

BOTHAS HILL PETROL FILLING STATION AND RETAIL CENTRE FEASIBILITY AND SOCIO-ECONOMIC IMPACT ASSESSMENT – MAY 2021



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ACRONYM AND ABBREVIATIONS

ACRONYM	EXPLANATION		
AI	Artificial Intelligence		
Appr.	Approximately		
ATM	Automated Teller Machine		
BHDKNQI	The market catchment area including Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga		
BID	Background Information Document		
COVID-19	Coronavirus		
СРІ	Consumer Price Index		
D2C	Direct-To-Consumer		
DNA	Deoxyribonucleic Acid		
GDP	Gross Domestic Product		
GLA	Gross Lettable Area		
GVA	Gross Value Added		
GVM	Gross Vehicle Mass		
JSE	Johannesburg Stock Exchange		
km	Kilometre (one thousand metres)		
kWh	Kilowatt Hour		
KZN	KwaZulu-Natal		
LDV	Light Duty Vehicle		
LSM	Living Standards Measure		
OECD	Organisation for Economic Co-operation and Development		
PEA	Potentially Economically Active		
PFS	Petrol Filling Station		
ppm	Parts Per Million		
QR code	Quick Response Code		
SACSC	The South African Council of Shopping Centres		
Sami	South African Market Insights		
SAPIA	South African Petroleum Industry Association		
Stats SA	Statistics South Africa		
ULP	Unleaded Petrol		
US\$	United States Currency (Dollar)		



1 INTRODUCTION

Simandlovu Trading proposes to develop a petrol filling station with food outlets and a small retail centre on erf 363 Bothas Hill, outer west of eThekwini Municipality, and have appointed Urban-Econ Development Economists to undertake a market feasibility assessment and socio-economic impact assessment for the proposed development.

1.1 AIM OF THE REPORT

The primary aim of this report is to show whether the development of a new petrol filling station and small retail centre in Bothas Hill is feasible. Furthermore, to show the socio-economic impact. Therefore, the study will include the following components as per Simandlovu Trading's request:

- Market Feasibility Study; and
- Potential Socio-Economic Impact Assessment of the development concept including the impact on surrounding and competing petrol filling stations and retail centres.

1.2 SCOPE OF WORK

The key steps of this project process are outlined in the box below:

- Regional "fit" and alignment analysis of the business concept, notably drawing on key local and commercial market dynamics;
- Market assessment of existing trends and opportunities;
- Identification of extent of potential socio-economic impacts during construction and into operation;
- Assessment of the feasibility of the development capturing the required supporting markets, by testing the development concept. The assessment will unpack the proposed business activities and guiding Simandlovu Trading with regards to the proposed operational arrangements.

1.3 STUDY AREA

The study area for the purpose of this study includes Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga (BHDKNQI). Bothas Hill and Drummond are urban areas, whereas KwaNyuswa, Qadi and Inchanga are semi-rural areas. Most of the motorists and commuters from these areas pass by the proposed development site when travelling to Bothas Hill town, Hillcrest, Kloof, Waterfall and Pinetown.





Map 1: Study Area: Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga (BHDKNQI)

Source: Google Earth and Urban-Econ, 2021

1.4 REPORT STRUCTURE

Section	Step	Description		
1.	Introduction and Overview	Introduces the study and provides an overview of the proposed development.		
2.	Spatial Analysis	Spatial analysis and market area identifying the market that will be influenced the most.		
3.	Macro-Economic Overview	A detailed assessment of the composition and stability of the national economy. The objective of the macro-economic analysis is to highlight significant economic trends that are likely to influence the development potential of the proposed development.		
4.	Socio-Economic Profile	Analyses the local demography including relevant socio-economic projections regarding the size and affordability of the local population as well as the potential socio-economic implications.		
5.	Petrol Filling Station	Analysis of the conglomeration of factors that determine the property market opportunities inform the subsequent development process. The		
6.	Retail Centre	demand for the proposed development is calculated and the existing developments are explored to determine whether any competition exists.		
7.	Socio-Economic Impact Assessment	An analysis of the socio-economic impacts that are expected to ensure as a result of the development is provided and an evaluation of the degree to which the implications will occur is given.		
8.	Risk and Mitigation	Enlists risks associated with the development of the proposed filling station and retail centre, and provides measures put in place to address such risks.		
9.	Implementation Plan	Enlists implementation plan to be employed in the development of the proposed filling station and retail centre.		
Summary of Findings and Development Recommendations		A summary of the findings from the research and demand models is provided and recommendations on the most optimal way forward are given.		

This report includes the following ten (10) main sections:



2 SPATIAL ANALYSIS

This site analysis section aims to contextualise the proposed development within the regional and local context. The following factors influence the outline of this section:

- The site location and description
- Accessibility consideration
- Adjacent land uses

2.1 MACRO-LEVEL ANALYSIS

The macro-level analysis investigates the regional spatial context of the development site. This refers to the area surrounding the development site. The proposed development site is located in eThekwini Local Municipality in the Outer West Durban along the Old Main Rd also known as R103. The eThekwini Local Municipality is the only Metropolitan in the province of KwaZulu-Natal, and among the eight in the country. The development site is well located with respect to regional (R103) and municipal route enabling good access from the different parts of the metro, it is also in proximity with the local Rob Roy Crescent.



Map 2: Macro-Level Analysis

Source: Urban-Econ & Google Earth, 2021

2.1.1 REGIONAL CONNECTIVITY

Regional accessibility refers to the ease of access to and from the proposed site by way of various transport routes adjacent to the site. The ability of the proposed filling station and the retail centre to



penetrate the local market is dependent on the accessibility, visibility, and general exposure in relation to the passing traffic, which improves the development's potential to capture transient traffic. The development site is located along the R103, the main road that provides direct access to Hillcrest town. The R103 also connects with M13 which provides direct access to Kloof and Pinetown. The R103 also connects with N3 which provides direct access to Cato Ridge, Pietermaritzburg, Durban and Camperdown. This gives the site good access to the local and regional area.



Map 3: Local and Regional Accessibility

Source: Google Earth & Urban-Econ, 2021

2.1.2 SURROUNDING LAND-USE

In order to determine the potential effect of the proposed development on the properties adjacent to the development site, the current land-use of the surrounding properties is investigated. The site is surrounded by the semi-commercial zone, residential area and hotel opposite the site. Buildings surrounding the development site include shops, warehouse, offices and residential houses. This mix of land-uses is essential for vehicle ownership and could provide sufficient traffic which could bode well for the proposed development. According to the municipal zoning certificate, shops and Fueling and Service Station are allowed as primary land uses.





Map 4: Surrounding Land-Uses

Source: Urban-Econ & Google Earth, 2021

2.2 MICRO-LEVEL ANALYSIS

The site analysis of the development site on a micro-scale provides the location and description in order to contextualise the site based on the following attributes:

- Locality and size of the site
- Visibility
- Development perspective
- Parking
- Gradient
- Infrastructure
- Opportunities.

2.2.1 SITE LEVEL ANALYSIS

The development site is located along the Old Main Rd which is the regional road (R103), The site is located within Bothas Hill town, and is surrounded by 1000 Hills Tourism Information Office, Builders Hardware (Build it Bothas Hill) and residential area.



Map 5: Site Level Analysis



Source: Urban-Econ & Google Earth, 2021

The size of the site is 11 104m². The following are the developments, with their sizes, which are purported for this site:

- Filling Station & Convenience Store 260m²
- Shops $-470m^3$
- Take away (Drive Thru) $-200m^2$
- Car Wash 72m²

Therefore, the total development site is $1.072m^2$. The site will also include parking, with 70 bays intended. The access to the site if off Old Main Rd along the westbound traffic.

Image 1: Development Description



Source: Three Degrees Architects & Interiors, 2021



The site is zoned activity node, with existing old, demolished building. The proposed development entails the construction of Bothas Hill Service Station including associated structures and infrastructure comprising fuel storage tanks [2 x 46 000 litres Unleaded Petrol (ULP)], 1 x 46 000 litres diesel totaling 138 000 litres all underground, pumps, concrete paving & canopy, convenience shop, retail centre with shops, food outlets / drive thru, kitchen, toilets, car wash and parking area. The height restrictions for the area is 3 floors.



Image 2: Demolished building on site

Source: Background Information Document (BID) by Ibhongo Consulting Services for Simandlovu Trading

2.2.2 KEY FEATURES OF STUDY AREA

The following are some of the key features or characteristics found in the study area:

No.	FEATURE	DESCRIPTION	Opportunity	
1.	Retail	Spar is the only formal retail (Spar, which includes	There is a large percentage of the	
		liquor store) in BHDKNQI which is located in	leakage of buying power from people	
		Bothas Hill town, approximately 300 metres away	travelling to Hillcrest, Kloof,	
		from the proposed development site. Other retails,	Pinetown, New Germany and Durban	
		which are based in semi-rural of the study area, are	to do their shopping since there is lack	
		trading shops, spazas and survivalists.	of options in the nearest area, which is	
			Bothas Hill.	

Table 1: Key Features of found in the study area



No.	FEATURE	DESCRIPTION	Opportunity		
2.	Builders Hardware	Two builders hardware in Bothas Hill town (Build- It and Crown Builders).	Semi-rural of the study area have tons of vacant land, thus people are always building. The same people who shop from these shops are likely to use the new proposed developments.		
3.	Road Network	The Old Main Rd (R103) is a regional road which is connected to the M13 and M33 Municipal route, and N2 National route.	The new development might encourage motorists to use the Old Main Rd route to access the new facilities.		
4.	College	Elangeni College ¹ - Qadi Campus.	Employees and students frequenting the development site for retail and petrol and/or diesel fill for their vehicles.		
5.	Public Transport	Bothas Hill shoppers have good access to public transport such as taxis and buses (mainly from KwaNyuswa, Qadi and Inchanga area) on the Old Main Rd.	Incorporating a mini taxi rank in the new development to attract more taxi passengers.		
6.	Hospital	Don McKenzie Hospital-ER, approximately 2.1km away from the proposed development site.	Employees frequenting the development site for retail and petrol and/or diesel fill for their vehicles.		
7.	Tourism Information Centre	Durban Tourism Information Office (Valley of Thousand Hills), which is just next to the development site. Tourists visits the Bothas Hill often because of the Valley of Thousand Hills and Phezulu Safari Park.	Offering tourists' products such as beads, traditional attire, etc. from the local supply. This forms part as community development.		
8.	Retirement Home	Rob Roy Retirement Home, which is surrounded by other private residential.	Offering special deals/discounts to pensioners.		
9.	Safari Park	PheZulu Safari Park is a tourism venue, situated in Botha's Hill.	The information office is next to the development site, thus a likely leakage from tourists en-route to Phezulu Safari Park.		
10.	SprayPave ²	A manufacturer, supplier and applicator of bituminous binders, emulsions, primes and pre- coats to the Southern African road construction industry.	Employer and Employees frequenting the development site for retail and petrol and/or diesel fill for their vehicles.		
11.	Other small stores	Such as sales and hire, Motor Spares, Earth Broker, the Bed factory, Tyre and Service Centre, etc.	Employer and Employees frequenting the development site for retail and petrol and/or diesel fill for their vehicles.		

² "SprayPave is a manufacturer, supplier and applicator of bituminous binders, emulsions, primes and pre-coats to the Southern African road construction industry. SprayPave also owns technology unique to the African continent in the form of a multistage bitumen converter that changes bituminous refinery feedstocks into superior quality bitumen to suit all asphalt specifications." (SprayPave website)



¹ "Elangeni TVET College is a Technical and Vocational Education. and Training institute." (Elangeni Website)



Figure 1: Key Features of the study area

Source: Urban-Econ (2021)

In spatial context, the existing retail supply in Bothas Hill town is as presented in the map below.





Source: Google Earth & Urban-Econ, 2021



2.2.3 SITE ASSESSMENT

A site visit was conducted during May 2021 in order to gain an understanding of the dynamics and characteristics of the surrounding environment. The location of facilities is an important supply factor, since it determines, inter alia, the accessibility to markets and the availability of infrastructural services. The potential of the market is not only influenced by the local market's characteristics and behaviour, but also by location factors such as accessibility, visibility, locality and the local development perspective. These factors are taken into account in the site evaluation model shown below.

The site evaluation model is utilised to assess the location of the site. The Urban-Econ model is pragmatic and is based on the assignment of values to various location factors. Firstly, the site is evaluated on a ten-point scale, with ten being the highest. Secondly, weights are attached to these factors, in order of importance (1 to 5, with 5 being the most important). These datasets are utilised to calculate an overall site rating.

The assessment of the site indicated an overall rating of 60.9%, which can be interpreted as a moderate potential for the particular site. The following aspects can be highlighted:

- Accessibility & visibility: The site is easily accessible through the Old Main Rd (R103). However, a slight uphill from the westbound traffic on the Old Main Rd limits the visibility of the site from the motorists.
- **Population and Household Growth**: Both the population and household growth rates in the study area is 6.0% and 8.1%, respectively, which is higher than that of the eThekwini Local Municipality (1.4% and 1.6%, respectively). The developments within the town would trigger the household growth in the municipality, thus increasing the number of vehicles in the area and increasing demand for fuel and retail.
- Absence of current supply: There is only one big retail (Spar) in the whole of study area, and the closest petrol filling station coming from the study area is only one (Total Bothas Hill Garage), which is located approximately 1.5km away from the semi-commercial of the study area. The proposed petrol filling station and retail centre will encourage motorists and commuters to travel directly to Bothas Hill semi-commercial area for fuel filling and shopping.
- Availability of land & future expansion potential: There is a possibility to expand since the site area is covered by forest. However, objection from local residents is likely, as the area in question may be regarded as environmentally sensitive.

Location factors	Grade 1-10	Weight 1-5	Points	Maximum Points
Accessibility	8	5	40	50
Visibility	4	4	16	50
Number of households in the area	8	5	40	50
Population and Household Growth	9	4	36	50
Absence of current supply (market gap)	9	4	36	50
Appeal of area	6	3	18	50

Table 2: Location Assessment



Location factors	Grade 1-10	Weight 1-5	Points	Maximum Points
Located in Direct Line of Growth	8	4	32	50
Availability of Land	7	4	28	50
Future Expansion Potential	7	4	28	50
	Total	Points	274	
	Maximum Points			450
	Sco	ore	60.9%	

Source: Urban-Econ (2021)

2.3 KEY FINDINGS

- The location of the site is well-positioned with respect to main roads enabling good accessibility to the site. However, the slight uphill road limits the view from the westbound traffic.
- The proposed development is located within a light commercial zone and residential area, which is advantageous in terms of accessing the service station and retail centre, as well as penetrating the market.
- The site is surrounded by the semi-commercial zone and residential area. Buildings surrounding the development site include shops, warehouse, offices and residential houses. This mix of land-uses is essential for vehicle ownership and could provide sufficient traffic which could bode well for the proposed development.
- The size of the site is appr. 11 104 m². The proposed developments on the site will take a total of $1.072m^2$.
- All traffic to and from Bothas Hill and KwaNyuswa passes this site through the Old Main Rd (R103). Whereas all traffic to and from Inchanga and Drummond to Bothas Hill and Hillcrest passes this site through the Old Main Rd (R103).
- KwaNyuswa and Inchanga are semi-rural areas, and most of the dwellers use public transport (Minibuses and Buses) to mainly travel to and from Pinetown, Hillcrest and Bothas Hill.
- The Old Main Rd (R103) is a dual carriage way in both directions which is an indication of the high traffic volumes that it caters for.
- Opposite the site's entrance is the Rob Roy Crescent road which leads to suburban residential area; thus, the development would attract both private motorists and pedestrians from the local.
- The site will be able to directly serve the western and eastern bounds traffic from the Old Main Rd (103), as well as the Northern bound from Rob Roy Cres.
- Currently, the site is an environmental zone with a lot of trees and forest.
- There are five (5) Petrol Filling Stations (PFSs) within the 5km radius of the proposed development site.
- The closest filling station to the proposed site is Total Bothas Hill Garage (1.5km), which is on the Old Main Rd (103).
- Three of the filling stations, within 5km radius to the proposed development site, are located in Hillcrest. These are Caltex and Shell both on the Old Main Rd (103), and BP on the Inanda Rd.



