DRAFT ENVIRONMENTAL ASSESSMENT FOR EA AMENDMENT & UPDATE OF EMPR

for

PARKDENE FILLING STATION

on

Erf 11221 Parkdene George

In terms of the

National Environmental Management Act (Act No. 107 of 1998, as amended) & 2014 Environmental Impact Regulations

Prepared for Holder of the EA: **Look Forward Construction (Pty) Ltd.**

Date: 24 November 2022

Primary EAP: Louise-Mari van Zyl

Author Email: louise@cape-eaprac.co.za

Report Reference: GEO139c/05

Department Reference: 16/3/3/5/D2/46/0006/22

Case Officer: Shireen Pullen

Cape EAPrac

Cape Environmental Assessment Practitioners

Tel: +27 44 874 0365 PO Box 2070, George 6530

Fax: +27 44 874 0432 17 Progress Street, George

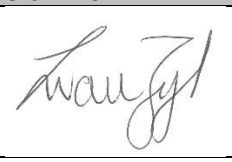
www.cape-eaprac.co.za

DOCUMENT TRACKING

DOCUMENT HISTORY

REVISION	DATE	AUTHOR
Application for Amendment of EA	12 October 2022	Sian Holder (reviewed LvZyl)
Draft Environmental Assessment for EA Amendment	18 November 2022	Sian Holder (reviewed LvZyl)

APPROVAL FOR RELEASE

NAME	TITLE	SIGNATURE
Louise-Mari van Zyl	Senior Environmental Practitioner EAPASA 2019/1444	

DISTRIBUTION

DISTRIBUTION LIST
Department of Environmental Affairs & Development Planning (DEA&DP)
Look Forward Construction (Pty) Ltd. (Holder of EA)

SUBMISSION AND CORRESPONDENCE

SUBMISSION / CORRESPONDENCE	DATE
Application for Amendment of EA submitted	12 October 2022
Acknowledgement of Receipt of Application for Amendment of EA	25 October 2022
Draft Environmental Assessment for EA Amendment submitted	24 November 2022
Acknowledgement of Receipt of Draft Environmental Assessment for EA Amendment	Outstanding
DEA&DP comment on Draft Environmental Assessment for EA Amendment	Outstanding
Final Environmental Assessment for EA Amendment decision-making	Outstanding

APPOINTED ENVIRONMENTAL ASSESSMENT PRACTITIONER:
Cape EAPrac Environmental Assessment Practitioners PO Box 2070 George 6530 Tel: 044-874 0365 Fax: 044-874 0432 Primary EAP & Registration: Director **Louise-Mari van Zyl** (MA Geography & Environmental Science [US]; Registered Environmental Assessment Practitioner with the Environmental Assessment Practitioners of South Africa, EAPSA, Registration Number **2019/1444**. Ms van Zyl has over twenty years' experience as an environmental practitioner. Assisted by: **Mrs Siân Holder** (MEd Environmental Education, BTech & Nat. Diploma Nature Conservation), who has 14 years' experience as an environmental consultant.

PURPOSE OF THIS REPORT:
Stakeholder Review & Comment

HOLDER OF THE EA:
Look Forward Construction (Pty) Ltd.

CAPE EAPRAC REFERENCE NO:
GEO139c/05

DEPARTMENT REFERENCE:
16/3/3/5/D2/46/0006/22

SUBMISSION DATE:
24 November 2022

ENVIRONMENTAL ASSESSMENT FOR EA AMENDMENT & UPDATE OF EMPr

in terms of the

National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended & Environmental Impact Regulations 2014

Parkdene Filling Station

Erf 11221 George

Submitted for:

Stakeholder Review & Comment

Report Issued by:

Cape Environmental Assessment Practitioners

Tel: 044 874 0365 PO Box 2070

Fax: 044 874 0432 17 Progress Street

Web: www.cape-eaprac.co.za George 6530

REPORT DETAILS

Title:	Environmental Assessment for EA Amendment for Parkdene Filling Station
Purpose of this report:	The purpose of this Environmental Assessment report is to provide the decision-making authority with sufficient information regarding the potential impacts associated with the proposed **amendment** of the Environmental Authorisation (EA) for the Parkdene Filling Station and associated updated EMPr.
Prepared for:	Look Forward Construction (Pty) Ltd
Published by:	Cape Environmental Assessment Practitioners (Pty) Ltd. (Cape EAPrac)
Primary EAP:	Mrs Louise-Mari van Zyl
Assisted by:	Mrs Siân Holder
Cape EAPrac Ref:	GEO139c/03
DEA&DP Case officer & Ref. No:	16/3/3/5/D2/46/0006/22
Date:	24 November 2022
To be cited as:	*Cape EAPrac,* 2022. Draft Environmental Assessment for EA Amendment for Parkdene Filling Station. Report Reference: GEO139c/05. George.

TECHNICAL CHECKLIST

The following technical checklist is included as a quick reference roadmap for the proposed project.

Holder of the EA Details		
Company profile	Name and details of Holder of the EA	Look Forward Construction (Pty) Ltd is a developer specialising in Filling Station development.
Site Details		
Size of the site	Description and Size in hectares of the affected property.	0.49hectares / 4 995m²
Covered development footprint	762.10m² covered (under roof) for main building, walkway and forecourt +/- 85% hard surface (parking, street surface, pavement)	• Main building including: • Pump attendant's restrooms, manager's office, kitchen, wash-up areas and a storeroom); • Small commercial and retail facilities (convenience store); • Thirty one (31) parking bays with two disabled bay; • Hard-surfaced internal access and service roads; • Carwash facility.
Site Access	No direct access off Sandkraal Road permitted. Two access points, one exit:	Access off Main Street is limited to entrance only, exit cannot be allowed. Full access is off Golf Street.
Technology Details		
Capacity of the fuel storage	~115m³ (~115 000 litres);	Installation of five (5) Underground Storage Tanks (USTs); Depth: 2 to 2.5 metres below natural ground level (ngl).

