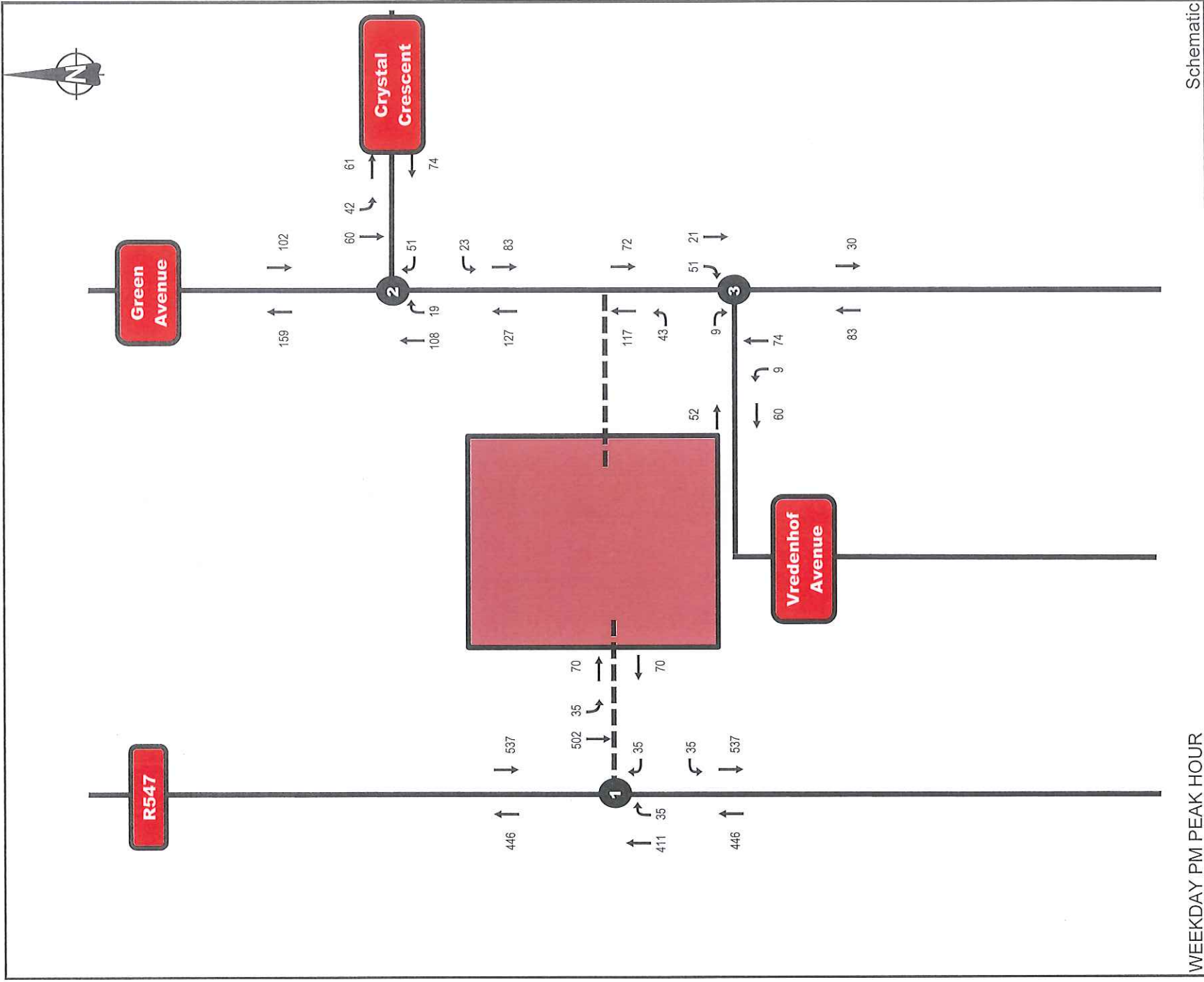
	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Present Traffic Demand plus Development	Fig: 9



WEEKDAY AM PEAK HOUR

Schematic

	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Expected 2021 Traffic Demand plus Development	Fig: 10



WEEKDAY PM PEAK HOUR

Schematic

	Erf 1685 Kriel	Job Ref No: TRAF 1065
	Expected 2021 Traffic Demand plus Development	Fig: 11

LANE SUMMARY

Site: 2017AM1+ PFS

R547 / Access
Stop (Two-Way)