- The fifth filling station, Engen Polo Pony, is located in Assagay on the Kassier Rd.
- There is a large percentage of the leakage of buying power from people of Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga and who travel to Hillcrest, Kloof, Pinetown, New Germany and Durban to do their shopping, since there is lack of options in the local Bothas Hill area.
- The tourism information office is next to the development site and thus an attraction of tourists en-route to Phezulu Safari Park.
- The assessment of the site indicated an overall rating of 60.9%, which can be interpreted as a moderate potential for the particular site.



3 MACRO-ECONOMIC ANALYSIS

The macro-economic profile provides a detailed assessment of the composition and stability of the national economy. The objective of the macro-economic analysis is to highlight significant economic trends that are likely to influence the development potential of the envisioned development. The economic indicators determine specific economic trends that are used to assess the future potential growth of the market. In brief, the macro-economic profile covers the following components:

- Economic Performance
- Economic Sector Contribution
- Interest rate trends
- Inflation rate trends

3.1 ECONOMIC PERFORMANCE

COVID-19 (coronavirus) is having a major impact on South Africa's economy. The economy contracted by 8.2% in 2020, as the pandemic weighed heavily on both external demand and domestic activity as the government implemented containment measures. This severe contraction is estimated to increase poverty by 2 million people (living below the poverty line for upper-middle income countries, \$5.5 (R77.64) per day in 2011 Purchasing Power Parity exchange rates, PPP) (The World Bank, 2021). The pandemic and the containment measures to curb the spread of the virus is damaging the South African economy (African Development Bank Group, 2021):

- Real GDP contracted by 8.2% in 2020, the result of a decline in construction, transport and communication, manufacturing, and mining. On the demand side, all components declined, with the largest contraction, 32.4%, recorded in investment.
- The Reserve Bank of South Africa cut the policy rate by a cumulative 300 basis points in 2020, from 6.5% to 3.5%, to support businesses and households affected by the pandemic.
- The budget deficit was estimated to widen significantly to more than 14% of GDP, mainly due to spending pressures to contain the economic impact of the pandemic.
- Despite the pandemic, the South African banking sector remains sound, with a capital ratio of 16.3%, which is above the 10% regulatory requirement.
- Domestic credit to private sector reached \$280 billion (R3,9 Trillion) in November 2020, an increase of 3.5% from December 2019, when it was 139% of GDP.
- Lingering economic weaknesses prompted the three major credit rating agencies to downgrade South Africa's local and foreign currency credit rating to sub-investment grade. Nevertheless, real private investment expanded by 33.2% in the third quarter of 2020.
- Social indicators are likely to remain weak due to the severity of the pandemic and legacy issues of low human development.

About 2.6 million people have lost their jobs since March 2020, bringing the unemployment rate to 32.5% in the fourth quarter of 2020 from 30.8% in the previous period. It was the highest jobless rate since quarterly data became available in 2008, with more people entering the labour market and actively looking for jobs. Still, the market is not creating sufficient jobs to absorb enough people of



working age into employment (Trading Economics, 2021). The unemployment rate is highest among youths aged between 15 and 24, at around 63%. Structural challenges and weak growth have undermined progress in reducing poverty, which have been heightened by the COVID-19 pandemic (The World Bank, 2021).





South Africa entered the pandemic after several years of low growth. In 2019, the economy grew by 0.2% (in 2018 it was 0.8%) partially caused by the resurgence of load shedding associated with operational and financial difficulties at the energy utility Eskom. The persistence of the pandemic at the global and domestic levels will continue to constrain the economic recovery during the first half of 2021. In addition, as economic activity restarts, pre-existing structural constraints, such as electricity shortages, are becoming binding again. Gross domestic product growth is expected to rebound to 3% in 2021. Commodity prices remain important for South Africa, a major net exporter of minerals and net importer of oil. Strengthening investment, including foreign direct investment, will be critical to propel growth and create jobs (The World Bank, 2021).

South Africa remains a dual economy with one of the highest, persistent inequality rates in the world. High inequality is perpetuated by a legacy of exclusion and the nature of economic growth, which is not pro-poor and does not generate sufficient jobs. Inequality in wealth is even higher and intergenerational mobility is low meaning inequalities are passed down from generation to generation with little change over time (The World Bank, 2021).

3.2 ECONOMIC SECTOR CONTRIBUTION

Analysing each economic sector allows us to determine the overall economic contribution of each economic sector and how they relate to one another, as well as to what degree the various sectors are supported in the local economy³.

³ Outer West Durban



Source: Stats SA, 2021



Image 3: Snapshot of the GVA Economic Contribution Per Sector

Source: Stats SA Census 2011 Data via Quantec Easy Data and Urban-Econ, 2021

Manufacturing has the biggest economic sector contribution to the local economy (36.0%), followed by Finance, insurance, real estate and business services (17.9%), and Wholesale and retail trade, catering and accommodation (11.1%), and Transport, storage and communication (9.8%) respectively.

Figure 3: GVA Economic Contribution Per Sector



Source: Urban-Econ and Easy Data, 2021

3.3 INTEREST RATES AND INFLATION

The interest rate influences household expenditure and consumer credit. Interest rates are directly linked to the level of consumer credit; thus, lower interest rates may result in higher disposable income for consumers with more credit facilities available. Additionally, interest rates have an indirect impact on the transport sector since a higher interest rate will have a negative impact on vehicle owners' ability to afford car loans or repay the loan as well impact vehicle owners overall fuel affordability.



As indicated in the figure below the prime interest rate has decreased since 2008, with the interest rate illustrating a rather stable growth when compared to the fluctuating inflation rate trend. The latest prime interest rate stands at 7.0%, which is down by 3.0% since the beginning of 2019.





As indicated in the figure below the inflation rate has decreased since 2008, illustrating a fluctuating inflation rate trend. The inflation rate stood at 3.3% in 2020, which is down by 0.8% since 2019.

Figure 5: CPI Inflation, 2000 - 2020



Source: Urban-Econ and Stats SA, 2021

According to Trading Economics, the annual inflation rate in South Africa eased to 2.9% in February of 2021 from 3.2% in January. It was the lowest inflation rate since June 2020, amid a slowdown in prices of food & non-alcoholic beverages (5.2% vs 5.4% in January); miscellaneous goods & services (3.9% vs 6.5%) and health (2.8% vs 4.5%). In addition, costs decreased for restaurants & hotels (-0.5% vs 0.3%) and communication (-0.5%, the same pace as in January). On a monthly basis, consumer prices were up 0.7%, after increasing 0.3% in the prior month, but below market expectations of 0.9% (Trading Economics, 2021).



Source: Urban-Econ and FNB, 2021



Figure 6: CPI Inflation, January 2020 – January 2021

Source: Urban-Econ and Trading Economics, 2021

3.4 THE IMPACT OF COVID-19 ON THE ECONOMY, PETROL CONSUMPTION LEVELS

AND RETAIL

3.4.1 THE IMPACT OF COVID-19 ON THE ECONOMY OF SOUTH AFRICA

In 2020, the World was hit by a COVID pandemic, with South Africa being a leading infected country in Africa. South African government responded by instituting a lockdown late March 2020 which curtailed economic activity. The government implemented regulations that directly constrained production capacity of most industries in the economy. Their doors were closed and workers could not go to work (Heerden & Ross, 2021).

It is now just over a year since South African government declared a National State of Disaster in response to the COVID-19 pandemic and had to introduce measures to contain its spread. Over the last year, the country has recorded more than 1.5 million cases of the coronavirus. And there have been more than 52,000 recorded deaths from COVID-19 (South African Government, 2021).

3.4.2 THE IMPACT OF COVID-19 ON FUEL

The fuel industry has seen significant changes in fuel consumption with more people working from home. But fuel retailers have found new ways of attracting revenue, including offering pharmacy goods, wi-fi access and electric vehicle charge stations at their forecourts. Fuel retailers are also using technology to innovate: Refuel is an app-based mobile business which brings fuel to you, for example (BR Reporter, 2021).

While the global oil sector has already witnessed declining oil prices because of a price war between Saudi Arabia and Russia, the rise of COVID-19 has certainly exacerbated existing price declines. The double blow of Coronavirus (COVID-19) and the oil price shock is hitting oil-exporting developing countries particularly hard at a time when the fossil fuel industry is facing a process of structural decline. Some countries may find themselves entering a spiral of unsustainable borrowing on the back



of the current turmoil, as oil-exporting developing countries have experienced an increased reliance on short-term and expensive non-concessional private borrowing in recent years, a significant proportion of which is backed by oil collateral. A timely and coherent response is needed, encompassing both concessional lenders and private financiers, to create fiscal space in oil-exporting developing countries, reduce the risks of unsustainable debt, corruption and illicit financial flows (IFFs), and catalyse a transition to a cleaner and more sustainable future (OECD, 2020).

The global economy is undergoing an energy transition from fossil fuels to more sustainable energy sources. Renewables are increasingly deflationary, and oil prices will have to compete with this, notwithstanding the economic- and pandemic-driven oil price drop. For example, in April 2020, Solar PV tariffs were recorded in Abu Dhabi at US\$1.35 cents per kWh. Furthermore, China, the world's largest importer of oil, has announced a three-year plan increase on the production of electric vehicles in their country. This plan has been endorsed by 24 provinces in China. It is clear that economies who are oil import-dependent are already developing policies to diversify their energy mix in order to ensure energy security and become less reliant on oil imports (Oberholzer, 2020).

According to the SA Petroleum Industry Association (SAPIA), oil companies in South Africa are unlikely to upgrade refineries to cut sulphur emissions unless the government allows them to pass the costs on to consumers or offers other support after being hit by the pandemic. New rules requiring oil refineries in South Africa to cut diesel sulphur levels to 10 parts per million (ppm) had been due to come into effect in 2017 but have been postponed indefinitely due to a disagreement between the government and SAPIA, which represents oil majors, over who will cover the cost. SAPIA has estimated that it would cost \$3.9bn (about R59.1bn) for all refineries in the country to upgrade to meet the new rules. Pump prices are government-regulated in SA and talks with the government on how companies will recover the cost of investment in cleaner fuel are deadlocked. The pandemic, lower oil demand and pressure from investors to cut carbon emissions have forced oil majors to close some refineries around the world that were operating on very slim margins (Reuters, 2021).

3.4.3 SOUTH AFRICA'S ECONOMIC RECOVERY

According to the World Bank, strength of South Africa's economic recovery depends on the vaccine rollout. The universal access to effective and affordable treatment and vaccines is critical to halt the course of the COVID–19 pandemic. In the middle of February, South African government began Phase 1 of vaccination programme, which involved the vaccination of health workers. More than 250,000 health workers have to date received the Johnson & Johnson vaccine as part of the Sisonke trial. The government have secured 11 million doses of the Johnson & Johnson vaccine, which is known to be effective against the dominant variants in South Africa. The South African government have secured a further 20 million doses and finalising the agreement with Johnson & Johnson. Moreover, the government is also finalising an agreement for 20 million doses of the Pfizer vaccine, which requires two doses. Together, the supply of vaccines is expected to provide enough doses to vaccinate 41 million people (South African Government, 2021).

The second phase of the COVID-19 vaccination programme aims to ensure that the South African government protects its communities, prevent health services from being overwhelmed and reduce the need for lockdowns that seriously disrupt education, the economy and the lives of the people. Phase 2 is scheduled to start in mid-May (South African Government, 2021).



3.5 KEY FINDINGS

- COVID-19 (coronavirus) is having a major impact on South Africa's economy. The pandemic weighed heavily on both external demand and domestic activity as the government implemented containment measures.
- The Reserve Bank of South Africa cut the policy rate by a cumulative 300 basis points in 2020, from 6.5% to 3.5%, to support businesses and households affected by the pandemic.
- Despite the pandemic, the South African banking sector remains sound, with a capital ratio of 16.3%, which is above the 10% regulatory requirement.
- Lingering economic weaknesses prompted the three major credit rating agencies to downgrade South Africa's local and foreign currency credit rating to sub-investment grade. Nevertheless, real private investment expanded by 33.2% in the third quarter of 2020.
- About 2.6 million people have lost their jobs since March 2020, bringing the unemployment rate to 32.5% in the fourth quarter of 2020 from 30.8% in the previous period.
- The unemployment rate is highest among youths aged between 15 and 24, at around 63%.
- Manufacturing has the biggest economic sector contribution to the local economy (36.0%).
- The latest prime interest rate (November 2020) stands at 7.0%, which is down by 3.0% since the beginning of 2020.
- The latest inflation rate for February 2021 currently stands at 2.9%, which has decreased by 0.3% from January 2021.
- The persistence of the pandemic at the global and domestic levels will continue to constrain the economic recovery during the first half of 2021. In addition, as economic activity restarts, pre-existing structural constraints, such as electricity shortages, are becoming binding again.
- The decreasing demand for fuel can be seen at the petrol station pump, where restrictions on movement have significantly affected the demand for fuel.
- It is uncertain what life will look like in the oil industry post COVID-19. Even if the demand for oil returns to its normal state, it will take a while to consume the oversupply.
- The double blow of Coronavirus (COVID-19) and the oil price shock is hitting oil-exporting developing countries particularly hard at a time when the fossil fuel industry is facing a process of structural decline.
- Strength of South Africa's economic recovery depends on the vaccine rollout, In the middle of February, South African government began Phase 1 of vaccination programme. Phase 2 is scheduled to start in mid-May.



4 SOCIO-ECONOMIC PROFILE

The aim of the socio-economic profile is to provide an overview of the population characteristics of the market area. The profile elaborates on information that will be used to inform the demand calculation model for housing in the delineated market area. This will establish whether the proposed development can be absorbed by the demand in the market area. The following aspects are investigated in this section:

- Population and household profile
- Age profile
- Employment profile
- Employment per industry
- Household income profile
- Education profile

The socio-economic profile plays an essential role in establishing the viability of any development as it provides an understanding of local socio-economic trends, issues, and dynamics. The study area, which is Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga (BHDKNQI), is the primary market of this proposed filling station and the retail centre. Majority of the primary market uses the Old Main Rd (R103) to travel to and from Bothas Hill, Hillcrest, Kloof, Pinetown, New Germany and Durban; thus, passes the development site. The study area is mostly residential, thus residents must travel to Hillcrest, Kloof, Pinetown, New Germany and Durban for shopping since they only have access to spaza shops⁴ locally. Therefore, there is a large percentage of the leakage from people travelling to Hillcrest, Kloof, Pinetown, New Germany and Durban to do their shopping.