PREFFERED ALTERNATIVE

Two Layout Alternatives were originally assessed in the Final BAR (Sept.2012). Layout Alternative 1 was authorised (*Figure 1 below)*. This amendment application proposes a **re-orientation** of the **authorised layout alternative** within the **same / approved site extent / proposal scope**:

The amended preferred layout Filling Station Site Development Plan (SDP) has been changed as follows:

- The approved covered (under roof) area changes from 769.55m² to 762.10m² (slight reduction);
- Re-orientation of convenience store & light-vehicle fuel dispensing Forecourt from south-western corner (SW to NE orientation); to the southern boundary (S to N orientation) and the underground storage tanks from south of property to north-east corner to accommodate the main building re-orientation.
- Access and egress points will slightly re-aligned to accommodate the Go-George bus stop that was developed post authorisation of the filling station.
- Twenty-two (22) parking bays with two (2) disabled bay, changes to thirty-one (31) parking bays with one (1) disabled bay (increase).
- Hard-surfaced internal access and service road area slightly larger to allow for required public transport (bus stops), vehicle manoeuvrability and pedestrian accessibility.

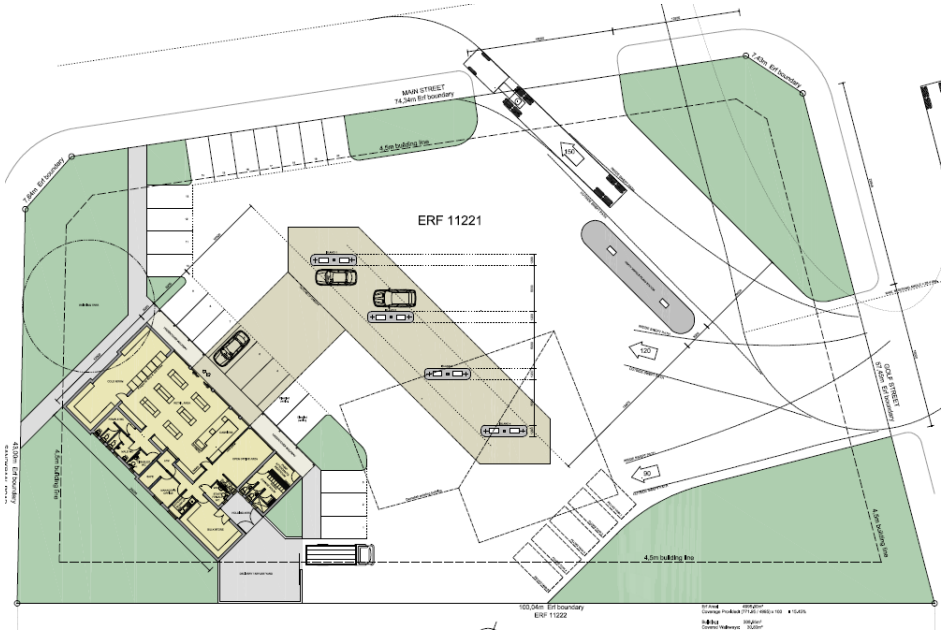


Figure 1: Previously approved Layout 1 (2012 LEFT SIDE IMAGE).
Figure 2: Revised Preferred Layout / SDP (2021 RIGHT SIDE IMAGE).

ORDER OF REPORT

Environmental Assessment for EA Amendment – Main Report

Appendix A : Location, Topographical Plans

Appendix B :
- Biodiversity Plans
- Screening Tool Report
- Site Sensitivity Verification Report

Appendix C : Site Development / Layout Plans:
- 2012 Authorised Layout
- Revised / Amended Layout & Building Plans

Appendix D : Updated Services Report (Element Engineers, 2022)

Appendix E :
- Updated Traffic Impact Assessment Report (TIA) (Corli Havenga Transportation Engineers, April 2021)
- Municipal Approval Letter (June 2021)
- Traffic Statement Report (Sept.2022)
- Traffic Statement Report (Nov.2022)

Appendix F : Updated Socio Economic Impact Assessment Report (Urban Econ, Nov.2022)

Appendix G : Updated Planning Statement & Zoning Approvals (DelPlan Consulting Planners, 2022)

Appendix H : Holder of the EA Motivation Letter (2022)

Appendix I : Updated Environmental Management Programme (EMPr) (Cape EAPrac, 2022)

Appendix J : Correspondence with Competent Authority:
- Acknowledgement of Amendment Application (25 Oct.2022)
- Copy of Environmental Autorisation (2012) & EA Addendum (2017)

Appendix K : Public participation information: including a copy of the register of I&APs, the comments and responses Report, proof of notices, advertisements & any other public participation information as is required.

Annexure K1 : Public Participation Plan, as approved by DEA&DP
Annexure K2 Potential Stakeholder List
Annexure K3 : Advert & Site Notice
Annexure K4 : Stakeholder Notification
Annexure K5 : Stakeholder Comments – *To be submitted with Final EIR*
Annexure K6 : Comments & Responses Report – *To be submitted with Final EIR*

Appendix L : EAP CV

Appendix M : Specialist Declarations – *Signed declarations to be submitted with Final EIR submission to the Competent Authority*

TABLE OF CONTENTS

FIGURES

TABLES

ENVIRONMENTAL ASSESMENT REPORT

1 INTRODUCTION

Cape EAPrac has been appointed by **Look Forward Construction (Pty) Ltd**, hereafter referred to as the Holder of the EA, as the independent Environmental Assessment Practitioner (EAP), to facilitate an application for **amendment** of the Environmental Authorisation (EA) and updating of the approved Parkdene Filling Station in terms of the National Environmental Management Act (NEMA, Act 107 of 1998).