Lane Use and Performance

Demand Flows		Deg. Satn		HV Cap.		Total		Lane Util.		Average Delay		Level of Service		95% Back of Queue		Lane Length		SL Type		Cap. Prob.		
L	T	R	v/c	%	veh/h	%	veh/h	%	%	sec	LOS	veh	m	m	veh	%	m	Turn	Bay	%	Block.	
veh/h	veh/h	veh/h																				
South: R547																						
Lane 1	0	453	0	453	0.0	1950	0.232	100	100	0.0	LOSA	0.0	0.0	0.0	0.0	0.0	500	-	-	0.0	0.0	
Lane 2	0	0	37	37	0.0	1150	0.032	100	100	9.2	LOSA	0.1	0.8	0.1	0.8	0.0	75	Turn	Bay	0.0	0.0	
Approach	0	453	37	489	0.0	0.232				0.7	NA	0.1	0.8									
East: ACCESS																						
Lane 1	37	0	0	37	0.0	959	0.038	100	100	11.7	LOS B	0.1	0.8	0.1	0.8	0.0	50	-	-	0.0	0.0	
Lane 2	0	0	37	37	0.0	340	0.108	100	100	19.4	LOS C	0.3	2.3	0.3	2.3	0.0	50	-	-	0.0	0.0	
Approach	37	0	37	74	0.0	0.108				15.6	LOS C	0.3	2.3									
North: R547 FROM TOWN																						
Lane 1	37	0	0	37	0.0	1857	0.020	100	100	8.2	LOSA	0.0	0.0	0.0	0.0	0.0	50	Turn	Bay	0.0	0.0	
Lane 2	0	237	0	237	0.0	1950	0.121	100	100	0.0	LOSA	0.0	0.0	0.0	0.0	0.0	500	-	-	0.0	0.0	
Approach	37	237	0	274	0.0	0.121				1.1	NA	0.0	0.0									
Intersection	837 0.0 0.232 2.1 NA 0.3 2.3																					

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2017PM1+ PFS

R547 / Access
Stop (Two-Way)

Lane Use and Performance

Demand Flows															
L	T	R	Total	HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue	Vehicles	Distance	Lane Length	SL Type	Cap. Prob.
veh/h	veh/h	veh/h	veh/h	%	veh/h	v/c	%	sec		veh	m	m	m		%
South: R547															
Lane 1	0	339	0	339	0.0	1950	0.174	100	0.0	LOSA	0.0	0.0	500	-	0.0
Lane 2	0	0	37	37	0.0	980	0.038	100	10.0	LOS B	0.1	0.9	75	Turn Bay	0.0
Approach	0	339	37	376	0.0		0.174		1.0	NA	0.1	0.9			
East: ACCESS															
Lane 1	37	0	0	37	0.0	807	0.046	100	12.7	LOS B	0.1	1.0	50	-	0.0
Lane 2	0	0	37	37	0.0	309	0.119	100	20.8	LOS C	0.4	2.5	50	-	0.0
Approach	37	0	37	74	0.0		0.119		16.7	LOS C	0.4	2.5			
North: R547 FROM TOWN															
Lane 1	37	0	0	37	0.0	1857	0.020	100	8.2	LOSA	0.0	0.0	50	Turn Bay	0.0
Lane 2	0	414	0	414	0.0	1950	0.212	100	0.0	LOSA	0.0	0.0	500	-	0.0
Approach	37	414	0	451	0.0		0.212		0.7	NA	0.0	0.0			
Intersection				900	0.0		0.212		2.1	NA	0.4	2.5			

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2021AM1+ PFS

R547 / Access
Stop (Two-Way)