Map 7: Primary Market for the proposed Petrol Filling Station and the Retail Centre



Source: Google Earth and Urban-Econ, 2021

⁴ "a small unofficial store in a township, often based in a private house." (The Oxford Dictionary, 2021)





Image 4: Snapshot of the study area



4.1 POPULATION AND HOUSEHOLD PROFILE

Population and household trends can give an indication of potential changes in the demand for fuel. With a change in the number of households within a given area, the number of vehicles within the immediate area may also potentially change. Therefore, the population and household trends are an important aspect to take into consideration for the potential development of a filling station.

A historic five-year average growth rate is used to project the future population size, which in turn is incorporated into the demand calculation model to calculate the future demand for residential development. The current and projected population and the number of households of the primary market area is provided in the table below.

The demographic information contributes to defining the household expenditure, disposable income and demand for the proposed filling station and retail centre. The current population of the study area is 15 384 people with a total of approximately 5 100 households.

BOTHAS HILL, DRUMMOND, KWANYUSWA, QADI AND INCHANGA									
		2020	2021	2022	2025	2030			
Primary Market Area	Population	15 384	16 314	17 299	20 629	27 664			
	Household	5 100	5 512	5 956	7 517	11 080			

Table 3: Population and Household Profile

Source: Stats SA Census 2011 Data via Quantec Easy Data and Urban-Econ, 2021

4.2 AGE PROFILE

An age group classification is conducted to determine the percentage of the potentially economically active (PEA) population in relation to the not economically active (youth and retired) population. This



illustrates the percentage of the population that will make up the majority of the potential target market. The following table presents an explanation of the age group classifications.

Table 4: Age Group Classification

Age	Category	Socio-Economic Contribution	Dependence	
Younger than 19 years	Junior population	The non-working population who does not generate any form of income	Dependent on an adult to provide to their needs	
Between 19 to	Potentially economically	The working population and main	Independent/usually provide for	
04 years	active (1 EA) population	generators of meome	une ouner groups	
65 years and older	and Senior population The retired population who are no longer productive within the working environment		Dependent on government or relatives to provide for their needs	

Source: Stats SA Census 2011 Data via Quantec Easy Data, 2021

The age profiles of the study area are indicated in the figure below. A large percentage of the study area falls within the potential economically active population. A total of 60.2% of the total population in the study area is potential economically active population whereas 33.6% of the total population is junior population. The senior population makes up 6.2% of the total population.

Figure 7: Age Profile



Source: Stats SA Census 2011 Data via Quantec Easy Data and Urban-Econ, 2021

It is assumed that most of the population within the delineated market area can contribute to the local economy. The study area has a high percentage of young dependents relying on the support of the economically active population.

It should be noted that a large portion of the population is below the age of 19 years and therefore it can be assumed that the demand for various goods and services will continue to exist as the younger portion of the population become economically active. A large number of the population are



economically active meaning that a large portion of the population can potentially spend money on housing and goods and services at retail facilities.

4.3 EDUCATION PROFILE

The sub-section aims to analyse the highest level of education of the study area. The level of literacy and levels of education are generally related to the level of income and hence also the disposable income of a market area.

The figure on the following page indicates the highest level of education in the study area. Approximately 42.8% of the study area population have Grade 12/Std 10 while 41.2% have some secondary education. A significant proportion of the study area population have higher education (10.7%), and 0.6% of the population have no schooling.





Source: Stats SA Census 2011 Data via Quantec Easy Data and Urban-Econ, 2021

4.4 EMPLOYMENT PROFILE

The employment profile aims to provide a detailed breakdown of the activity status of the local population. The data used for the employment profile were derived from Stats SA via Quantec Easy Data. The employment profile of the market areas is provided in the figure below. The study area has an employment level of 42.0% while the unemployed stood at 8.9%. This bodes well for access to income in the area where individuals can spend on buying a vehicle and fuels for their vehicles as well as shop at the retail centre. Notwithstanding, a number of people in the study area are not economically active (41.5%), and 7.6% are discouraged work-seekers.





Figure 9: Employment Profile

Source: Stats SA Census 2011 Data via Quantec Easy Data and Urban-Econ, 2021

4.5 EMPLOYMENT PER INDUSTRY

The employment per industry aims to provide a detailed breakdown of the type of employment the local population is involved into. The data used for the employment per industry were derived from Stats SA via Quantec Easy Data. The employment per industry of the market areas is provided in the figure below. Majority of the people in the study area are employed in the Wholesale and Retail Trade (18.2%), Financial; Insurance; Real Estate and Business Services (17.9%), and Private Households (16.8%).



Figure 10: Employment Per Industry



4.6 HOUSEHOLD INCOME PROFILE

Household income illustrates the overall prosperity of the local population and is a measuring tool to calculate the demand for goods and services across all income brackets. The household income reflects the total amount of income available in the direct market area. Higher disposable household income is a good indication for any prospective development. The percentage distribution of household income in the market areas is presented in the figure below.



The figure below illustrates that approximately 4.6% of the households within the study area have no income. Furthermore, 58.0% of the study area population fall within the middle-income bracket (R19 201 – R614 400), this is followed by high income population with 28.9% (R614 401 – R2 457 601 and more). The low-income population stood at 8.6% (R1 – R19 200). The majority of the study area falls within the middle-income bracket. This indicates that a significant proportion of households have access to income.





Source: Stats SA Census 2011 Data via Quantec Easy Data and Urban-Econ, 2021

4.7 KEY FINDINGS

- Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga (BHDKNQI) is the primary market of this proposed filling station and the retail centre.
- There is a large percentage of the leakage of buying power from people travelling to Hillcrest, Kloof, Pinetown, New Germany and Durban to do their shopping.
- The current population of the study area is 15 384 people with a total of approximately 5 100 households.
- A historic 10-year average population growth rate (6.0%) was used to estimate and project future population growth trends.
- Based on the statistics, the household within the market area has a higher growth rate (8.1%) compared to that of the population, resulting in smaller families living in homes.
- A large percentage of the study area falls within the potential economically active population. A total of 60.2% of the total population in the study area is potential economically active population whereas 33.6% of the total population is junior population. The senior population makes up 6.2% of the total population.
- Based on the statistics, 42.8% of the study area population have Grade 12/Std 10 while 41.2% have some secondary education. A significant proportion of the study area population have higher education (10.7%), and 0.6% of the population have no schooling.
- The study area has an employment level of 42.0% while the unemployed stood at 8.9%.
- Majority of the people in the study area are employed in the Wholesale and Retail Trade



(18.2%), Financial; Insurance; Real Estate and Business Services (17.9%), and Private Households (16.8%).

• The majority of the study area falls within the middle-income bracket. Approximately 58.0% of the study area population fall within the middle-income bracket (R19 201 – R614 400), this is followed by high income population with 28.9% (R614 401 – R2 457 601 and more). The low-income population stood at 13.2% (R1 – R19 200). The households with no income in the study area are about 4.6%.



5 PETROL FILLING STATION

5.1 MARKET AREA DELINEATION

The market area delineation uses several factors in order to derive an appropriate market catchment that will fully resemble the market area and the demand for the new proposed filling station. A market area delineation is essential since it highlights the expected boundaries of the market area from which the proposed development may draw potential tenants. In essence, the market area delineation highlights the area of influence of the proposed development where Urban-Econ's investigation will be focused. Based on the advice of the Petroleum Products Act of 1977, the Filling Station uses a 5km radius market area. This market area is used to extract the necessary information need for the filling station.

There are five (5) Petrol Filling Stations (PFSs) within the 5km radius to the proposed development site. The closest filling station to the proposed site is Total Bothas Hill Garage (1.5km away), which is also on the Old Main Rd (103). There are also two other filling stations on the Old Main Rd in Hillcrest within of a 5km radius, these are Caltex and Shell. The other two filling stations are located along the Inanda Rd (Bp) and the Kassier Rd (Engen). Most of these FPSs are located in Hillcrest, which is quite a distance to the proposed development site, although these filling stations are within of a 5km radius of the proposed filling station.



Map 8: Market Area - Filling Station

Source: Urban-Econ & Google Earth, 2021



5.2 TRANSPORT OVERVIEW

This section will provide an overview of the national and regional transport trends and will discuss the following topics in more detail:

- Mode of transport
- Changes in fuel price
- Vehicle sales
- New vehicle registrations
- Daily traffic flow patterns

5.3 MODE OF TRANSPORT

The following subsection aims to investigate the mode of transport of the transient traffic passing the proposed development site. The importance of determining the split between the modes of transport is reflected in its effect on the total market demand for fuel in the regional market. Accordingly, the modes of transport are divided into the following categories:

- Car
- Mini-Bus Taxis
- Bus
- Heavy Vehicles

5.3.1 LIGHT AND HEAVY VEHICLES

The total volumes of transient traffic travelling pass the development site within a 24-hour period is illustrated in the table below, showing both eastbound and westbound roads. The projected transient traffic totals for 2021, 2022, 2023, 2025 and 2030 are based on the average growth rate in sales for new vehicles in KwaZulu-Natal, based on the following categories: Car, Mini-Bus Taxi, Bus and Heavy Vehicle (Emaan Traffic Engineers, 2021).

5.3.1.1 Vehicles travelling past the site towards the East

In 2021, the total number of light vehicles travelling past the site towards the East were 3 333 in 24 hours. The number of taxis totaled 594, the number of heavy vehicles totaled 118 and busses were 32. The number of light vehicles, taxis, heavy vehicles and busses are expected to increase in the next 10 years.

Vehicle Type	2021	2022	2023	2025	2031
Light Vehicle/Car	3 333	3 541	3 762	4 246	6 105
Taxi	594	608	622	652	749
Bus	32	37	43	57	137
Heavy Vehicle	118	122	126	135	166
Total	4 077	4 308	4 553	5 090	7 158

 Table 5: Traffic Passing the Development Site within 24 Hours (Eastbound Road)

Emaan Traffic Engineers & Urban-Econ, 2021


5.3.1.2 Vehicles travelling past the site towards the West

In 2021, the total number of light vehicles travelling past the site towards the West were 2 907 in 24 hours. The number of taxis totaled 565, the number of heavy vehicles totaled 117 and busses were 22. The number of light vehicles, taxis, heavy vehicles and busses are expected to increase in the next 10 years.

Vehicle Type	2021	2022	2023	2025	2031
Light Vehicle/Car	2 907	3 089	3 281	3 704	5 326
Taxi	565	579	592	620	713
Bus	22	25	29	39	95
Heavy Vehicle	117	121	125	134	165
Total	3 611	3 814	4 028	4 498	6 298

 Table 6: Traffic Passing the Development Site within 24 Hours (Westbound Road)

Emaan Traffic Engineers & Urban-Econ, 2021

5.4 CHANGE IN FUEL PRICE

This subsection aims to provide an overview and an understanding of current and historical fuel price trends and demonstrates recent fuel price trends from 2008 to 2020.

The following figure shows the changes in fuel prices for Petrol 95 Octane (both leaded and unleaded) and Diesel prices (both 500pm and 50pm) from 2008 to 2020. The figure provided below illustrates the consistent growth in fuel prices since 2008. The first peak in fuel prices and the subsequent decline can be attributed to the 2000s energy crises that pushed the crude oil price to \$147.30⁵ per barrel in July 2008. Fuel prices steadily increased in 2009 to 2013. It reached a peak in March 2013 and slightly declined due to the oil glut of the 2010s. Fuel prices increased from 2016 to 2019. Fuel prices, for Lead and Unleaded, hit a record high in South Africa in December 2019 due to rising oil prices and a significantly weakened Rand exchange rate.

Fuel prices decreased in 2020 as a result of the Covid-19 pandemic. The decreasing demand for fuel can also be seen at the petrol station pump, where restrictions on movement have significantly affected the demand for fuel. In South Africa, the Saudi-Russia price war resulted in a fuel price cut of R2 per litre in April 2020. Storage capability, price, levies, taxes and the exchange rate will however continue to play an important role in determining the fuel price in South Africa. Extra tax levies might be introduced to make up the losses government suffers as a result of the pandemic (Oberholzer, 2020).

⁵ Approximately R2 113.95 in current exchange rate.







Source: Automobile Association South Africa and Urban-Econ, 2021

It is uncertain what the economy will be like in the oil industry post COVID-19. Even if the demand for oil returns to its normal state, it will take a while to consume the oversupply, since million barrels have been pumped into storage over the last months. The drop in oil prices raises questions about the future of the global and regional energy industry as well as the role of fossil fuels in the transition towards a more sustainable energy future after the pandemic (Oberholzer, 2020).

5.5 VEHICLE SALES

This sub-section investigates vehicle sales in KwaZulu Natal and breaks down vehicle sales into the following categories:

- Passenger vehicle sales
- Light commercial vehicle sales (< 3,501kg)
- Medium, heavy and extra heavy commercial vehicle sales (3,501-16 500 kg)
- Bus sales (> 8,500kg)

The following table and figure indicate vehicle sales trends for passenger vehicles, light commercial vehicles, total medium-heavy and extra heavy commercial vehicles and busses.

The data provided in this sub-section indicates that vehicle sales in KwaZulu-Natal increased from 2000 to 2020, with an average annual increase of 1.6%. The increase in passenger vehicles and various commercial vehicle sales also signals the increase in the demand for fuel which bodes well for the new filling station development.

Notwithstanding, the total sale of vehicles has been decreasing since 2014 in KwaZulu-Natal (highlighted with purple shading in table 7). However, in 2020 the decrease was significant due the COVID-19 pandemic. Between the period 2014 and 2020, all type of vehicles (except for buses) experienced an increased of sales only once during this period (highlighted with yellow shading in table 5). The buses had a growth in sales three times during this period (2014-2020), that is 2014, 2017 and 2019.



Year	Passenger vehicle sales	Light commercial vehicle sales	Medium commercial vehicle sales	Medium commercial vehicle Heavy commercial vehicle sales		Total
2000/12/31	24 724	12 744	706	307	252	38 733
2001/12/31	25 731	12 788	643	278	138	39 578
2002/12/31	26 931	12 649	633	291	236	40 740
2003/12/31	26 931	13 080	720	369	189	41 289
2004/12/31	36 555	16 001	1 088	571	181	54 396
2005/12/31	48 027	22 366	1 778	883	276	73 330
2006/12/31	58 783	26 559	2 003	1 207	104	88 656
2007/12/31	53 735	28 178	2 117	1 068	164	85 262
2008/12/31	38 309	21 875	1 623	922	227	62 956
2009/12/31	27 732	15 129	1 083	566	217	44 727
2010/12/31	39 929	16 319	974	686	112	58 020
2011/12/31	50 380	19 433	1 175	684	194	71 866
2012/12/31	57 552	20 064	1 312	781	264	79 973
2013/12/31	58 114	21 289	1 620	949	98	82 070
2014/12/31	54 383	20 897	1 383	783	219	77 665
2015/12/31	53 021	21 179	1 306	735	169	76 410
2016/12/31	46 855	20 392	983	834	157	69 221
2017/12/31	46 096	20 213	937	833	276	68 355
2018/12/31	46 107	19 831	812	743	185	67 678
2019/12/31	45 550	18 676	962	741	227	66 156
2020/12/31	37 518	14 067	717	585	207	53 094

Table 7: Vehicle Sales (Yellow Shade indicates increase of sales and Purple Shade indicate	s decrease of sales)
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Source: Easy Data by Quantec and Urban-Econ, 2021

The reason of the decline in vehicles sales is because of the poor economy of the country.