The Parkdene Filling Station was initially granted Environmental Authorisation (EA) on **14 November 2012**. An extension of validity of the EA was then granted on **21 August 2017**, changing the contact details of the 'Holder of the EA' and authorising the extension of the EA validity period by a **further 5-years**. Due to several unforeseen delays (*see Section 2 below)* the Holder of the EA has been unable to implement the required pre-construction requirements of the site and operation licences (issued by the Department of Mineral Resources & Energy (DMRE) on 08 Nov. 2022), and could therefore not commence before the revised EA lapse date (14 November 2022).

In order to prevent lapsing of the EA an Application to Amend the EA was submitted on 12 October 2022 and acknowledged by the Department of Environmental Affairs & Development Planning (DEA&DP) on 25 October 2022, as the competent authority, to **extend the validity period** of the Environmental Authorisation with an **additional five (5)-years**, **amend the layout / orientation** of the Filling Station Site Development Plan and **update the EMPr** accordingly.

Given the ten (10)-year time lapse from the original EA, the competent authority confirmed that a further extension on the EA constitutes a substantial amendment, to be dealt with as a Part 2 Amendment (impact assessment) process. *Refer to Appendix K for DEA&DP acknowledgement for Amendment Application.* The purpose being to consider (a) the time lapse and any changes in the site/economic conditions during the preceding ten (10) years and (b) the significance of changes to the site plan.

Most notably changes to the (approved) Site Development Plan / Layout of the Filling Station has been done to accommodate the new Go-George bus stops built by the Municipality, adjacent to the site and in accordance to current marketing best practice i.t.o. exposure to Nelson Mandela Boulevard / Sandkraal Road. It is with due consideration of this new criteria affecting the current site context (access points, building lines, existing services, petrochemical infrastructure & particularly delivery truck manoeuvres), that the site layout had to be amended as recommended in the updated TIA (2021) and recommendations from the Local Authority.

This Draft Impact Report is available for a 30-day comment period extending from Monday 28 November 2022 to Wednesday 18 January 2023 (excluding the December break). Should any Interested & Affected Parties wish to view any documentation associated with the original BA process, please contact *Cape EAPrac* directly, and we will provide to you.

2. MOTIVATION FOR EA EXTENTION

In an attempt to respond to the current site context and marketability, and particularly the development of the "Go George" bus infrastructure adjacent to the site, the process of designing a responsive layout for the Filling Station started during 2018 already. The amended layout is the product of more than three (3) years of discussions, negotiations and revisions between the Holder of the EA and local authorities, which were subject to an updated Traffic Impact Assessment (2021). The approval of the Updated TIA & amended layout / SDP by the George Municipality in June 2021, allowed for the submission of the building plans (reflecting the new layout) thereafter.

Additional delays resulted from on-going negotiations with BP as the service provider and the Municipality regarding its required capital contributions. The delays associated with these negotiation, were compounded further due to the COVID period, when it was difficult to meet and to obtain responses from people who were working remotely and were often difficult to contact.

In addition, multiple delays were experienced as part of litigation processes associated with objections and appeals received from competitors to the application for the site and retail licence (submitted in 2015). These

applications were initially rejected by the Controller, but following the review and setting aside of those rejections by the High Court, the Controller reconsidered the applications and ultimately granted the site licences. These, however lapsed, while the negotiations referred to above and below were underway.

Thereafter, further delays resulted from protracted negotiations with the Retailer (BP). *Refer to Holder of the EA Motivation attached as Appendix H, for further details in this regard.*

Subsequently, new site and retail licences (Licences) were issued by the Department of Mineral Resources & Energy (DMRE) on 8 November 2022. As this Application for the extension of the EA and amendment of the layout had already been initiated with the DEA&DP prior to the Licences being approved, and the fact that there are several pre-construction requirements applicable to the both the EA and the Site Licence that could not be commenced with / implemented prior to 14 November 2022 (EA lapse date), this Amendment Application process automatically extends the validity of the EA until such time as the Amendment Application process is completed.

3. LEGISLATIVE AND POLICY FRAMEWORK

The applicable legislation has been updated since the submission of the Final BAR in 2012 and these changes in legislation have been considered as part of this Amendment Application process. The table below lists the applicable legislation and describes whether any additional considerations are applicable to the amendment (i.e. that were not considered in the final BAR).

Table 1: Legislation applicable to Parkdene Filling Station including any additional considerations applicable to the amendment of the EA.