Lane Use and Performance

Demand Flows		Deg. Satn		HV Cap.		Lane Util.		Average Delay		Level of Service		95% Back of Queue		Lane Length		SL Type		Cap. Prob.	
L	T	R	Total	% v/c	% veh/h	Cap. veh/h	Util. %	Delay sec	Service	Vehicles	Distance	m	SL	Type	m	Cap. Prob. %	Adj. Block. %		
South: R547																			
Lane 1	0	543	0	543	0.0	1950	0.279	100	0.0	LOSA	0.0	0.0	500	-	500	0.0	0.0	0.0	0.0
Lane 2	0	0	44	44	0.0	1096	0.040	100	9.5	LOSA	0.1	1.0	75	Turn Bay	75	0.0	0.0	0.0	0.0
Approach	0	543	44	587	0.0	0.279			0.7	NA	0.1	1.0							
East: ACCESS																			
Lane 1	44	0	0	44	0.0	913	0.048	100	12.0	LOS B	0.2	1.1	50	-	50	0.0	0.0	0.0	0.0
Lane 2	0	0	44	44	0.0	271	0.163	100	22.9	LOS C	0.5	3.4	50	-	50	0.0	0.0	0.0	0.0
Approach	44	0	44	88	0.0	0.163			17.5	LOS C	0.5	3.4							
North: R547 FROM TOWN																			
Lane 1	44	0	0	44	0.0	1857	0.024	100	8.2	LOSA	0.0	0.0	50	Turn Bay	50	0.0	0.0	0.0	0.0
Lane 2	0	284	0	284	0.0	1950	0.146	100	0.0	LOSA	0.0	0.0	500	-	500	0.0	0.0	0.0	0.0
Approach	44	284	0	328	0.0	0.146			1.1	NA	0.0	0.0							
Intersection	1004		0.0	0.279					2.3	NA	0.5	3.4							

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2021PM1+ PFS

R547 / Access
Stop (Two-Way)

Lane Use and Performance

	Demand Flows			Total veh/h	HV % veh/h	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Prob. Adj. Block. %
	L veh/h	T veh/h	R veh/h												
South: R547															
Lane 1	0	407	0	407	0.0	1950	0.209	100	0.0	LOSA	0.0	0.0	500	-	0.0
Lane 2	0	0	44	44	0.0	898	0.049	100	10.5	LOS B	0.2	1.2	75	Turn Bay	0.0
Approach	0	407	44	451	0.0	0.209			1.0	NA	0.2	1.2			0.0
East: ACCESS															
Lane 1	44	0	0	44	0.0	737	0.060	100	13.3	LOS B	0.2	1.3	50	-	0.0
Lane 2	0	0	44	44	0.0	241	0.183	100	25.0	LOS D	0.5	3.8	50	-	0.0
Approach	44	0	44	88	0.0	0.183			19.2	LOS C	0.5	3.8			0.0
North: R547 FROM TOWN															
Lane 1	44	0	0	44	0.0	1857	0.024	100	8.2	LOSA	0.0	0.0	50	Turn Bay	0.0
Lane 2	0	496	0	496	0.0	1950	0.255	100	0.0	LOSA	0.0	0.0	500	-	0.0
Approach	44	496	0	541	0.0	0.255			0.7	NA	0.0	0.0			0.0
Intersection				1080	0.0	0.255			2.3	NA	0.5	3.8			

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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INTERSECTION

LANE SUMMARY

Site: 2017AM2 + PFS

GREEN AVENUE / CRYSTAL CRESCENT
Stop (Two-Way)

Lane Use and Performance

Demand Flows																
L	T	R	Total HV veh/h	Cap. % veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance m	Lane Length m	SL Type	Cap. Prob. Adj. Block. %			
														veh/h	veh/h	veh/h
South: GREEN AVENUE																
Lane 1	0	82	3	85	0.0	1891	0.045	100	1.8	LOSA	0.3	2.1	500	-	0.0	0.0
Approach	0	82	3	85	0.0	0.045			1.8	NA	0.3	2.1				
East: CRYSTAL CRESCENT																
Lane 1	107	0	145	253	0.0	746	0.339	100	13.0	LOS B	1.4	10.0	500	-	0.0	0.0
Approach	107	0	145	253	0.0	0.339			13.0	LOS B	1.4	10.0				
North: GREEN AVENUE																
Lane 1	266	66	0	333	0.0	1875	0.177	100	6.6	LOSA	0.0	0.0	500	-	0.0	0.0
Approach	266	66	0	333	0.0	0.177			6.6	NA	0.0	0.0				
Intersection				671	0.0	0.339			8.4	NA	1.4	10.0				

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2017PM2 + PFS

GREEN AVENUE / CRYSTAL CRESCENT
Stop (Two-Way)