Figure 13: Vehicle Sales

Source: Easy Data by Quantec and Urban-Econ, 2021



5.6 NEW VEHICLE REGISTRATIONS

The following table shows new vehicle registration in 2019 and 2020⁶ for KwaZulu-Natal. There has been a decrease in new vehicle registrations from 2019 (81 859) to 2020 (51 620). However, this is caused by the missing data for some of the months in 2020. Therefore, comparing active months for both years, for instance, between the month of January 2019 (9 960) and 2020 (10 322) there was an increased in new vehicle registrations by 362. Likewise, between the month of December 2019 (3 540) and 2020 (4 053) there was an increased in new vehicle registrations for the rest of the months between 2019 and 2020, and this could be attributed to the COVID-19 pandemic and the government-enforced lockdown and curtailment of economic activity in the country, which heavily impacted on the economy.

There has been an increase in bus registrations between 2019 (330) and 2020 (382) by 52, despite of the missing data in 2020, indicating that the number could be way higher.

Year	Month	Motor cars and station wagons	Minibuses	Buses, bus trains, midibuses	Motorcycles, quadrucycles , tricycles	LDV's, panel vans, other light load veh's GVM <= 3500kg	Trucks (Heavy load vehicles GVM > 3500kg)	Other self- propelled vehicles	Total
2019	31-Jan	7 071	323	14	161	2 091	207	93	9 960
2019	28-Feb	4 364	270	42	138	1 627	185	94	<u>6 720</u>
2019	31-Mar	4 372	230	41	152	1 580	208	125	6 708
2019	30-Apr	4 544	267	22	156	1 729	212	95	7 025
2019	31-May	4 699	232	14	130	1 477	213	78	6 843
2019	30-Jun	4 209	275	17	130	1 331	198	76	6 236
2019	31-Jul	4 738	313	19	186	1 828	269	101	7 454
2019	31-Aug	4 126	374	44	133	1 863	250	103	6 893
2019	30-Sep	4 059	282	34	121	1 532	221	59	6 308
2019	31-Oct	5 602	429	34	184	1 529	277	115	8 170
2019	30-Nov	4 027	376	24	133	1 136	219	87	6 002
2019	31-Dec	2 201	245	25	89	757	172	51	3 540
2019	Total	54 012	3 616	330	1 713	18 480	2 631	1 077	81 859
2020	31-Jan	7 339	225	108	179	2 103	275	93	10 322
2020	28-Feb	4 364	270	42	138	1 627	185	94	6 720
2020	31-Mar	3 742	243	32	115	1 315	244	99	5 790
2020	30-Apr	-	-	-	-	-	-	-	-
2020	31-May	-	-	-	-	-	-	-	-
2020	30-Jun	3 970	244	60	223	1 493	168	85	6 243

Table 8: New Vehicle Registrations

⁶ Only for the months of January, February, March, June, August, October, November and December. The missing months were not accessible on the eNaTis website.



Year	Month	Motor cars and station wagons	Minibuses	Buses, bus trains, midibuses	Motorcycles, quadrucycles , tricycles	LDV's, panel vans, other light load veh's GVM <= 3500kg	Trucks (Heavy load vehicles GVM > 3500kg)	Other self- propelled vehicles	Total
2020	31-Jul	-	-	-	-	-	-	-	-
2020	31-Aug	3 031	261	51	187	1 453	374	123	5 480
2020	30-Sep	-	-	-	-	-	-	-	-
2020	31-Oct	4 733	291	46	187	1 444	327	141	7 169
2020	30-Nov	3 777	256	26	173	1 245	265	101	5 843
2020	31-Dec	2 489	255	17	157	873	187	75	4 053
2020	Total	33 445	2 045	382	1 359	11 553	2 025	811	51 620

Source: National Traffic Information System, 2020

5.7 MARKET POTENTIAL ANALYSIS

5.7.1 FILLING STATION SUPPLY

5.7.1.1 Filling Station Supply Analysis

A supply audit of the existing filling stations within the market area was conducted by Urban-Econ in April 2021. In this case, the filling stations directly adjacent to and in relative proximity to the development site were considered by the supply audit. The purpose of this audit was to determine the effective competitive supply within the market area, i.e., the existing filling stations, which are expected to compete with the new filling station and its auxiliary functions. Consequently, the following sub-section provides a summary of the findings of the abovementioned supply audit.

This subsection considers the following aspects:

- The location of existing filling stations;
- Analysis of the expected fuel sales of existing filling stations;
- The availability of auxiliary functions at said filling stations;
- Number of pumps filling stations; and
- Distance from the proposed filling station.

The table on the following page identifies the surrounding filling stations within a 5km radius to the proposed development site. With respect to the average volume data for the filling stations, in accordance with the guidelines to applicants for new to industry site and retail licenses which was proposed on the 10th of January 2020, the average volumes of the respective filling stations within a 5km radius are to be obtained. For the purpose of the study, contact with all the filling stations listed in the table below was made in an attempt to obtain the relevant information. The study was only able to obtain the relevant volume information from one (1) of the filling stations within a 5 km radius. After multiple attempts in contacting the relevant filling stations, one (1) of the total contacted (5) was the only filling station where the relevant information was officially obtainable, other respondents were not eager to share information of their service stations. Thus, estimations of the number of fuels pumped per month were employed using the number of existing PFS. A detailed call log was kept



recording the attempted contact information with all the filling stations within a 5km radius – see **Annexure 1**.

The four remaining filling station average volume values were extrapolated from the volume obtained for the one service station. The calculation utilises the existing average volume and was divided by the number of nozzles of the filling station. These values, therefore, provide us with a maximum and minimum volume range for each filling station. This, therefore, provided us with the maximum and minimum volume range for the other four filling stations.

Name of Filling Station **Details** No. **Total Botha's Hill Garage** Location: Old Main Rd, Bothas Hill, Outer West Durban, 3610 **Pumps**: 8 Truck Pump: 0 Truck Stop: None Auxiliary Function: bonjour Shop, Aqua Tap, ATM (Standard 1. Bank), Car Wash **Distance from the site**: 1.5km Average Volume Minimum Estimate: 170 000pm Maximum Estimate: 270 000pm Caltex Old Main Rd Location: 65 Old Main Rd, Hillcrest, 3650 **Pumps**: 12 Truck Pump: 0 Truck Stop: None Auxiliary Function: Fresh Stop Shop, Seattle Coffee Co, ATMs (Nedbank & Standard Bank), Car 2. Wash **Distance from the site**: 4.9km Average Volume Minimum Estimate: 260 000pm Maximum Estimate: 360 000pm







Source: Urban-Econ Audit, 2021



5.7.1.1.1 Number of Fuel Pumps of Existing Filling Stations

The number of fuel pumps at existing filling stations is investigated in order to determine the average supply capacity of each of the stations as well as the predominant market trends. Within this subsection, the following elements of the existing stations are investigated:

- The number of pumps at each station; and
- The number of nozzles at the respective stations

Table 10: Number of Fuel Pumps at existing Filling Stations

No.	Name	Number of Pumps	Number of Nozzles	Volume
1.	Total Botha's Hill Garage	12	18	270 000pm
2.	Caltex (St Margaret Rd)	5	24	360 000pm
3.	Bp	10	20	270 000pm
4.	Shell	14	30	450 000pm
5.	Engen Polo Pony	10	30	450 000pm

Source: Urban-Econ Audit, 2021

5.7.1.2 Filling Station Demand Analysis

The market demand analysis seeks to determine the demand for fuel in the market area by considering the following factors:

- Interception rate
- Average fill
- The quantity of both light, taxis and heavy vehicles passing the proposed development site adjacent to the regional road.

5.7.1.2.1 Method

In determining the feasibility of a new filling station, it is necessary to calculate the total demand for the fuel required by transient traffic. Traffic counts conducted by Emaan Traffic Engineers for Simandlovu Trading and associated transient traffic interceptions rates were applied to calculate the number of potential customers attracted to the proposed filling station. Within the analysis, the transient traffic consists of light, taxi, heavy traffic and bus.

According to the South African Trip Generation Rates of 2014, 81.8% of traffic visiting a filling station purchase fuel, while the remaining 18.2% constitute visits to the convenience store associated with the filling station. These rates are incorporated into the demand model in order to determine a conservative estimation of the potential customers who would purchase fuel at the proposed filling station. Accordingly, the potential number of customers who would purchase fuel is multiplied by the abovementioned average fill figures in order to determine the total pump volume correlating with the demand for fuel by visiting vehicles.

5.7.1.2.2 Overview of the Market Demand Factors

This subsection explores the various factors which influence the demand calculations for the new filling station in the market area.



5.7.1.2.2.1 Interception Rate

The percentage of transient traffic that will turn into the proposed filling station is known as the interception rate. Within the demand calculations, the interception rates are applied to determine the number of potential customers visiting the filling station. An interception rate of 5.5% from light vehicles, and 4.5% from Taxis, Heavy Vehicles and Buses is employed on the transient traffic from the Old Main Rd (both westbound and eastbound traffic). The market catchment, which includes Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga, has a household growth rate of 8.1%, and is currently accessible to only one petrol filling station in Bothas Hill. Also, the proposed development is strategically positioned since it is located in Bothas Hill town and will include a retail centre which is expected to attract more people than it could have if it was only the filling station.

Table 11: The interception rate

Vehicle Type	Interception Rate			
Light Vehicle/Car	5.5%			
Taxi	4.5%			
Bus	4.5%			
Heavy Vehicle	4.5%			

The total pump volume in litres is expected to be 328 736 litres per month in 2023, growing steadily to 368 035 litres in 2025 and 519 528 litres by 2031.

Table 12: Gross Monthly Demand for Fuel by Total Vehicles

TOTAL	2023	2025	2027	2029	2031
	328 736	368 035	412 430	462 646	519 528

Accordingly, the volumes of transient traffic as determined by the traffic count conducted accurately reflect the number of vehicles passing the site of the proposed filling station within a 24-hour period.

5.7.1.2.2.2 Average Fill

The average fill is the average amount of fuel that any given vehicle will purchase when visiting a filling station. An average fill varies with the mode of transport, i.e., light, taxi and heavy vehicles. The following table shows the average fuel tank capacity for a range of different vehicles by South African Market Insights (Sami).

Table 13: The average fuel tank capacity

Vehicle Type	Light Vehicle/Car	Taxi	Bus	Heavy Vehicle
Average capacity	45 litres	75 litres	250 litres	250 litres
Cost for a full tank of petrol	R698.85	R1 164	R3 882	R3 882
Cost for a full tank of diesel	R639.90	R1 066.50	R3 555	R3 555

Source: South African Market Insights and The South African, 2019

However, vehicles are not expected to always fill up full tanks whenever they stop by the filling station, thus, Urban-Econ has determined the average fill for vehicles travelling on local and provincial roads as follows:

- 31 litres per light vehicle
- 31 litres per taxi



- 50 litres per Bus
- 85 litres per heavy vehicle

The average fill figures were incorporated into the demand calculation model in order to determine the market demand for a new filling station.

5.7.1.2.2.3 Market Demand

This subsection calculates the total demand for the fuel required by transient traffic in terms of total pump volume per litre. Table 12 to Table 18 below presents the demand for fuel based on the traffic volumes in table 5 and 6.

Vehicle Type	2023	2025	2027	2029	2031
Light Vehicle/Car	7 043	7 950	8 973	10 128	11 431
Тахі	1 215	1 272	1 333	1 396	1 463
Bus	72	97	129	173	232
Heavy Vehicle	251	269	288	309	331
Total	8 581	9 588	10 724	12 006	13 457

Table 14: Total Vehicles Passing Proposed Filling Station in 24hrs

Table 15: Total Vehicles Passing the Proposed Filling Station in 1 month

Vehicle Type	2023	2025	2027	2029	2031
Light Vehicle/Car	197 215	222 596	251 243	283 577	320 072
Taxi	30 363	31 807	33 320	34 904	36 564
Bus	1 804	2 416	3 234	4 330	5 797
Heavy Vehicle	5 022	5 383	5 769	6 183	6 626
Total	234 405	262 201	293 566	328 994	369 060

Table 16: Gross Monthly Demand for Fuel by Light Vehicles

	2023	2025	2027	2029	2031
Light Vehicle/Car	10 847	12 243	13 818	15 597	17 604
81,8% of total (purchase fuel)	8 873	10 015	11 303	12 758	14 400
Average fill per liter	31	31	31	31	31
Pump Volume	275 054	310 452	350 406	395 502	446 401

Table 17: Gross Monthly Demand for Fuel by Taxis

	2023	2025	2027	2029	2031
Тахі	1 366	1 431	1 499	1 571	1 645
81,8% of total (purchase fuel)	1 118	1 171	1 227	1 285	1 346
Average fill per liter	31	31	31	31	31
Pump Volume	34 648	36 296	38 022	39 830	41 724

Table 18: Gross Monthly Demand for Fuel by Buses

	2023	2025	2027	2029	2031
Bus	81	109	146	195	261
81,8% of total (purchase fuel)	66	89	119	159	213
Average fill per liter	50	50	50	50	50
Pump Volume	3 321	4 446	5952	7969	10670



	2023	2025	2027	2029	2031
Heavy Vehicle	226	242	260	278	298
81,8% of total (purchase fuel)	185	198	212	228	244
Average fill per liter	85	85	85	85	85
Pump Volume	15 714	16 841	18 050	19 345	20 733

Table 19: Gross Monthly Demand for Fuel by Heavy Vehicles

The proposed filling station would negatively affect competing filling stations in the market area by taking clients of the existing filling stations, particularly in the short term. However, in the long term, things would remain to normal as the new filling station would tap into a new demand.

5.8 KEY FINDINGS

- The development of another petrol filling station in Bothas Hill is feasible,
- The total pump volume in litres is expected to be 328 736 litres per month in 2023, growing steadily to 368 035 litres in 2025 and 519 528 litres by 2031.
- Filling stations within 5km radius of the proposed filling station were contacted to obtain the relevant information.
- After multiple attempts in contacting the relevant filling stations, 1 of the total contacted (5) was the only filling station where relevant information was officially obtainable, other respondents were not prepared to share information of their service stations.
- A detailed call log was kept recording the attempted contact information with all the filling stations within a 5km radius see Annexure 1.
- An interception rate of 5.5% from light vehicles, and 4.5% from Taxis, Heavy Vehicles and Buses is employed on the transient traffic from the Old Main Rd (both westbound and eastbound traffic). The market catchment, which includes Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga, has a household growth rate of 8.1%, and is currently accessible to only one petrol filling station in Bothas Hill. Also, the proposed development is strategically positioned since it is located in Bothas Hill town and will include a retail centre which is expected to attract more people than it could have if it was only the filling station.
- The number of light vehicles, taxis, heavy vehicles and busses travelling past the site towards the west and east bounds are expected to increase in the next 10 years.
- Fuel prices decreased in 2020 as a result of the Covid-19 pandemic. The decreasing demand for fuel can also be seen at the petrol station pump, where restrictions on movement have significantly affected the demand for fuel.
- It is uncertain what life will look like in the oil industry post COVID-19. Even if the demand for oil returns to its normal state, it will take a while to consume the oversupply, since million barrels have been pumped into storage over the last months.
- The drop in oil prices raises questions about the future of the global and regional energy industry as well as the role of fossil fuels in the transition towards a more sustainable energy future after the pandemic.
- Vehicle sales in KwaZulu-Natal increased from 2000 to 2020, with an average annual increase of 1.6%. The increase in passenger vehicles and various commercial vehicle sales also signals



the increase in the demand for fuel which bodes well for the new filling station development.