Legislation	Additional considerations for Parkdene Filling Station Amendment.
NATIONAL LEGISLATION	
The Constitution of the Republic of South Africa	No additional considerations applicable to the Parkdene Filling Station Amendment.
National Environmental Management Act (NEMA, Act 107 of 1998) & EIA Regulations 2014, as amended.	The NEMA EIA Regulations were amended in 2014 & 2017. This application is being undertaken in terms of this legislation. The same listed activity is applicable to what was originally assessed i.e. no additional activities are applicable to the Parkdene Filling Station.
National Environmental Management: Biodiversity (Act 10 of 2004)	The ecosystem status of the mapped vegetation type: (Garden Route Granite Fynbos) changed from Endangered to Critically Endangered in 2014 and Gazetted as such on 18/11/2022. This change has not yet been gazetted & the site conditions remain the same as previously assessed: transformed, with no natural habitat remaining.
Conservation of Agricultural Resources Act – CARA (Act 43 of 1983):	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George.
The Subdivision of Agricultural Land, Act 70 of 1970	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George.
National Water Act, No 36 of 1998	No aquatic / water resources on / near site. No additional considerations applicable to Parkdene Filling Station, located within the urban context of George.
National Forests Act (No. 84 of 1998):	No natural forest or protected tree on / near site. No additional considerations applicable to Parkdene Filling Station.
National Heritage Resources Act (NHRA, Act 25 of 1998)	No application applicable as development below thresholds of Section 38 of NHRA.
National Energy Act (No. 34 of 2008)	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George.
PROVINCIAL LEGISLATION	
Western Cape Nature Conservation Ordinance (Act 9 of 2009).	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George. Site conditions remain the same as previously assessed: transformed, with no natural habitat remaining.
Western Cape Provincial Spatial Development Framework (PSDF) 2014	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George.
REGIONAL AND MUNICIPAL LEGISLATION	
Garden Route District Municipality Spatial Development Framework, 2017	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George. Site zoned Business Zone IV, with the operation of the filling station as primary use right. The following key policies, amongst others, remain applicable: - Prioritise infrastructure that invests in people & their socio-economic mobility & resilience, particularly in informal settlements; - Direct public and private fixed investment to existing settlements reinforcing their economic development potential; etc.
George Local Municipality Integrated Development Plan (IDP), 2017-2022	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George. Site zoned Business Zone IV, with the operation of the filling station as primary use right. According to the George IDP (2017-22), George is ranked second to Cape Town on the Western Cape list of rankings of "Development Potential Index". Despite this potential, the municipality faces problems of economic and employment insecurities, inequitable access to basic services and facilities, while safeguarding the natural environment. It is imperative that new developments within the municipality create sustainable jobs for local communities in order to reduce unemployment in the region, which the Parkdene Filling Station intends to do.

Legislation	Additional considerations for Parkdene Filling Station Amendment.
George Local Municipality Spatial Development Framework (SDP), 2019.	No additional considerations applicable to Parkdene Filling Station, located within the urban context of George. Site zoned Business Zone IV, with the operation of the filling station as primary use right.
George Municipality Building Control Regulations	Site Development Plan / Building Plan Approval is still awaited from the local authority.
Outeniqua Sensitive Coastal Area (OSCA) Regulations	Property falls outside OSCA Regulated area & not listed ito OSCA applicable sites.
GUIDELINES, POLICIES AND AUTHORITATIVE REPORTS	
National Protected Area Expansion Strategy (NPAES) for S.A. 2008 (2010)	No additional considerations applicable to Parkdene Filling Station Amendment. The project remains outside of any protected area expansion focus areas, within the urban edge of George.
Critical Biodiversity Areas	No additional considerations applicable to Parkdene Filling Station Amendment. The project remains outsite of any critical biodiversity or ecological support areas.
Sustainability Imperative	No additional considerations applicable to Parkdene Filling Station.

4. PLANNING CONTEXT

The **planning requirements remain unchanged** to those which were considered in the Final BAR (2012) for the Parkdene Filling Station. Erf 11221, George was subdivided in 1987 when the residential area of Parkdene and Ballotsview was first approved and subdivided. The zoning allocated to the property then was for a filling station thus implementation of the filling station is deemed to be a **primary right and in furtherance of said rights.**

The zoning certificate from the Town Planning Section of George Municipality, dated 5 August 2022, confirms the zoning of Business Zone IV – with the primary use right for a service station.

The property has an urban land use within an urban area. From a purely town planning perspective, there are no town planning reasons for not constructing a filling station on the property and utilizing it as such. *Refer to Planning Statement (2022) & zoning certificate, attached as Appendix G.*

5. SITE DESCRIPTION & ATTRIBUTES

Parkdene Filling station is to be located on **Erf 11221**, within the urban edge of George, and is surrounded by suburbs Lawaaikamp (west), Thembalethu (south), and Maraiskamp (north). The erf is located on the corner of Main Street and Nelson Mandela Blvd / Sandkraal Road, which connects the George Industrial area with the Thembalethu informal settlement) in the suburb of Parkdene, in George. The Huis Outeniekwa Plek van Veiligheid, a secure, fenced-in facility, that forms the southern boundary for the erf (*Figure 3*). The site is surrounded by various residential sectors (low-medium density housing), as well as commercial, retail and institutional facilities.

Erf 11221 covers an area of **approximately 4 995m^2** and is **zoned Business Zone VI and Utility Zone,** with the **operation of the filling station as primary use right**. Current access to the site is via Main Street. 'Go-George Bus' stops are located on Golf (outside SE boundary), Main (outside northern boundary) and on Nelson Mandela Boulevard / Sandkraal streets. The asphalt bus pull-over is located at the Main Street stop.

This Go-George bus stops **did not exist at the time the original assessment (2012)** or the granting of the Amendment (2017). This has now been **accommodated** in the amended site plan with new access and layout design of the new preferred filling station layout, with access off Main Street limited to entrance only (exit cannot be allowed). Full access is off Golf Street. No access off Nelson Mandela / Sandkraal Road permitted.