Lane Use and Performance																
Demand Flows				Deg. Satn	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles	Distance m	Lane Length m	SL Type	Cap. Prob. Adj. Block. %	%			
L	T	R	Total HV													
veh/h	veh/h	veh/h	% veh/h	v/c	%	sec		veh	m	m		%	%			
South: GREEN AVENUE																
Lane 1	0	94	16	109	0.0	1829	0.060	100	1.5	LOSA	0.3	2.2	500	-	0.0	0.0
Approach	0	94	16	109	0.0	0.060			1.5	NA	0.3	2.2				
East: CRYSTAL CRESCENT																
Lane 1	19	0	42	61	0.0	813	0.075	100	11.6	LOS B	0.3	1.8	500	-	0.0	0.0
Approach	19	0	42	61	0.0	0.075			11.6	LOS B	0.3	1.8				
North: GREEN AVENUE																
Lane 1	35	54	0	88	0.0	1912	0.046	100	3.2	LOSA	0.0	0.0	500	-	0.0	0.0
Approach	35	54	0	88	0.0	0.046			3.2	NA	0.0	0.0				
Intersection				259	0.0	0.075			4.5	NA	0.3	2.2				

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2021AM2 + PFS

GREEN AVENUE / CRYSTAL CRESCENT
Stop (Two-Way)

Lane Use and Performance														
Demand Flows														
L	T	R	Total	HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue	Lane Length	SL Type	Cap. Prob.	
veh/h	veh/h	veh/h	veh/h	% veh/h	veh/h	v/c	%	sec		veh	m		%	
South: GREEN AVENUE														
Lane 1	0	99	4	102	0.0	1881	0.054	100	2.2	LOSA	2.6	500	-	0.0
Approach	0	99	4	102	0.0	0.054		2.2	NA	0.4	2.6			0.0
East: CRYSTAL CRESCENT														
Lane 1	129	0	174	303	0.0	698	0.434	100	14.6	LOS B	17.2	500	-	0.0
Approach	129	0	174	303	0.0	0.434		14.6	LOS B	2.5	17.2			0.0
North: GREEN AVENUE														
Lane 1	320	80	0	399	0.0	1875	0.213	100	6.6	LOSA	0.0	500	-	0.0
Approach	320	80	0	399	0.0	0.213		6.6	NA	0.0	0.0			0.0
Intersection			805	0.0	0.434			9.0	NA	2.5	17.2			

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2021PM2 + PFS

GREEN AVENUE / CRYSTAL CRESCENT
Stop (Two-Way)

Lane Use and Performance																
Demand Flows																
L	T	R	Total HV	Cap.	Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue	Lane Length	SL Type	Cap. Prob.	Adj. Block.			
veh/h	veh/h	veh/h	% veh/h	veh/h	v/c	%	sec		veh	m		%	%			
South: GREEN AVENUE																
Lane 1	0	112	19	131	0.0	1823	0.072	100	1.6	LOSA	0.4	2.7	500	-	0.0	0.0
Approach	0	112	19	131	0.0	0.072		1.6	NA	0.4	2.7					
East: CRYSTAL CRESCENT																
Lane 1	23	0	51	73	0.0	782	0.094	100	11.9	LOS B	0.3	2.3	500	-	0.0	0.0
Approach	23	0	51	73	0.0	0.094		11.9	LOS B	0.3	2.3					
North: GREEN AVENUE																
Lane 1	42	64	0	106	0.0	1912	0.055	100	3.2	LOSA	0.0	0.0	500	-	0.0	0.0
Approach	42	64	0	106	0.0	0.055		3.2	NA	0.0	0.0	0.0				
Intersection	311		0.0	0.094		4.6	NA	0.4	2.7							

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2017AM3 + PFS

GREEN AVENUE / VREDENHOF AVENUE
Stop (Two-Way)

Lane Use and Performance														
Demand Flows				Deg. Satn		Lane Util.		Average Delay		Level of Service		95% Back of Queue		
L	T	R	Total	HV	Cap.	Satn	Util.	Delay	Service	Distance	SL	Cap. Prob.	Adj. Block.	
veh/h	veh/h	veh/h	veh/h	%	veh/h	v/c	%	sec		m	Type	%	%	
South: GREEN AVENUE														
Lane 1	16	46	0	62	0.0	1926	0.032	100	2.1	LOSA	0.0	0.0	500	0.0
Approach	16	46	0	62	0.0	0.032		2.1	NA	0.0				
North: GREEN AVENUE														
Lane 1	0	145	19	164	0.0	1858	0.088	100	1.2	LOSA	0.5	3.4	500	0.0
Approach	0	145	19	164	0.0	0.088		1.2	NA	0.5		3.4		
West: VREDENHOF AVENUE														
Lane 1	23	0	5	28	0.0	1018	0.028	100	11.1	LOS B	0.1	0.6	500	0.0
Approach	23	0	5	28	0.0	0.028		11.1	LOS B	0.1		0.6		
Intersection			255	0.0	0.088		2.5	NA		0.5		3.4		