- Notwithstanding, the total sale of vehicles has been decreasing since 2014 in KwaZulu-Natal. Between the period 2014 and 2020, all type of vehicles (except for buses) experienced an increase of sales only once. The buses had a growth in sales three times during this period (2014-2020), that is 2014, 2017 and 2019.
- There has been a decrease in new vehicle registrations between 2019 and 2020, and this could be attributed to the COVID-19 pandemic and the government-enforced lockdown and curtailment of economic activity in the country, which heavily impacted on the economy.



6 RETAIL CENTRE

6.1 **RETAIL SECTOR**

South Africa-based businesses in the consumer and retail markets are facing a myriad of challenges, including slowing local economies, resultant pressure on their bottom line and customers, new global competitors, and a changing political and regulatory environment. In addition, consumers are now in a position of power - being able to access the global marketplace through their mobile devices to research, shop and pay for products. The emergence of social media has significantly changed how retailers communicate and engage with consumers and has shown the power of consumers to positively or negatively influence the brand of a retail and consumer company (PwC, 2021).

Retail trade sales fell on an annual basis for the 10th month in a row in January 2021, posting a 3.5% decline. This points to persistently weak demand in a fragile economy which seems to be heading for a first-quarter contraction. The 3.5% year-on-year fall in retail sales was the 10th straight month of decline, which began in April 2020, the first full month of ultra-hard lockdown. So, the retail sector has effectively been limping along ever since and has yet to recover, which is no surprise in the wake of the 7% gross domestic product (GDP) contraction in 2020 (Stooddard, 2021). Notwithstanding, South Africa's retail sector is adapting to the reality of new customer preferences, lifestyle changes, the impacts of Covid-19 and technological developments. Thus, the retail sector is on the mend, and will see greater recovery throughout 2021 (BR Reporter, 2021).

6.2 RETAIL PROPERTY SECTOR

The South African listed property index has posted poor returns in the past three years (2018, 2019 and 2020), as evidenced by the -25.3%, 1.9% and 34.5% total returns in 2018, 2019 and 2020, respectively. Driving these lacklustre returns are weak domestic economic growth, oversupply of lettable area in the office and retail sectors (regional malls), coronavirus pandemic lockdowns, rising loan-to-value ratios and firm bond yields. An improvement is expected in global and domestic property fundamentals such as rent collections, net operating income, balance sheets restructuring and dividend growth to bolster total returns in 2021. South African listed property sector will benefit considerably from its global diversification, which, arguably, reduces its reliance on the domestic economy's pedestrian growth.





Figure 14: Top 10 South African Property Companies' Net Operating Income



Property expenses have been adversely affected by strong increases in municipal charges in the past few years. Since 2006, rates and taxes and electricity charges have registered compound annual growth rates of 9.5% and 9.2%, respectively. Aggressive escalations in property expenses put pressure on net operating income and, invariably, distributable earnings and dividends. In the past three years, the South African listed property sector has significantly underperformed other asset classes, eroding the superb 20-year performance that was a beneficiary of strong economic growth, government infrastructure spending, the emerging middle class, new property developments across different subsectors, offshore acquisitions and new listings of property companies (ALG, 2021).



Figure 15: South African listed property index returns

Source: Stanlib Asset Management, TMGI Property Investments

The likely improvement in physical property fundamentals could be a catalyst in closing the valuation gap. The economic recovery driven by the reopening of the economy, together with the coronavirus vaccine rollout, should strongly support the property sector in the future (ALG, 2021).





Figure 16: Dividend Distribution Growth

Source: Stanlib Asset Management, TMGI Property Investments

The South African property sector's distribution growth profile underpins the valuation in the short to medium term. Johannesburg Stock Exchange (JSE) guidelines require real estate investment trusts (REITs) to distribute 75% of their distributable earnings and retain the remaining 25%. In 2020, REITs deferred dividend payments as a result of the collapse in rent collections and the unclear economic outlook caused by the coronavirus lockdowns. In 2021 net operating income (operating profits after property expenses) is expected to have a positive impact on distributable earnings. The property sector is trading at a forward dividend yield of 10.3%, a superior yield relative to bonds and cash. Bond yields have increased by 77bp (Basis Point⁷) over the past month, from 8.5% in early February 2021 to 9.27% in March 2021, narrowing the gap (ALG, 2021).

6.2.1 THE COMMERCIAL PROPERTY SECTOR

The commercial property sector has been under pressure for some time and unfortunately Covid-19 has resulted in further pressure, particularly in the retail and office environments. Retail has been under threat for many years as more and more people become more at ease with purchasing goods online. Owners of retail spaces are going to have to look at what they can change within these spaces in order to secure their yields. On the other hand, industrial space is faring well, as goods will always need a space to be stored (BusinessTech, 2021).

6.3 THE IMPACT OF COVID-19 ON RETAIL SECTOR

Due to the outbreak of COVID-19 in South Africa, a national wide lockdown was introduced on 26 March 2020, which closed all non-essential retailers and limited trading to essential goods. These initial regulations had a disastrous impact on the economy, leading to a rising unemployment rate, lower spending confidence and shrinking disposable incomes. The initial hard lockdown spanned 26

⁷ "A basis point is a hundredth of a percentage point, or 0.01% -- a key concept in discussing bond yields" (The Street Dictionary, 2018)



March to 30 April. During this time borders were closed to tourists but not for the distribution of goods, while inter-provincial travel was banned, and domestic and international tourist flights ceased (Euromonitor, 2021).

The COVID-19 pandemic has had a massive impact on retail in 2020. The obvious outcome has been the growth in e-commerce. Major online retailers like Takealot and Superbalist were well to benefit from this change in consumer behaviour. Offline retailers were forced to respond with the speedy rollout of new technologies, apps and ways of meeting shoppers' needs such as Click and Collect. The impact of the COVID-19 pandemic will be felt for months to come and most likely permanently (Spacematch, 2020).

According to the Bureau for Economic Research (BER), South African retailer confidence has declined by 13 points in the first quarter of 2021, impacted by the Covid-19 pandemic and related trade restrictions. The trade sector has experienced another tough start to the new year. Much of the performance of the sector still largely reflects a Covid-19 narrative. Be it in terms of its restrictions on trade or its impact on the labour market, the pandemic's sustained influence on business and consumer sentiment remains concerning amid the uncertainty about its trajectory (Kantar, 2021).

6.3.1 MALLS/CENTRES

The retail sector has recovered somewhat from the severe coronavirus-induced collapse in the first half of 2020. Neighbourhood (less than 10 $000m^2$) and Community Shopping Centres ($12\ 000m^2-25\ 000m^2$) have fared better than Regional ($50\ 000m^2-100\ 000m^2$) and Super Regional (more than 100 $000m^2$) malls during the coronavirus pandemic, measured by trading density growth rates and vacancy rates. It is a convenience phenomenon. The retail sector's trading densities is expected to grow by 3.3% in 2021 (ALG, 2021).

6.3.2 **RETAILER CONFIDENCE**

Retail volume growth worsened on aggregate in the first quarter (from -1 to -16), largely dragged down by significant declines in the durable goods category (i.e. retailers in hardware, furniture and household appliances). Non-durable goods (e.g. food, beverages, tobacco, pharmaceuticals and cosmetics) sales volumes held firm during the first quarter, but sales of durable and semi-durable goods (e.g. clothing and footwear, sporting equipment) slumped. Retailers, in general, kept selling prices elevated, and durable goods retailers, in particular, hiked their prices. Current price increases can be attributed to several factors. Among these are the increases in import prices, particularly of steel and raw materials, as well as relatively high food inflation. Costs associated with Covid-19 related hygiene protocols also remain an extra expense to retailers. Looking ahead, rising fuel and electricity prices will also have an impact on prices (Kantar, 2021).

6.3.3 SOUTH AFRICAN GOVERNMENT SOCIAL GRANTS

South African government social grants have been a pillar of support for retail sales. As a result, according to Stats SA retail sales declined only 4% year-on-year in November 2020, not disastrous in this environment. On the downside, however, rising unemployment, together with declining personal disposable income, remains a big risk for retail sale growth (ALG, 2021).



6.3.4 SOUTH AFRICA'S ONLINE RETAIL SECTOR

South Africa's online retail sector is small by the standards of developed international markets, however it has been growing rapidly in scope and value. However, online retail's share of South Africa's retail trade was still below 2% in 2019, despite enjoying double-digit sales growth for many years (BusinessWire, 2020). Therefore, South Africa is expected to be mildly affected by the shift to online shopping, which currently accounts for 3% of total retail sales. In Europe, e-commerce sales contributed 15% to total retail sales in 2020. The internet penetration rate in South Africa's low-income areas is insignificant; property companies that own Community and Neighbourhood Shopping Centres in these areas will almost certainly continue to see stable trading density growth rates, despite the upward trajectory in global online shopping (ALG, 2021). The industry has huge long term growth potential. Investment in technology and supply chains is increasing, and the coronavirus outbreak and lockdown has driven an unprecedented boom in online spending and adoption. However, the crisis has also affected the economy, employment, investment and incomes, and put pressure on consumer spending (BusinessWire, 2020).

The coronavirus outbreak and economic lockdown had a huge impact on the online retail industry. It is estimated that online retail sales grew by around 40% during lockdown. International forecasts suggest that year-on-year growth may be in the region of 100%. A key impact of the crisis has been the huge increase in ecommerce adoption among businesses and consumers who otherwise may not have entered the online market for some time. There has been huge growth at many of the omnichannel retailers, although online gains have been partly offset by declines in consumer spending in physical stores and the wider retail sector (BusinessWire, 2020).





Source: SAPOA

6.3.5 **ANTICIPATED MOMENTOUS RISKS**

The overall retail sector (except for the non-durable retailers) is pessimistic about business conditions and sales volumes in the second quarter. Momentous risks lie ahead with the prospect of a third wave in South Africa looming amid a very slow vaccine rollout. Renewed lockdown restrictions to curb the spread of the virus will certainly harm the sector (Kantar, 2021).



6.4 SOCIAL MEDIA'S INFLUENCE OF RETAILERS

Social media is having an increasing influence on consumers in South Africa, with some players embracing these platforms to showcase the positive work they are doing in the community, as well as promoting deals and discounts to entice consumers to stores. However, as well as offering these positive aspects, consumers have also used social media to expose misguided actions of retailers, with easy image sharing abilities boosting this trend (Euromonitor, 2021).

Social commerce is the use of networking websites such as Facebook, Instagram, and Twitter as tools to promote and sell products and services. Ambassadors are a critical touchpoint for customers, they are the face of the retailer and on the frontline of questions, queries and often influence customer's decision to purchase. Social commerce has the potential to grow faster than overall ecommerce — proving once again that, while consumers may not be meeting up in person, socially driven commerce is uniquely embedded in their DNA. Around 70% of shoppers turn to Instagram for product discovery. When compared to the average consumer, Generation Z⁸ spends 2 to 3 times more on social channels with Instagram and Snapchat taking the lead, while Generation X⁹ prefers shopping on Facebook (Spacematch, 2020).

6.5 EXISTING TRENDS WHICH ARE LIKELY TO BECOME MORE PROMINENT IN 2021

The impact of the COVID-19 pandemic will be felt for months to come and most likely permanently. The following are some trends that are already in place and might become prominent (Spacematch, 2020).

- The Evolution of Shopping Malls Shoppers are returning despite the pandemic but malls will need to be reimagined. Relying on department stores like Edgars as anchors will no longer be viable. There will be more demand for smaller independent stores that are in sync with consumers' needs. Local Neighbourhood Centres will benefit at the expense of super regional shopping centres as shoppers try to avoid the crowds and focus on convenience. Brands will need to adapt to this and focus on local communities.
- Local and Independent For many years big Malls pushed small local entrepreneurs out of the way in favour of international brands. With several of these large international brands having closed shop, there is an emergence of successful local brands.
- **Direct-To-Consumer Brands** (**D2C**) Over the past few years, D2C brands have exploded, giving brands direct access to customers and profits, and giving customers direct access to brands at lower prices. Premium designer brand sales are increasing, creating a new vertical in the D2C sector. Customers are turning to luxury private label brands for superior products and better shopping experiences.
- **Livestreaming** Shopping in person yet livestreaming is the closest many retailers and brands have been able to come to physically connecting with their customers during the pandemic.

⁹ "the generation born after that of the baby boomers (roughly from the early 1960s to late 1970s), typically perceived to be disaffected and directionless." (Oxford Dictionary 2021)



⁸ "the generation reaching adulthood in the second decade of the 21st century, perceived as being familiar with the internet from a very young age." (Oxford Dictionary 2021)

Livestream-generated sales are expected to double to R1,7 trillion worldwide in 2021. Shoppers want to feel a connection to a brand.

- **Touch-free Technology** Burberry's first social retail store, which recently opened in Shenzhen, southern China. This gives a customer a flavour of the store of the future. With a specific programme on WeChat, the country's most popular messaging app, customers can click on exclusive content and personalised experiences in-store, then share details with friends. No touching is needed. Every item in-store has a tag with a QR code, scan them for more storytelling. Each customer is also given a playful animal character via Snapchat that evolves as they walk around the store. The gamified experience takes retail to another level. The more that customers engage with this form of augmented retail, the more rewards they get through Burberry's social currency.
- Offline Ecommerce One thing that physical stores do better than any other channel is to engage all five senses¹⁰. This means they are a great way to forge emotional connections with customers through personalised, engaging experiences. Online retailers are increasingly coming to the conclusion that they are missing out by not having a bricks and mortar presence. Pop-ups shops, interactive ecommerce kiosks, and bricks and mortar stores¹¹ are all bringing favourite online retailers onto the high street.
- **Re-Commerce** With consumers becoming increasingly motivated by sustainability, rather than price, second-hand sales of luxury items will shake up the Re-Commerce industry. This presents an interesting opportunity for brands to open up their own Re-Commerce marketplace and turn second-hand shopping into an exciting shopping experience.
- AI Enhancing In-Store Experience Artificial intelligence (AI) can automate in-store operations and reduce operational expenses in retail stores. It can replace sales personnel to assist customers in the store, reduce queues through cashier-less payment, replenish stock by real-time stock monitoring, and digitise store display and trial rooms. Amazon has launched Amazon Go, a new kind of store featuring the world's most advanced shopping technology. No lines, no checkout just grab and go!

6.6 THE LOCAL CONVENIENT CENTRE

Simandlovu Trading proposes to develop a small retail centre in Bothas Hill. There is only one formal retail facility in the study area, which is located in Bothas Hill semi-commercial area. Most of the people in the study area consider doing majority of their shopping in Pinetown, Hillcrest and Durban. Therefore, there is a large percentage of the leakage from people travelling to the above-mentioned areas for shopping since majority of their transports pass by the proposed development site. The total number of households in the market area, BHDKNQI, is 5 100 for 2020. The South African Council of Shopping Centres recommends the following threshold values and market support for a successful local convenience centre (SACSC, 2016):

¹¹ "The term "brick-and-mortar" refers to a traditional street-side business that offers products and services to its customers faceto-face in an office or store that the business owns or rents. The local grocery store and the corner bank are examples of brickand-mortar companies." (Investopedia 2021)



¹⁰ Sight, Sound, Smell, Taste, and Touch (Visiblebody 2021)

Table 20: Market characteristics and threshold values

Living Standards Measure (LSM) groups	Number of households
LSM 1 - 5	<10 000
LSM 6 - 9	<5 000
LSM 10 - 10+	<2 000

Source: South African Council of Shopping Centres, 2016

The function offered by local convenience centres is mainly express convenience and caters mainly for daily milk and bread purchases. This includes a café/small food store, takeaway foods, local restaurants, DVD stores, banks and ATM facilities (SACSC, 2016).