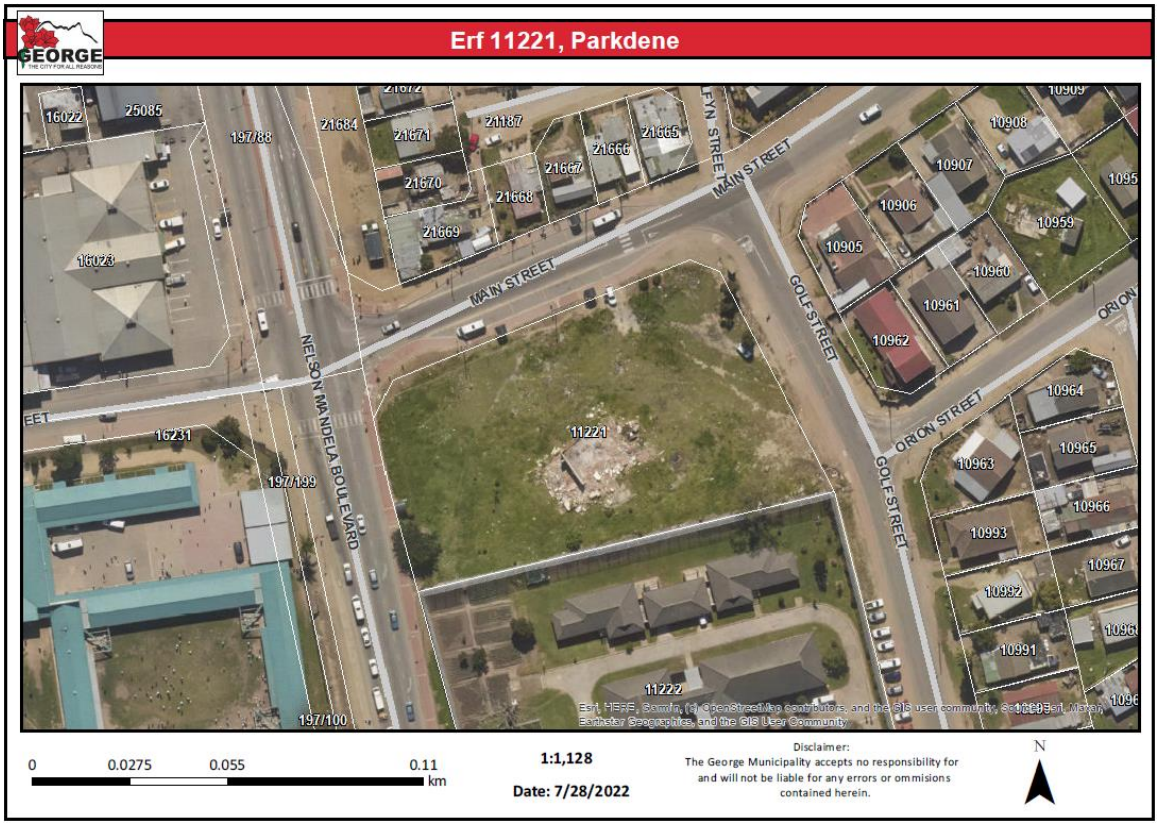


Figure 3: Erf 11221 Locality Map (GeorgePublicGISViewer, 2022).

The site has been used for various purposes over the years and is entirely transformed. The site was previously occupied by Life Community Services, a non-profit ministry group, which provided a crèche and after school care facility for nearby community children. The previous crèche building, in the approximate centre of the site, was demolished some time ago, with a portion of the wall, foundation & rubble still remaining on site.

The site is fenced with a simple fence and monitored daily by a security guard, to deter trespassers and illegal dumping. A temporary wire 'gate' is located on the south-eastern corner of the site, off Golf Street (approximately in the position of proposed filling station entrance), which is used to allow occasional entry to a community member's horses, which graze the grass on the site from time to time.

Figure 4: View south along SE fence & Golf Street. Note bus stop.
Figure 5: View west at site entry/exit point off Golf Street. Note partially demolished building in centre of site.

Figure 6: View west along northern fence & Main Road.
Figure 7: View SSW onto site at propose entry point.

Figure 8: View south along Sandkraal boundary.
Figure 9: Centre of site with partially demolished building.

5.1 SCREENING TOOL & APPLICABILITY OF SPECIALIST STUDIES

The Screening Tool is a new specialised, high level 'tool' developed by the National Department of Environmental Affairs (DFFE) in 2019. Its purpose is to help identify potential specialist themes that may be applicable to development/transformation of a particular land parcel. It was originally designed for large scale renewable energy project (wind and solar farms in particular) but has subsequently been expanded to cover all activities that may require *prior* Environmental Authorisation. It is important to understand that it is the responsibility of a specialist, or registered EAP to verify the outcome of the screening tool and to advise on the need for undertaking relevant specialist studies that may be applicable.

The Screening Tool Report for the Parkdene Filling Station site (DFFE, 21/06/2022, *attached in Appendix B)* identified the following themes as potentially sensitive for the site: Aquatic Biodiversity, Archaeological & Cultural Heritage, Terrestrial Biodiversity & Civil Aviation.

Due cognisance is given to the fact that there is already a valid Environmental Authorisation granted for the development of the property, that the property is located within the urban edge, within the urban area (zoned Business IV), is surrounded by other developments (schools, a juvenile facility and residential properties) and that the site is completely transformed and fenced, making the movement of any non-flying fauna impossible on site and eliminating it as potentially sensitive from a biodiversity/botanical perspective. There is also no wetland indicators on the property.

As motivated in the Site Sensitivity Verification Report (SSVR) (*see Appendix B),* given the location, type of land use, urban context, historic and current condition of the site, none of the abovementioned themes / sensitivities / specialist studies are applicable to the site, or this amendment application.

Considering the lapse of ten (10) years since the original impact assessment and Environmental Authorisation, the current context and preferred site development plan has been re-assessed via updated Socio-economic, Traffic and Civil Service studies, as part of this Amendment Application process.

The competent authority, in response to the Part 2 Amendment Application, agreed with the findings of the EAP as submitted in the SSVR, as well as the specialist studies required for this Amendment Application. *Refer to Appendix K for DEA&DP acknowledgement for Amendment Application.*

5.2 ECOLOGICAL SENSITIVITY OF SITE

The ecosystem status of the mapped vegetation type (Garden Route Granite Fynbos) found in the site area in general, at the time of the original environmental assessment was classified as 'Endangered'. This ecological threat status was subsequently elevated to 'Critically Endangered' in 2014 and subsequently Gazetted the same on 18 November 2022.