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2017PM3 + PFS

GREEN AVENUE / VREDENHOF AVENUE
Stop (Two-Way)

Lane Use and Performance

Demand Flows																
L	T	R	Total HV veh/h	Cap. % veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Lane Length m	SL Type	Cap. Prob. Adj. Block. %			
														veh/h	veh/h	veh/h
South: GREEN AVENUE																
Lane 1	7	63	0	71	0.0	1940	0.036	100	0.9	LOS A	0.0	0.0	500	-	0.0	0.0
Approach	7	63	0	71	0.0		0.036		0.9	NA	0.0	0.0				
North: GREEN AVENUE																
Lane 1	0	20	42	62	0.0	1504	0.041	100	6.0	LOS A	0.2	1.2	500	-	0.0	0.0
Approach	0	20	42	62	0.0		0.041		6.0	NA	0.2	1.2				
West: VREDENHOF AVENUE																
Lane 1	36	0	7	43	0.0	1047	0.041	100	11.0	LOS B	0.1	1.0	500	-	0.0	0.0
Approach	36	0	7	43	0.0		0.041		11.0	LOS B	0.1	1.0				
Intersection			176		0.0	0.041			5.2	NA	0.2	1.2				

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2021AM3 + PFS

GREEN AVENUE / VREDENHOF AVENUE
Stop (Two-Way)

Lane Use and Performance

Demand Flows		Deg. Satn	Lane Util.	Average Delay	Level of Service	95% Back of Queue	Lane Length	SL Type	Cap. Prob. Adj. Block.					
L	T	v/c	%	sec		veh	m		%					
veh/h	veh/h		veh/h						%					
South: GREEN AVENUE														
Lane 1	19	56	0	75	0.0	1926	0.039	100	2.1	LOSA	0.0	0.0	0.0	0.0
Approach	19	56	0	75	0.0	0.039			2.1	NA	0.0	0.0		
North: GREEN AVENUE														
Lane 1	0	174	23	197	0.0	1855	0.106	100	1.3	LOSA	0.6	4.2	500	0.0
Approach	0	174	23	197	0.0	0.106			1.3	NA	0.6	4.2		
West: VREDENHOF AVENUE														
Lane 1	28	0	6	34	0.0	995	0.034	100	11.2	LOS B	0.1	0.8	500	0.0
Approach	28	0	6	34	0.0	0.034			11.2	LOS B	0.1	0.8		
Intersection			306	0.0	0.106				2.6	NA	0.6	4.2		

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.
SIDRA Standard Delay Model used.

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LANE SUMMARY

Site: 2021PM3 + PFS

GREEN AVENUE / VREDENHOF AVENUE
Stop (Two-Way)

Lane Use and Performance

Demand Flows															
L	T	R	Total	HV	Cap.	Deg.	Lane	Average	Level of	95% Back of Queue	Distance	Lane	SL	Cap. Prob.	
															veh/h
South: GREEN AVENUE															
Lane 1	9	76	0	85	0.0	1940	0.044	100	0.9	LOSA	0.0	0.0	500	-	0.0
Approach	9	76	0	85	0.0	0.044			0.9	NA	0.0	0.0			0.0
North: GREEN AVENUE															
Lane 1	0	24	51	75	0.0	1490	0.050	100	6.0	LOSA	0.2	1.5	500	-	0.0
Approach	0	24	51	75	0.0	0.050			6.0	NA	0.2	1.5			0.0
West: VREDENHOF AVENUE															
Lane 1	43	0	9	52	0.0	1029	0.050	100	11.1	LOS B	0.2	1.2	500	-	0.0
Approach	43	0	9	52	0.0	0.050			11.1	LOS B	0.2	1.2			0.0
Intersection				211	0.0	0.050			5.2	NA	0.2	1.5			

Level of Service (LOS) Method: Delay (HCM 2000).

Lane LOS values are based on average delay per lane.

Minor Road Approach LOS values are based on average delay for all lanes.

NA: Intersection LOS and Major Road Approach LOS values are Not Applicable for two-way sign control since the average delay is not a good LOS measure due to zero delays associated with major road lanes.

SIDRA Standard Delay Model used.

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