This retail facility aims at satisfying the local needs of the residents within one or two adjoining suburbs (SACSC, 2016). However, in the case of the proposed development, it intends to satisfy the local needs of the residents within Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga (BHDKNQI). The first two areas can be classified as semi-urban areas, whereas the latter three areas can be classified as semi-rural. When people from these areas travel to Hillcrest, Kloof, Pinetown and Durban their transport pass by the proposed development site, particularly Bothas Hill, KwaNyuswa and Qadi, whereas Drummond and Inchanga have an option to use N3 when travelling to Pinetown or Durban.

A local convenience centre could be a single building, or a number of buildings located in close proximity to each other to provide a single destination. It could consist of one tenant or a number of small tenants (SACSC, 2016).

Table 21: Description and Centre Characteristics

Size of Centre (m ²) (GLA)	Number of Stores	Size of land (ha)
500 - 5 000	5 - 25	0.15 - 1.5

Source: South African Council of Shopping Centres, 2016

Local convenience centres are usually located on collector streets in suburbs. They mostly require customers to get to the centre by car, but are often also located within walking distance of a large proportion of the local population. The close proximity of a taxi rank will add to the market strength of a convenience centre (SACSC, 2016).

Table 22: Location Criteria

Average radius of primary trade area	Median travel time to the centre	Access requirements
1 - 1.5km	2 - 3m	Suburban street or minor collector road

Source: South African Council of Shopping Centres, 2016

The tenant mix of these centres include anchor tenant: Usually smaller than ± 1000 m² with the typical tenants being a café, independent food store, Woolworths Food or other smaller grocery stores such as Kwik Spar or specialised food stores. Other tenants for these centres are convenience retailers including a pharmacy, deli, butchery, DVD store, hairdresser, dry cleaner, liquor store, florist and a hardware store. Small eating places/fast-food outlets could be accommodated depending on the micro location (SACSC, 2016).



The geographic segmentation of these centres is in metropolitan areas, cities, towns and rural areas. The potential will mainly be determined by the local population, the location of the proposed centre, as well as the anchor tenant. Some anchor tenants in this category are more successful than others. In most cases shoppers have a very specific preference based on the product range, the quality and price, the operator, the service, business hours, parking and security. These are all factors which will impact on the success of these centres (SACSC, 2016).

6.7 THE FUTURE OF RETAIL INDUSTRY

Retailing will benefit from eased restrictions across the forecast period, with recovery on the landscape predicted for late 2021. As price-sensitivity remains in the early forecast period, price-points will remain key, with players expected to leverage and expanded their private label offerings, boosting sales (Euromonitor, 2021).

6.8 REVIEW OF COMPETING RETAIL IN THE STUDY AREA

There is only one big retail in the study area which is located in the Bothas Hill semi-commercial area. Other retails available are small such as Spaza shops, trading shops and survivalist shops which are mainly located in the semi-rural areas of the study area.

6.9 DEMAND SIDE ASSESSMENT AND MODELLING

6.9.1 KEY ASSUMPTIONS

Several assumptions were made in conjunction with the information presented in the previous sections to arrive at the recommendations for the new retail centre. These assumptions and calculations are presented in the following subsections.

6.9.1.1 The market catchment area

The total number of households in the market area, BHDKNQI, is 5 100 for 2020. According to the South African Council of Shopping Centres, local convenience centres are expected to attract a local area, and in this case, BHDKNQI is a local area which has Bothas Hill town as the only commercial zone. The BHDKNQI area is dominated by semi-rural area such as KwaNyuswa, Qadi and Inchanga. Bothas Hill and Drummond is an urban area, however, people from the whole of BHDKNQI area travel to Bothas Hill town, Hillcrest, Kloof, Pinetown, New Germany and Durban to do shopping from formal retail.

6.9.1.2 Household's Income and Expenditure

The table below shows the total income and expenditure for various goods related to this study for the Outer West Durban area.



Household Income and Expenditure	2019	2020	2021	2025	2030	2035
Disposable income ¹²	22 172	25 546	27 420	36 398	51 862	<mark>73 895</mark>
Final consumption expenditure by households	10 809	12 461	13 382	17 821	25 569	36 810
Dura	ble goods					
Furniture, household appliances, etc	250	272	284	337	417	515
Personal transport equipment	1 284	1 488	1 602	2 153	3 113	4 503
Computers and related equipment	46	51	54	67	88	116
Recreational and entertainment goods	195	220	234	298	403	545
Other durable goods	119	134	142	180	242	325
Total	1 894	2 166	2 317	3 035	4 263	6 004
Semi-di	urable goo	ds				
Clothing and footwear	948	1 090	1 170	1 548	2 198	3 121
Household textiles, furnishings, glassware, etc	228	254	268	333	436	572
Recreational and entertainment goods	135	153	162	207	280	380
Miscellaneous goods	108	125	135	180	258	370
Total	1 419	1 622	1 734	2 667	3 127	4 441
Non-du	irable goo	ds				
Food, beverages and tobacco	4 850	5 564	5 960	7 845	11 061	15 594
Household consumer goods	710	805	858	1 106	1 518	2 083
Medical and pharmaceutical products	332	385	415	560	815	1 185
Recreational and entertainment goods	200	237	258	360	548	834
Total	6 091	6 992	7 491	9 871	13 941	19 697

Table 23	: Household	income	for ou	uter west	Durban	area	(Rands	Million)
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Source: Quantec Easy Data and Orban-Ec on, 2021

6.9.1.3 Average real growth (GDP and Expenditure)

As of 2020, the total number of households within BHDKNQI's catchment area is 5 100. The growth rate that was used for projected retail GLA Net Effective Demand for the study area in 15 years, is based on a function of the historical growth rate for household expenditure and Quantec's projected growth rate for household expenditure.

6.9.1.4 Local convenience retail trading density

Retail trading densities used are based on the MSCI Inc. The study was only able to obtain trading densities for super regional, regional, small regional, community and neighbourhood. Therefore, the local convenience centre trading density was extrapolated from the trading densities obtained for the

¹² Current income less taxes on income and wealth



other five mentioned centres. The cost of a square metre per month varies according to the type of centre, in a descending order from super regional to neighbourhood centres. Therefore, the difference between the two last centres from the five, in terms of the cost of a square metre per month, was employed to determine the trading density for the local convenience centre. The table below presents retail trade density for a local convenience centre for different types of shop classifications/ categories.

Retail Trade Density	Apparel	Department Stores	Department Stores Food Food Service		Décor
R/m ² /month	893	1 729	2 563	1 773	1 040
R/m ² /annum	10 721	20 742	30 751	21 277	12 478

Table 24: Local Convenience Retail Trade Density

Source: MSCI Inc. & Urban-Econ (2021)

6.9.1.5 Existing (Gross) Supply GLA

There is an excess of 1 $650m^2$ of GLA supplied within the market area as shown in the table below.

Table 25: Existing (gross) supply GLA

Spar 1 650m ²	GLA (m ²)
	1 650m ²
Total Supply 1 650m ²	1 650m ²

Source: Google Earth and Urban-Econ, 2021

6.9.1.6 Retail demand model (per expenditure category)

Table 25 illustrates the total Gross Lettable Area (GLA) demand in 2020. A retained leakage of 21% of expenditure was employed in this table. This means, of the total number of households expenditure in the study area, 21% of their income was spent locally (Bothas Hill town), particularly on the food, beverages, tobacco and household consumer goods. Therefore, a total GLA of 4 450m² for value centre-related goods (durable, semi-durable and non-durable goods) is currently demanded by the local market area. This is more than the current supply (1 650m²) in the study area which mainly supplies food, beverages, tobacco and household consumer goods.

Simandlovu Trading proposes to develop a small retail centre which will also supply food, beverages, tobacco and household related consumer goods. The total GLA of $1.890m^2$ for food, beverages, tobacco and household consumer goods is currently demanded (highlighted with yellow shading in both Tables 25 & 26), and is projected to be $2.157m^2$ in 2023 (see Table 26), which is the year the proposed retail centre begins operating. This then makes it feasible for the development of a proposed convenience centre without negatively impacting on the current supply.



Table 26: GLA Demand in 2020

Commentity	2020 Retail Buying Leakages Total Expenditure		Total Free an ditana	Tuo dia a Danaita	2020				
Commodity	Income	Expenditure	Power	Leakages	Total Expenditure	I rading Density	2020		
Durable Goods									
Furniture, household appliances, etc		R272	R16 670 080	R3 500 717	R3 500 717	12 478	281		
Computers and related equipment		R51	R3 148 304	R661 144	R661 144	35 246	19		
Recreational and entertainment goods		R220	R13 477 700	R2 830 317	R2 830 317	12 478	227		
Other durable goods		R134	R8 175 452	R1 716 845	R1 716 845	12 478	138		
Total		R678	R41 471 536	R8 709 023	R8 709 023		664		
Semi-durable Goods									
Clothing and footwear		R1 090	R66 733 175	R14 013 967	R14 013 967	10 721	1 307		
Household textiles, furnishings, glassware, etc		R254	R15 524 275	R3 260 098	R3 260 098	12 478	261		
Recreational and entertainment goods		R153	R9 352 930	R1 964 115	R1 964 115	35 246	56		
Miscellaneous goods		R125	R7 664 414	R1 609 527	R1 609 527	35 246	46		
Total		R1 622	R99 274 794	R20 847 707	R20 847 707		1 670		
		No	n-durable Goods						
Food, beverages and tobacco		R5 564	R340 547 080	R71 514 887	R71 514 887	44 818	1 596		
Household consumer goods		R805	R49 297 667	R10 352 510	R10 352 510	35 246	294		
Medical and pharmaceutical products		R385	R23 587 904	R4 953 460	R4 953 460	35 246	141		
Recreational and entertainment goods		R237	R14 496 127	R3 044 187	R3 044 187	35 246	86		
Total		R6 992	R427 928 777	R89 865 043	R89 865 043		2 116		
Final consumption expenditure by households	R27 420	R9 291	R568 675 108	R119 421 773	R119 421 773		4 450		

Source: Quantec Easy Data and Urban-Econ, 2021



Table 27: GLA Demand projections

	0	1	2	3	4	5	10	15	
Commodity	2020	2021	2022	2023	2024	2025	2030	2035	
Durable Goods									
Furniture, household appliances, etc	281	291	302	313	325	338	406	489	
Computers and related equipment	19	20	21	22	23	24	31	41	
Recreational and entertainment goods	227	235	244	253	262	271	325	388	
Other durable goods	138	144	151	158	165	173	218	274	
Total	664	690	717	746	775	806	980	1 192	
Semi-durable Goods									
Clothing and footwear	1 307	1 352	1 399	1 447	1 497	1 548	1 833	2 171	
Household textiles, furnishings, glassware, etc	261	271	282	292	303	315	379	457	
Recreational and entertainment goods	56	59	62	65	69	73	95	123	
Miscellaneous goods	46	47	49	51	53	55	66	79	
Total	1 670	1 729	1 791	1 855	1 922	1 990	2 373	2 831	
Non-du	able Goods	;							
Food, beverages and tobacco	1 596	1 672	1 752	1 835	1 923	2 015	2 543	3 211	
Household consumer goods	294	306	319	332	346	360	441	541	
Medical and pharmaceutical products	141	149	158	167	177	188	250	334	
Recreational and entertainment goods	86	90	95	99	103	108	136	170	
Total	2 116	2 217	2 322	2 433	2 549	2 670	3 370	4 256	
Final consumption expenditure by households	4 450	4 637	4 831	5 034	5 246	5 467	6 724	8 278	

Source: Quantec Easy Data and Urban-Econ, 2021



6.9.1.7 Net effective GLA demand

The assumption is made that the proposed retail centre will start operating in 2023. The table below gives an indication of the net effective demand. The net effective demand in 2020 was 2 880m², and projected to be 3 384m² in 2023 when the proposed development begins operating. Therefore, there is enough retail demand to accommodate a local convenience centre in the study area which is proposed by Simandlovu Trading.

Period	0	3	5	10	15
Year	2020	2023	2025	2030	2035
Proposed Centre's GLA (m ²)		470 ¹³			
Demand (m ²)	4 450	5 034	5 467	6 724	8 278
Supply (m ²)	1 650	1 650	1 650	1 650	1 650
Net Effective Demand (m ²)	2 800	3 384	3 817	5 074	6 628

Table 28: Projected GLA Net Effective Demand for 15 years

Source: Google Earth and Urban-Econ (2021)

The following insights can be drawn from the GLA demand projections:

- In 2020 net GLA demanded by the target market area is projected to be 2 800m².
- By 2023, this net demand is projected to have increased to 3 384m².
- By 2025, this net demand is projected to have increased to **3 817m**².
- By 2030, the net demand is anticipated to increase to **5 074m**².
- By 2035, the net demand is anticipated to increase to 6 628m².

Therefore, there is sufficient demand to develop a local convenience centre in the study area. The new retail centre's potential market capture from the existing net effective demand in the study area is 6.9%.

In addition, the projected demand indicates that a development of a neighbourhood centre $(5\ 000\text{m}^2\text{ to}\ 12\ 000\text{m}^2)$ is also feasible, considering that once the centre begins operating, there will be an increased percentage of retained leakage to the local market since shoppers will not need to travel very far to shop (for instance, to Hillcrest, Kloof, New Germany, Pinetown and Durban). Therefore, if any investor were to build a shopping centre of 5 000 to 8 000 square metres, there would be sufficient demand for that, but then the centre would have to cater various goods.

6.10 KEY FINDINGS

- There is enough retail demand to accommodate a proposed local convenience centre of 470 m2 in the study area.
- The net effective demand in 2020 was 2 880m², and projected to be 3 384m² in 2023 when the proposed development begins operating.
- There is only one formal retail facility in the study area, which is located in Bothas Hill semicommercial area, with a GLA supply of 1 650m².

¹³ New Centre commences operation.



- Most of the people in the study area consider doing majority of their shopping in Pinetown, Hillcrest and Durban. Majority of their transports pass by the proposed development site.
- Therefore, there is a large percentage of the leakage of buying power from people travelling to Pinetown, Hillcrest and Durban for shopping.
- The total number of households in the study area is 5 100 for 2020. Thus, a local convenience centre is a suitable development for such a market.
- The proposed retail facility aims at satisfying the local needs of the residents within Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga (BHDKNQI).
- The close proximity of a taxi rank will add to the market strength of a convenience centre.
- Factors such as the product range, the quality and price, the operator, the service, business hours, parking and security will impact on the success of the proposed centre.
- The assumption is made that the proposed retail centre will start operating in 2023.
- South Africa's retail sector is adapting to the reality of new customer preferences, lifestyle changes, the impacts of Covid-19 and technological developments. Thus, the retail sector is on the mend, and will see greater recovery throughout 2021
- The commercial property sector has been under pressure for some time and unfortunately Covid-19 has resulted in further pressure, particularly in the retail and office environments. On the other hand, industrial space is faring well, as goods will always need a space to be stored.
- The COVID-19 pandemic has had a massive impact on retail in 2020. The obvious outcome has been the growth in e-commerce. Offline retailers were forced to respond with the speedy rollout of new technologies, apps and ways of meeting shoppers' needs such as Click and Collect. The impact of the COVID-19 pandemic will be felt for months to come and most likely permanently.
- South African retailer confidence has declined by 13 points in the first quarter of 2021, impacted by the Covid-19 pandemic and related trade restrictions.
- The retail sector's trading densities is expected to grow by 3.3% in 2021.
- Costs associated with Covid-19 related hygiene protocols remain an extra expense to retailers. Looking ahead, rising fuel and electricity prices will also have an impact on prices.
- South African government social grants have been a pillar of support for retail sales.
- South Africa's online retail sector is small by the standards of developed international markets, however it has been growing rapidly in scope and value.
- The internet penetration rate in South Africa's low-income areas is insignificant; property companies that own Community and Neighbourhood Shopping Centres in these areas will almost certainly continue to see stable trading density growth rates, despite the upward trajectory in global online shopping.
- Investment in technology and supply chains is increasing, and the coronavirus outbreak and lockdown has driven an unprecedented boom in online spending and adoption. However, the crisis has also affected the economy, employment, investment and incomes, and put pressure on consumer spending.
- Momentous risks lie ahead with the prospect of a third wave in South Africa looming amid a very slow vaccine rollout. Renewed lockdown restrictions to curb the spread of the virus will certainly harm the sector.