The site verified conditions remain the same as previously assessed: transformed, with no natural habitat remaining. As such the threat status does not apply given that no natural habitat remains on site.

The site is **not located within a Critical Biodiversity Area (CBA)**, Ecological Support Area (ESA) or Protected Area (PA). There are also **no watercourses or aquatic features** on or near the property (*Figure 13 below*), and as such, there are no expected aquatic ecosystem impacts.

The site is transformed, with only a few indigenous plants noted. The sparse vegetation is dominated by Kikuyu grass, alien invasive plants (garden escapees) and weedy pioneers.

Overall, the **amended layout would not change or introduce new ecological impacts** associated with development during or post-construction i.e. not considered sufficient to increase the original post-mitigation significance from Low to Very Low. As such, the original very-low negative post-mitigation impact on vegetation would remain unchanged.

Figure 10: Remnant disturbed vegetation found on site.
Figure 11: Two Wild Fig trees just outside the western site boundary.

Figure 12: Alien species noted include Mulberry & American Pokeberry plants.

Figure 13: Critical Biodiversity Area (CBA) map with Erf 11221 indicated as red polygon (CapeFarmMapper, 2022).

5.3 GEOTECHNICAL CONDITIONS

Element Consulting Engineers (2021) confirmed the following: Gradient of the site is flat, and thus no natural slope instability is present. Inspection of the site indicated relatively consistent soil horizons throughout, with a light brown silty sand of significant depth present. The materials appear slightly moist and are fairly loose. No ground water and/or perched water are evident. Lateral movement of stormwater will be slow due to the flat gradient.

A TLB will suffice to execute trenching and excavations of all services and foundations in all materials. The possibility of rock at deeper depths is small. The visual investigation indicated that the in-situ materials are adequate to support the development of a filling station. Reinforced strip footings will be adequate for the development. Fill areas to be adequately compacted.

6. PROPOSAL DESCRIPTION

This amendment application proposes a re-orientation of the authorised layout alternative within the same / approved site extent / proposal scope:

6.1 AUTHORISED FILLING STATION DESCRIPTION

The Parkdene Filling Station is currently authorised (Environmental Authorisation (EA), 2012), as follows:

A Filling Station to dispense both octane (petrol) and diesel fuels, for passenger, light delivery, and heavy vehicles. The total covered development footprint (769.55m²) includes:

- Installation of five (5) Underground Storage Tanks (USTs);
  - Depth: 2 to 2.5 metres below natural ground level;
  - Capacity: ~115m³ (~115 000 litres);
- Hard-surfaced fuel dispensing Forecourt and tanker refuelling area;

- Main building (309.92m^2), including:
  - Pump attendant's restrooms, manager's office, kitchen, wash-up areas and a storeroom);
  - Small commercial and retail facilities (convenience store);
- Twenty-two (22) parking bays with two disabled bay;
- Hard-surfaced internal access and service roads;
- Carwash facility.

6.2 PROPOSED AMENDMENTS

The following changes / amendments are proposed to the approved layout / orientation of the Filling Station Site Development Plan (SDP) **within the same site / property extent:**

- The total development covered footprint changes from 769.55m^2 to 762.10m^2;
- Position / orientation of the main building convenience store & light-vehicle fuel dispensing Forecourt shifts from south-western corner (SW to NE orientation) to the southern boundary (S to N orientation). The building was positioned and orientated in accordance to marketing best practice in terms of exposure to Sandkraal Road, but with due consideration to the current site conditions related to access, building lines, existing services, required petrochemical infrastructure and delivery truck manoeuvres, in-particular. The final building positioning and orientation were arrived at subsequent to approximately 5 iterations, in consultation with the George Municipality (Element Engineers, 2021).
- Relocation of the underground storage tanks from the south of the property to north-east corner to accommodate the main building shift.
- Access and egress points will be slightly re-aligned to accommodate the new bus stop.
- Twenty-two (22) parking bays with two (2) disabled bay, changes to thirty-one (31) parking bays with one (1) disabled bay.
- Hard-surfaced internal access and service road area slightly larger to allow for required public transport ("Go-George" bus stops), vehicle manoeuvrability (truck swept path & turning radius) and pedestrian access (linking sidewalks).
- Exclusion of car-wash facility.

These proposed amendments do not materially change the scope / extent of the development, nor the associated NEMA Listed Activity, risk or impacts.

6.2.1 Amended Activity Description

A Filling Station to dispense both octane (petrol) and diesel fuels, for passenger, light delivery, and heavy vehicles. The total covered development footprint (762.10m^2) includes:

- Installation of five (5) Underground Storage Tanks (USTs);
  - Depth: 2 to 2.5 metres below natural ground level;
  - Capacity: ~115m^3 (~115 000 litres);
- Hard-surfaced fuel dispensing Forecourt and tanker refuelling area;
- Main building (309.92m^2), including:
  - a convenience shop, public toilets, freezer/chiller room, storeroom, kitchen freezer/chiller, prep area, servery area, cashiers' cubicle, offices, staff toilets, attendants' cubicle, attendants' change rooms, ATM room.
- Thirty-one (31) parking bays with one (1) disabled bay;
- Hard-surfaced internal access and service roads;
- Access:
  - Entrance only off Main Street;
  - Full access off Golf Street.

6.2.2 NEMA Listed Activity

Table 2: NEMA Listed activity as authorised.