7 SOCIO-ECONOMIC IMPACT ASSESSMENT

This chapter presents the analysis of the socio-economic impacts that are expected to ensue as a result of the development of the proposed project and an evaluation of these impacts according to the predefined criteria. The potential socio-economic impacts identified arise because of the construction and operational phases of the proposed housing development; thus, the impacts are assessed for the construction and operational phases, where applicable.

7.1 IMPACT RATING APPROACH

The scoring was done following the approach described below.

Nature of the Impact

A brief description of the type of impact (positive or negative) the proposed development will have on the affected environment.

Extent of Impact

The physical extent of the impact. The impact could be:

- Footprint: the impacted area extends only as far as the actual footprint of the activity.
- Site: the impact will affect the entire or substantial portion of the site/property.
- Local: The impact could affect the area including the neighbouring businesses, properties and transport routes.
- Regional: Impact could be widespread with regional implication.
- National Scale: Impact could have a widespread national level implication.

Duration of Impact

The specialist should indicate whether the lifespan of the impact would be:

- Short term: The impact is quickly reversible within a period of one year, or limited to the construction phase
- Medium-term: The impact will have a medium-term lifespan (project lifespan 1 10 years)
- Long-term: The impact will have a long-term lifespan (project lifespan > 10 years).
- Permanent: The impact will be permanent beyond the lifespan of the development.

Intensity of Impact

These criteria evaluate the intensity of the impact and are rated as follows:

- Minor: The activity will only have a minor impact on the affected environment in such a way that the natural processes or functions are not affected.
- Low: The activity will have a low impact on the affected environment.
- Medium: The activity will have a medium impact on the affected environment, but function and process continue, albeit in a modified way.
- High: The activity will have a high impact on the affected environment which may be disturbed to the extent where it temporarily or permanently ceases.
- Very high: The activity will have a very high impact on the affected environment which may be disturbed to the extent where it temporarily or permanently ceases.

Probability of Impact



This describes the likelihood of the impacts actually occurring. The likelihood can be described as:

- Improbable: The possibility of the impact occurring is highly improbable
- Low: The possibility of the impact occurring is very low, due either to the circumstances, design or experience.
- Medium: There is a possibility that the impact will occur to the extent that provision must be made, therefore.
- High: There is a high possibility that the impact will occur to the extent that provision must be made, therefore.
- Definite: The impact will definitely take place regardless of any prevention plans, and there can only be relied on mitigatory actions or contingency plans to contain the effect.

Significance

Significance is determined through a synthesis of the various impact characteristics and represents the combined effect of the extent, duration, intensity, and probability of the impacts.

- No significance: The impact is not substantial and does not require any mitigatory action.
- Low significance: The impact is of little importance but may require limited mitigation.
- Medium significance: the impacts will have a moderate influence on the proposed development and/or environment. The impact can be ameliorated by a modification in the project design or implementation of effective mitigation measures.
- High significance: The impact is of great importance. Failure to mitigate, with the objective of reducing the impact to acceptable levels, could render the entire development option or entire project proposal unacceptable. Mitigation and management are essential.

The following assessment scale will be used to determine the significance of the impact on the environment:

Significance = (probability + duration + extent) x intensity

- Probability: 1 5
- Extent: 1 5
- Duration: 1 4
- Intensity: 1 5

Significance rating criteria:

>75	High environmental significance
50 – 75	Medium environmental significance
<50	Low environmental significance

7.2 IMPACT ANALYSIS

The following potential impacts were identified and examined in greater detail:

- Impact on the local and regional economy
- Impact on employment opportunities
- Impact on the sense of place
- Impact on household income
- Impact on competing filling stations



7.3 CONSTRUCTION PHASE

7.3.1 CREATION OF TEMPORAL AND SUSTAINABLE EMPLOYMENT OPPORTUNITIES

The proposed development is anticipated to result in the creation of direct and indirect employment opportunities. Direct employment opportunities are anticipated to occur through the employment of construction workers, and this is anticipated to be short term or last until the construction phase is complete. The development is anticipated to attract a pool of skilled, semi-skilled labour in the local area and is expected to result in the transfer of skills during the construction phase. Additional activities during the construction phase such as transactions with building material suppliers will potentially create indirect job opportunities, as suppliers are expected to potentially hire additional factory workers as well as equipment and material producers due to the demand for building equipment.

Nature: The construction of the filling station and retail centre is expected to create temporal and sustainable employment opportunities			
Extent/Scale	Local (3)		
Duration	Short (1)		
Intensity	Medium (3)		
Probability	High (4)		
Significance	Low Environmental Significance (24)		
Status (Positive or negative)	Positive		
Can impacts be mitigated?	NA		

Table 29: Creation of temporal employment opportunities during the construction phase

7.3.2 IMPACT ON HOUSEHOLD INCOME – TEMPORARY JOBS FOR THE LOCAL LABOUR FORCE

The temporal employment opportunities created during the construction phase will provide the local labour force and their households with income. The disposable income will enable households to have access to retail goods and services such as educational and medical services. The wage and salary levels are to be competitive and take into consideration of the skills levels of the employed construction workers.

Table 30: Impact on Household Income during the construction phase

Nature: The construction of the filling station and retail centre is expected to have a positive impact on local			
household income - through the provision of temporary jobs			
Extent/Scale	Local (3)		
Duration	Medium (2)		
Intensity	Medium (3)		
Probability	High (3)		
Significance	Low Environmental Significance (24)		
Status (Positive or negative)	Positive		
Can impacts be mitigated?	NA		



7.3.3 INFLUX OF MIGRANT LABOUR

A lot of unemployed persons are expected to influx the site as soon as they are aware of the new development. The key concerns and negative impacts are largely anchored around the anticipated influx of migrant labour and. Therefore, generally, the recommended mitigation measures should address the anticipated negative impacts.

Nature: The construction of the filling station is expected to attract migrant labour			
Extent/Scale	Local (3)		
Duration	Short (1)		
Intensity	Low (2)		
Probability	Medium (4)		
Significance	Low Environmental Significance (40)		
Status (Positive or negative)	Negative		
Can impacts be mitigated?	Yes		
Mitigation	Prioritising local labour for employment		

Table 31: Influx of migrant labour during the construction phase

7.3.4 POTENTIAL DISRUPTIONS OF BASIC SERVICE PROVISION

Potential disruptions of basic service provision during construction are also expected in the local area.

Nature: The construction of the filling station and retail centre is expected to disrupt provision of basic services			
Extent/Scale	Local (3)		
Duration	Short (1)		
Intensity	Medium (3)		
Probability	Medium (4)		
Significance	Low Environmental Significance (27)		
Status (Positive or negative)	Negative		
Can impacts be mitigated?	Yes		
Mitigation	Provision of a schedule for construction when water and electricity interruption could		
	occur with the consent of the community and the provision of parking on site for		
	visitors and customers.		

Table 32: Potential disruptions of basic service provision during construction

7.4 **OPERATIONAL PHASE**

7.4.1 CREATION OF TEMPORAL AND SUSTAINABLE EMPLOYMENT OPPORTUNITIES

Direct employment creation during the operational phase of the development is anticipated to be sustainable and the duration is anticipated to be longer than the employment created during the construction phase. The following activities are anticipated to create direct employment opportunities during the operational phase:

- Cleaning and maintenance of the building
- Building and petrol pump management
- Petrol Pump Attendants



- Building and retail centre management
- Cashiers

Indirect employment creation will occur though the transactions between suppliers for services. Such services may be outsourced from external companies and may provide those companies to hire more employees to produce the supplies or offer the needed services. These services may include:

- Store Attendants
- Security services

Table 33: Creation of employment opportunities in the operational phase

Nature: The construction of the filling station is expected to create temporal and sustainable employment opportunities			
Extent/Scale	Local (3)		
Duration	Long (3)		
Intensity	Medium (3)		
Probability	High (4)		
Significance	Low Environmental Significance (30)		
Status (Positive or negative)	Positive		
Can impacts be mitigated?	NA		

7.5 STIMULATION OF THE LOCAL AND REGIONAL ECONOMY

The usage of energy plays a pivotal role in economic growth and development. The establishment of a petrol station and retail centre in this area will serve to improve the accessibility of petroleum products to motorists and accessibility of goods to shoppers, thus boosting the economy. Furthermore, the operation of the petrol station coupled with the convenience store and the retail centre will have a positive effect on the local economy. Not only will it provide jobs to the respective parties, but it will promote economic growth.

Nature: The construction of the filling station and retail centre is expected to stimulate the local and regional economy – an increase in production and GDP		
Extent/Scale	Regional (3)	
Duration	Permanent (4)	
Intensity	Medium (3)	
Probability	High (4)	
Significance	Low Environmental Significance (33)	
Status (Positive or negative)	Positive	
Can impacts be mitigated?	NA	

Table 34: Impact on Production and GDP in the operational phase

7.6 CHANGE IN SENSE OF PLACE

The site is in a semi-commercial area, however, not too far away from residential area, thus the additional noise and visual impact will be experienced by surrounding land-users.



Nature: The construction of the f	illing station and retail centre is expected to affect the sense of place
Extent/Scale	Local (3)
Duration	Permanent (4)
Intensity	Low (2)
Probability	Definite (5)
Significance	Low Environmental Significance (24)
Status (Positive or negative)	Negative
Can impacts be mitigated?	Yes
Mitigation	Design of the filling station and retail centre and landscape designs to enhance the visual impacts of the station and retail centre to fit into the existing environment. Moreover, installing signs to warn pedestrians and motorists of the construction taking place; as well as notifying businesses around the site.

Table 35: Impact on the sense of place in the operational phase

7.7 IMPACT ON HOUSEHOLD INCOME

The employment opportunities created during the operational phase will provide the local labour force and their households with income. The disposable income will enable households to have access to retail goods and services such as educational and medical services. The wage and salary levels are to be competitive and take into consideration of the skills levels of the employed construction workers.

Nature: The operation of the filling station and retail centre is expected to have a positive impact on local household income - through the provision of jobs for the local population			
Extent/Scale	Local (3)		
Duration	Long (3)		
Intensity	Medium (3)		
Probability	High (3)		
Significance	Low Environmental Significance (27)		
Status (Positive or negative)	Positive		
Can impacts be mitigated?	NA		

Table 36: Impact on Household income in the operational phase

7.8 IMPACT OF COMPETING FILLING STATION

The development of a new petroleum filling station is expected to have an impact on the competing filling stations, particularly those that are located on the same route as the proposed filling station. There is only one filling station in Bothas Hill located on Old Main Rd next to eastbound traffic which is approximately 1.5km away from the proposed site.

In the short term, the current filling station in Bothas Hill is expected to negatively impact the development of the new petroleum filling station with a slight decrease in pump volumes. In the long term, due to the increase in traffic volumes and growth in petrol consumption, pump volumes are expected to return to normal and exceed them.

The intensity of the impact on the existing filling station is expected to be of medium intensity. In the short term there is an expectation of a decline in pump volumes, but not to the extent that the



competition filling stations become unfeasible. The long-term effects are expected to be of low intensity.

The increase in competition between the filling station benefits the consumer, in terms of price, convenience and options.

Table 37: Impact on competing filling stations

 Nature: The operation of the filling station is expected to compete with existing filling stations Market forces will correct the demand for fuel. The sale of new vehicles and an increase in vehicle ownership will create demand for more fuel. After a short while, the pump volumes are expected to return to normal and exceed them 			
Extent/Scale	Local (3)		
Duration	Short term (2)		
Intensity	Medium (3)		
Probability	Medium (3)		
Significance	Low Environmental Significance (55)		
Status (Positive or negative)	Negative		

The table below presents the quantification of the impact on the existing filling stations. The purpose of the table is to understand when the negative impact of the new filling station will be fully absorbed by the market forces. Thus, when the existing filling station will reach the same pump volume before the impact of the new filling station. The assumption is made that the proposed filling station will start operating in 2023. The negative impact will only last for an estimated 4 years and by 2027 the pump volumes for the existing filling stations are expected to exceed the levels seen in 2022.

Table 38: Quantification of the impact on the existing filling stations

Quantification of Impact on Filling Stations	2022	2023	2026	2027	2031
Total Average Estimated Pumped Volumes	1 622 991	1 699 419	1 950 984	2 042 858	2 455 703
New Filling Station Pumped Volumes	-	328 736	389 553	412 430	519 528
Impact on Filling Stations		1 370 683	1 561 432	1 630 429	1 936 176
Impact	-	Negative	Negative	Positive	Positive

Source: Urban-Econ Calculations, 2021

7.9 IMPACT OF COMPETING RETAIL

The development of a retail centre is expected to have an impact on the competing retail, particularly those that are located on the same route as the proposed retail. There is only one formal retail in the whole of BHDKNQI area which is located in Bothas Hill town, many shoppers choose to travel to Hillcrest and Pinetown to do their shopping due to limited variety in Bothas Hill town. Therefore, there might be impact on the competing retail in Bothas Hill, however, it is expected to be minimal since the new retail centre is expected to attract the leakage of shoppers travelling to Hillcrest and Pinetown due to the variety of goods which will be offered.

Table 39: Impact on competing retail

Nature: The operation of the retail centre is expected to compete with existing retail				
Extent/Scale	Local (3)			
Duration	Medium term (3)			



Nature: The operation of the retail centre is expected to compete with existing retail				
Intensity	Low (2)			
Probability	Medium (3)			
Significance	Low Environmental Significance (35)			
Status (Positive or negative)	Negative			

7.10 THE IMPACT OF THE PROPOSED DEVELOPMENT ON TRAFFIC FLOW

The current access is off Old Main Road. There will be no internal roads as the entrance will branch off to the Convenience Centre. Therefore, vehicles that will be turning into and out of the site of the development are likely to cause some limited danger for other vehicles.

Table 40: Impact on the traffic flow

Nature: The operation of the proposed development is expected to have a negative impact on the traffic flow				
Extent/Scale	Local (3)			
Duration	Permanent (4)			
Intensity	Low (2)			
Probability	High (4)			
Significance	Medium Environmental Significance (55)			
Status (Positive or negative)	Negative			
Can impacts be mitigated?	Yes			
Mitigation	Installing traffic lights for safety reasons.			