Activity No.	NEMA Listing Notice 1	Extent & location on site
14	The development and related operation of facilities or infrastructure, for the storage, or	The proposed filling station is for the storage (via USTs) of octane (petrol) and diesel fuels

	for the storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic metres	with capacity approx. 115 cubic metres (not exceeding 500 cubic metres). The proposed location for installation of these USTs has moved to the north-eastern corner of the site to accommodate the main building shift, while the handling (dispensing Forecourt) has changed to the centre of the site, instead of the south-western corner.

Given the fact that the condition of the site and scope of the activity remains the same as was originally assessed in the Basic Assessment (BA, 2012) process, the assessment of the impacts related to the installation (construction) of the fuel storage tanks, as well as those impacts associated with the storage and handling of fuel (operation) remain applicable to this amendment application. Therefore, the avoidance, mitigation, management, monitoring and rehabilitation measures associated with these abovementioned impacts also remain applicable to this amended layout and are contained in the updated Environmental Management Programme (EMPr) for implementation.

Any additional mitigation measures related to impacts on the current context have been included this Report, as well as the Updated EMPr. *See Sections 8-10 below.*

6.3 ALTERNATIVES

6.3.1 Site Alternatives

A comprehensive iterative design process has been undertaken to inform the amended filling station layout. This included consideration of the existing socio-economic, traffic and service-availability context. There are no highly sensitive and/or 'no-go' areas associated with the proposed site area from an ecological, socio-economic or traffic perspective, and thus no fatal flaws. Due to the fact that the site has an existing Environmental Authorisation (EA) for a filling station, and the amended layout does not change the extent or scope of this activity at this site (as described in the existing EA), **no additional / alternative site locations** were considered in this amendment assessment.

As noted by the original (2012) and updated (2022) socio-economic studies, there remains a specific refuelling demand for the **heavy vehicle transient market making use of the N2**, for a filling station at this site along Nelson Mandela Boulevard / Sandkraal Road. The **demand for fuel by local taxis and commercial vehicles** (large vehicles or trucks) remains the **intended target market for the filling station development.** Three key factors within the current context necessitated the change in layout configuration from the previously approved Layout (2012) to the proposed amended layout for the Filling Station:

- The need to **optimise the visibility / marketability** of the Filling Station from Nelson Mandela Blvd – hence the shift from the south-western corner to the centre of the site. Ingress traffic / movement into the site a critical feasibility factor. As ingress is permitted off both Main and Golf Street, the site remains feasible.
- The need to **respond new existing public transport infrastructure** (bus stops) and their operations, and associated pedestrian movements within the layout – hence the access off Main Street limited to entrance only (no exit), with a widened full access at the Golf Street access point; and
- The need to **optimise large vehicle (truck) manoeuvrability** into, within and out of the site.

As the amended filling station layout responds to the existing / current context of the site, and remains within the same scope as the authorised proposal, it is presented as the **current PREFERRED Alternative**.

6.3.2 No-Go Alternative

The 'no-go' alternative is the option of constructing the Parkdene Filling Station as authorised in 2012 (no changes to the layout/site plan).

This alternative would result in failure of the filling station to operate given that its approved access is blocked by the position of the newly constructed Go-George bus stop in Main Street.

As a result, the Holder of the EA will not be able to effectively implement the filling station rights as originally authorised. Location and accessibility for a filling station speaks directly to the need & desirability of such a facility. With accessibility compromised to the extent that that vehicles will not be able to access the facility under the No-Go option, this alternative is deemed to not be reasonable, nor feasible, especially consider the fact that the reason for it (Go-George bus stop at point of original access) being something that was outside the control of the Holder of the EA.

The following activity / infrastructure details are drawn from the Updated Services, Traffic and Socio-economic studies, are responsive to the existing services and site context, and have been accommodated within the amended Site Development Plan / Layout, as the preferred alternative.

6.4 FILLING STATION & PETROCHEMICAL DESIGN

A specialist will oversee all petro-chemical design aspects of the development supplier to the project. All infrastructure will comply to the latest petro-chemical industry standards. Design criteria of the filling station and petro-chemical infrastructure are as follows:

- Fuel delivery truck manoeuvres accommodated on site & based on permissible access & partial access point (as indicated on site development plan).
- Allowance in layout for fuel loading bay of 22m.
- Fuel serving island configuration will be four islands
- Fuel tank configuration will be 5 x 23kl (3 x diesel and 2 x ulp)
- Fuel tanks will be double walled and installed underground
- Access width on Golf Street 12.9m and inside radius of 7.9m
- Access width on Main Road of 8.5m and radii of 3.4m and 4.0m
- Forecourt (service area) concrete surface with cut-off drain
- Rest of forecourt asphalt surfacing 30mm
- Pavement structural materials from commercial sources
- Minimum forecourt grade of 0.4%
- Road design life of 20 years
- Drizit fuel & oil trap for forecourt

The Filling Station building size is 309m² and consists of a convenience shop, public toilets, freezer/chiller room, storeroom, kitchen freezer/chiller, prep area, servery area, cashiers' cubicle, offices, staff toilets, attendants' cubicle, attendants' change rooms, ATM room. The design of the building is dictated by the corporate design of the retailer and have matching and repetitive features on all elevations. *See Services Report (Appendix D) for internal layout, architectural details, elevation diagrams etc.*

6.5 SERVICES

The George Municipality confirmed the availability of water, sewer, storm water and roads for new proposed layout on Erf 11221 (letter dated 13 June 2022). In addition, the George Municipality confirmed the availability of all electrical services (letter dated 27 September 2022). Various upgrades to the Low Voltage network will be finalized during detail design phase.

According to the Services Report (Element Consulting Engineers, 2022), there will be a temporary solid waste collection area at the back of the building. George Municipality will remove the solid waste.