7.11 IMPACT ASSESSMENT MATRIX

Table 41: Impact Assessment Matrix – Construction Phase

Potential Impact Description	Extent of Impact	Duration of Impact	Intensity of Impact	Probability of Impact	Significance Score	Significance
Creation of temporal and sustainable employment opportunities (Temporary jobs in the construction phase)	3	1	3	4	24	Low
Impact on Household Income (Temporary jobs in construction phase)	3	2	3	3	24	Low
Influx of migrant labour	3	1	2	4	40	Low
Potential disruptions of basic service provision	3	1	3	4	27	Low

Table 42: Impact Assessment Matrix – Operational Phase

Potential Impact Description	Extent of Impact	Duration of Impact	Intensity of Impact	Probability of Impact	Significance Score	Significance
Creation of temporal and sustainable employment opportunities (direct and indirect employment opportunities)	3	3	3	4	30	Low
Stimulation of the local and regional economy (Increase in Production and GDP)	3	4	3	4	33	Low
Change in sense of place	3	4	2	5	24	Low
Impact on Household Income (Job creation for local labour force)	3	3	3	3	27	Low
Change in the sense of place	3	4	2	5	24	Low
Impact on competing filling stations	3	2	3	3	55	Medium
Impact on retail	3	3	2	3	35	Low
Impact on traffic flow	3	4	2	4	55	Medium


7.12 NEGATIVE IMPACTS' TRANSITION INTO POSITIVE IMPACTS

Negative Impact	Phase	Significance	Transition to the Positive Impact
Influx of migrant	Construction	Very Low	The site is located in an existing light commercial area where
labour			workers continuously circulate in search of employment. The
			development of a petrol filling station and retail centre is also a
			small development that will attract few additional migrant
			labourers.
			Migrant labour boost the working age population in the area.
			They also arrive with skills and contribute to human capital
			development, as well to technological progress (OECD, 2014).
Potential disruptions	Construction	None	There will be no disruption of basic services since the area is
of basic service	&		within a well serviced precinct in terms of engineering services
provision	Operational		(BID by Ibhongo Consulting Services).
			Portable water - there is portable water on site.
			Sewerage - the area where the site is located has sewer
			infrastructure. There will be no bulk transportation of sewerage.
			It is not foreseen that the sewerage volumes will be so high as to
			be a challenge to the local municipal Wastewater Treatment
			WORKS. Defines Defines will be stored on site in a well constructed him
			Refuse - Refuse will be stored oil site, in a well-constructed bill area before disposed a Thelewini Municipality will be requested
			to collect solid waste once a week alternatively a private service
			provider can be arranged for the collection of solid waste from
			the facility
			Electricity - There is electricity on site, and it will be a matter of
			ensuring the necessary connections to the proposed new
			building.
			Storm water - A storm water plan will be complied to regulate
			water flow on site.
Change in the sense	Operational	Low	There will be a positive change in sense of place since this will
of place			be a varied development including the PFS, convenient shop,
			retail centre with shops, food outlets / drive thru, ATM service,
			car wash, parking area, kitchen and toilets.
			Moreover, building a new development also mean up-to-date
			technology and security (YAS Property & Development, 2019),
			which might be helpful for pedestrians, shoppers and vehicles
			passing by the site. This could also attract new developments in
			the area.
Impact on	Operational	Medium	The introduction of a new petrol filling station will have a short-
competing filling			term impact on the competing stations. This impact will however
stations			have been negated after about four years when new grow in the
			traffic volumes have normalised the operations of the existing
			stations. The competition from the new proposed station will
			improve to the provision of a convenience service to the
			community of BHDKNQI. It will provide an improved service.

Negative impacts turning into positive impacts



Negative Impact	Phase	Significance	Transition to the Positive Impact		
Impact on competing retail	Operational	Very Low	There is only one formal retail in in the whole of the study area, thus, very low impact is expected on the existing retail since the retail centre is expected to attract leakage of shoppers travelling to Hillcrest, Pinetown and Durban for their shopping. Also, loyal shoppers are unlikely to shift to the new retail, unless they are motivated by other factors such as variety of products and services offered by the new centre.		
Impact on traffic flow	Operational	Low	A petrol filling station is not a generator of new traffic flows. It taps in the existing flows. Also, the type of the retail centre proposed normally attract locals, which is part of the existing flows, whether by public or private transport.		



7.13 CONCLUSION

Simandlovu Trading plan to establish a new service station & convenience shop, retail centre, take away (drive thru) and car wash on a 1 172m² total site. The project is planned to be in Bothas Hill town (semi-commercial area) along the Old Main Rd (R103).

In the short term, filling stations located along the same route is expected to negatively impact the development of the new petroleum filling station. With the probability of a slight decrease in pump volumes. In the long term, the pump volumes are expected to return to normal and exceed them. As the sale of new vehicles increase and vehicle ownership rise, the demand for fuel will increase.

The intensity of the impact on the existing filling stations is expected to be of medium intensity. In the short term there is an expectation of a decline in pump volumes, but not to the extent that the competition filling stations become unfeasible. The long-term effects are expected to be of low intensity.

Very low impact is expected on the existing retail since the retail centre is expected to attract leakage of shoppers travelling to Hillcrest, Pinetown and Durban for their shopping.

The increase in competition between the filling stations and retail benefits the consumer, in terms of price, convenience and options.

The table below summarises the socio-economic impacts linked to the proposed development. The key concerns and negative impacts are largely anchored around the anticipated influx of migrant labour, potential disruptions of basic service provision during construction and change in sense of place. However, various mitigation measures have been proposed, including prioritising local labour for employment, provision of a schedule for construction when water and electricity interruption could occur with the consent of the community and the provision of parking on site for visitors and customers. Generally, the recommended mitigation measures should address the anticipated negative impacts. On the other hand, positive impacts such as job creation and stimulation of local and regional economics should also ensure the proposed mixed-use high-density development.

Phase	Impact	Status before mitigations	Significance before mitigations
Construction	Creation of temporal and sustainable employment	Positive	Low (24)
Operational	opportunities (Increase in Production and GDP)	Positive	Low (30)
Construction	Impact on Household Income	Positive	Low (24)
Operational	nal Impact on Household Income		Low (27)
Operational	Regional and Local Economy		Low (33)
Operational	Operational Impact on competing filling stations		Medium (55)
Operational Impact on competing retail		Negative	Low (35)
Operational	Operational Sense of Place		Low (24)
Construction Influx of migrant labour		Negative	Low (40)
Construction	Potential disruptions of basic service provision	Negative	Low (27)
Operational	Impact on traffic flow	Negative	Medium (50)

Table 43: Summary of impacts and significance rating per impact before mitigation measures



8 RISK AND MITIGATION

Any substantial capital investment has some elements of risks associated with it. Such risks could be high or minimal, as seen in the assessment below, depending on the nature of the project, economic viability of the project as well as the capability and reliability of project owners.

Risk management is an important aspect of ensuring the success of a project through assessing potential risks, risk severity and devising ways to mitigate or alleviate such risks. The subsections below enlist risks associated with the development of the new filling station and retail centre in the Erf 363 Bothas Hill, and provides measures put in place to address such risks. This is done to prepare for any unforeseen circumstances that may threaten the success of this project.

8.1 CAPITAL RISKS

The following table looks at capital risks that may be associated with a petrol station and retail centre development.

Potential Risks	Risk Severity	Actions To Address Risk
This project is highly dependent on equity partners and funders for its success.	Low	There is equity reserved by owners to fund some aspects of the filling station and retail centre development. Given the economic viability of the filling station and small retail centre, it should be relatively comfortable to attract equity partners to invest and cover the balance left by the owners' equity.
The availability and access of land is critical for the development of the filling station and retail centre.	None	Land is available in the Erf 363 Bothas Hill.
It will take between one and two years before construction is completed.	Low	Construction will not be delayed and its start and completion will take place within duly communicated timeframes.

Table 44: Capital Risks

8.2 OPERATIVE RISKS

The following table enlist operative risks that may be associated with a petrol station and retail centre development.

Table 45: Operative Risks

Potential Risks	Risk Severity	Actions To Address Risk
The financial viability and sustainable development of the filling station and retail centre will largely depend on the number of	Low	The demand model has indicated that at 5.5% interception rate for Light Vehicles and 4.5% for Bus and Heavy Vehicles, the new filing station at Erf 363
vehicles using the site, as well as shoppers frequenting the site.		Bothas Hill will be sustainable.



Potential Risks	Risk Severity	Actions To Address Risk
		Factors such as the product range, the quality and price, the operator, the service, business hours, parking and security will impact on the success of the proposed centre.
The role of the filling station and retail centre to meet consumer demand is critical.	Medium	The filling station demand model has shown that available demand is 328 736 litres a month. The retail demand model has shown that the current
		GLA demand is 4 $450m^2$, and 5 $034m^2$ in 2023, the year the proposed retail centre begins operating.
The capacities and reliabilities of the owners of the filling station franchise and retail centre, and key staff are key to the success of the proposed developments.	Low	The owners of the proposed developments have the right experience and profiles to make the filling station and retail centre sustainable and profitable. Care will also be given to appointing well qualified and experienced key personnel to oversee the daily running of the filling station and retail centre.
Fast food restaurant tenant rental rates and services offered by filling station should be at desired or acceptable standards.	Low	Industry gross leasable area rates will be utilised. Reasonable rental rates will be accompanied by excellent service for the tenants.
Consumer satisfaction is important to the sustainability of the filling station and retail centre.	Low	Through proper induction of the staff and a tenant, both motorists, public transport users, shoppers and pedestrians will be made to enjoy their fuelling and shopping experience at the Erf 363 Bothas Hill Convenience Centre.

8.3 MARKETING RISKS

The table below assesses marketing risks that may be associated with a petrol station and retail centre development.

Table	46: M	arketing	Risks
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Risk	Risk Severity	Actions to Address Risk
Availability of other suppliers has the potential to affect sales at the proposed filling station and retails centre.	High	Although the competition is high (within the 5km radius), there is just one petrol filling station in Bothas Hill which is located along the Old Main Rd, and is 1.5km away from the site of the proposed station. Moreover, good management will ensure that even when competition arises, the filling station retains its market share to remain profitable and sustainable. This will be a new centre of its kind in the study area, therefore there is no competition except for the single formal retail.
Location of the petrol filling station and retail centre is critical to attract both primary and transient market.	Low	The petrol filling station and retail centre will be located on the busy Old Main Rd, thus attracting transient market to other part of Bothas Hill, and to KwaNyuswa, Qadi, Drummond and Inchanga.



Risk	Risk Severity	Actions to Address Risk
Ability to meet high consumer demand is critical in sustaining the consumer base.	Medium	The new filling station will have eight islands capable of servicing eight vehicles at the same time. Moreover, the demand model indicted a need for 328 736 litres of fuel a month. This demand will easily be met. The retail centre will adapt to the technological advancements to encourage efficiency in shopping for shoppers.



9 IMPLEMENTATION PLAN

The following implementation plan will be followed in the development of the new filling station and the retail centre:

Table 47: An Implementation Plan

Actions/Project	Timeframe	Funders/Responsible					
Land Use							
Land Acquisition	N/A (Land is available)	Owners					
Filling station and retail centre development	Medium Term Owners/ Equity Partners						
Connectio	ons						
Traffic calming measures over the Old Main Rd and Rob Roy Cres	Medium Term	eThekwini Municipality					
Enhancing public transport network/Taxi ranks and drop offs	Medium Term	eThekwini Municipality /Owners					
Governar	nce						
Retail, events and business attraction strategy to attract new investments to the filling station and retail centre	Short Term	Owners					
Marketing package for the filling station and retail centre	Short Term	Owners					
Development of a safety camera network	Short Term	Owners/ Equity Partners					
Facilitate catalyst gateway/landmark building	Medium Term	Owners					
Develop an economic, environmental and social scorecard	Short Term	Owners					
Monitoring and review	Medium Term	Owners					



10 RECOMMENDATIONS AND CONCLUSIONS

Based on the analysis conducted, Urban-Econ considers the proposed filling station and retail centre development as a viable development option. The following recommendations are based on the findings from the feasibility study and Socio-Economic Impact assessment.

Petrol Filling Station:

- With the expected pump volume of 328 736 litres per month in 2023, there is currently sufficient demand for a new filling station. This pump volume solely comes from the projected demand and not from the average pumped volumes of the current filling stations, indicating enough demand to accommodate an extra filling station in the area.
- The filling station should provide both petrol and diesel pumps. With eight islands and ability to fill eight cars at the same time, the proposed filling station will be able to satisfy market demand for its services.
- The filling station should provide a convenience store, food outlet, coffee shop, ATM, and restroom facilities to be considered on par with competing facilities.
- A car wash is suggested as an added advantage.
- A substantial amount of the filling station budget should be spent on marketing. This will ensure the filling station is well known and that the transient market driving on the Old Main Rd (R103) heading to East and West of eThekwini could be attracted.
- A sufficient demand and sustainable market capacity are indicated by the demand calculations for the proposed filling station development. To this end, the development concept is regarded as feasible.
- The positive socio-economic impacts outweigh the associated negative impacts of the proposed filling station. Thus, making the proposed project socio-economically justifiable.

Retail Centre:

- Currently, there is no retail centre in the study area. There is just one formal retail located in Bothas Hill town with a GLA supply of 1 652m². Thus, most people in the study area consider doing majority of their shopping in Pinetown, Hillcrest and Durban. Majority of their transports pass by the proposed development site.
- Therefore, there is a large percentage of the leakage of buying power from people travelling to Pinetown, Hillcrest and Durban for shopping.
- The total number of households in the study area is 5 100 for 2020. Thus, a local convenience centre is a suitable development for such a market. The proposed retail facility aims at satisfying the local needs of the residents within the study area (Bothas Hill, Drummond, KwaNyuswa, Qadi and Inchanga).
- The current GLA demand is 4 450m², and by 2023 (operational of the proposed development commences) it is projected to be 5 034m².
- The net effective demand in 2020 was 2 880m², and projected to be 3 384m² in 2023.
- The proximity of a taxi rank will add to the market strength of a retail centre.
- Factors such as the product range, the quality and price, the operator, the service, business



hours, parking and security will impact on the success of the proposed centre.

• The development of a neighbourhood centre (5 000m² to 12 000m²) is also feasible, considering that once the centre begins operating, there will be an increased percentage of retained leakage to the local market since shoppers will not need to travel very far to shop (for instance, to Hillcrest, Kloof, New Germany, Pinetown and Durban).



11 ANNEXURE

Annexure 1: Petrol Filling Station Call Log

Posi	Positive Response Mo Response / Positive Response difficult to obtain								
1					4				
No.	Filling Station	Address	Number	Date	Time	Response	Person		
1.	Total Botha's Hill Garage	Old Main Rd, Bothas Hill, Outer West Durban, 3610	+27 31 765 3842	24/05/2021	08:15	Unable to release such confidential information.	Ria		
2.	Caltex (St Margaret Rd)	65 Old Main Rd, Hillcrest, 3650	+27 31 765 5335	24/05/2021	08:20	He said they cannot tell me that because it is confidential	Tiago		
3.	Вр	5 Inanda Rd, Hillcrest, 3650	+27 31 765 5591	24/05/2021	08:25	Wrong number	Shanial		
4.	Shell	42 Old Main Rd, Hillcrest, 3650	+27 31 765 3422	24/05/2021	08:30	Between 350 000 to 450 000 per month	Ntombi & Jacko		
5.	Engen Polo Pony	571 Kassier Rd, Assagay, Clifton Canyon, 3610	+27 31 768 1145	24/05/2021	08:35	I cannot give you that information, it is confidential. You can try emailing my boss at <u>diker@gmail.com</u> Email bounced back.	Gregory		





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