6.5.1 Water

The Average Annual Daily Demand (AADD) for this proposed development in line with accepted design consumptions, assumptions, criteria, and standards, is calculated and estimated at approximately 2 kl/day.

The site is serviced by municipal uPVC water lines along Main Road and Golf Street, respectively the northern and eastern boundaries. The water connection to the development is taken from the water line on Golf Street, on the eastern boundary of the site.

Design Criteria and Standard of Engineering Services

- Design consumption:
  - Convenience shop – 400l/100m2/day
  - Filling station – 0.8kl/day
- Peak factors as prescribed
- Minimum pressures for the network are calculated for a fire flow 30l/sec and peak demand at the point of lowest pressure under peak conditions.
- Maximum of 4 valves to isolate a pipe section.
- Minimum cover to pipes to be 900mm.
- Pipe type and class to be HDPE 50mm class 9, depending on existing network pressure.
- Fire hydrants to be provided in accordance with the relevant guidelines and legislation.

A rational fire design has been conducted for the proposed development. Fire protection equipment will include a water-based system for the convenience shop and a chemical based system for the forecourt. All SANS and petro-chemical industry standards will be adhered to.

6.5.2 Sewer

The site drains from west to east as confirmed with the topographical survey of the site conducted for the development. The Average Dry Weather Flow (ADWF) of the development, in line with ac-cepted design criteria and standards, can be calculated and estimated as 2kl/day. The design peak flow, inclusive of a specified peak factor of 3.5 and 15% extraneous flow, is estimated at 0.08l/s.

A fat, oil & grease (FOG) trap is specified. The FOG trap retains all fats, oils and grease from the restaurant and prohibits these substances to flow into the sewer network. FOG trap to be cleaned on a weekly basis by the restaurant personnel and checked monthly by the restaurant's manager.

The site is serviced by municipal sewer line along Golf Street on the eastern boundary. A sewer erf connection is provided on the south-eastern corner of the erf. The locality of the existing sewer line and erf connection in relation to the proposed development site is indicated in the diagram below.

Design Criteria and Standards of Engineering Services

The following design flows will be utilized:

- Convenience shop – 400l/100m²/day
- Filling station – 0.8kl/day
  - Specified peak factor of 3.5;
  - Allowance for 15% extraneous flow;
  - A conventional waterborne sewerage system will be provided;
  - Minimum flow velocities designed for as 0.7m/s;
  - Minimum cover to all pipes to be 800mm;
  - Pipe diameters of generally 110mm for all service connections and minor lines and 160mm and above for outfall line;
  - Design gradient of 1:60;
  - Erf connection depth to be minimum 1.0m and at least be able to drain 80% of the erf;
  - Precast concrete rings manholes with concrete floor and premanufactured concrete lid;
  - Manhole covers and frames to be Polymer Concrete;
  - Manholes to be central over main pipe on downstream side;
  - All concrete, mortar or screed used with manholes to be from dolomite aggregate and low alkali sulphate resistant cement to SABS 471;
  - Pipelines to be uPVC class 34 and to be laid on Class C bedding.

6.5.3 Stormwater

The site drains from west to east as confirmed with the topographical survey of the site conducted for the development. A formal stormwater reticulation system will be provided by a combination of surfaced roadways, kerbs, channels, cut-off drains, stormwater pipes and various minor structures. The site is serviced by

municipal stormwater line along Golf Street on the eastern boundary. A storm-water connection point is available on the south-eastern corner of the erf.

The following standards and design criteria are envisaged:

- Minimum gradients for pipelines to allow minimum flow speeds of 0.7m/s at full flow.
- Maximum pipeline flow velocities to be 3.5m/s.
- Stormwater pipes to be 100D as required by specific loadings or installation conditions.
- Bedding to be Class C.
- Minimum cover on pipes to be 800mm.
- Minimum pipe diameter to be 450mm.

Contaminated runoff from the under-roof main forecourt area (concrete apron) will be collected into a closed-circuit fuel/oil separator system and will be collected by a reputable contractor on a regular basis all in line with the latest petro-chemical industry standards.

6.5.4 Roads & Access

Current and proposed access to the site is obtained from Main Street to the north and Golf Street to the east. Access is not available from Nelson Mandela Blvd to the west. Sight distances at both of the proposed access points are excellent and satisfactory for development purposes in both the vertical and horizontal alignments.

Internal standards and design criteria are specified as follows:

- Access width on Golf Street 12.9m and inside radius of 7.9m;
- Access width on Main Road of 8.5m and radii of 3.4m and 4.0m;
- Forecourt (service area) concrete surface with cut-off drain;
- Rest of forecourt asphalt surfacing 30mm;
- Pavement structural materials from commercial sources;
- Minimum forecourt grade of 0.4%;
- Road design life of 20 years.

6.5.5 Pedestrian Access & Bus Stops

It is recognized that a filling station with convenience shop, restaurant and coffee facilities located within this site, will attract a significant number of pedestrians from the surrounding areas. Safe and dedicated pedestrian improvements will be implemented, with sidewalks and walkways linking up with existing municipal non-motorized infrastructure in the area.

The municipal bus stop on Main Road on the northern boundary of the site, will greatly amplify this situation. Pedestrian improvements incorporated onto the site development plan have considered the bus stops and safe and dedicated pedestrian improvements will be implemented surrounding the bus stops.

6.5.6 Electrical & Mechanical

A low voltage (400V) supply is available from an existing kiosk, located on the corner of Main St and Nelson Mandela Blvd. This kiosk is currently being supplied from the 500kVA SS Lawaaikamp. The new development is proposed to be serviced from the existing kiosk via a new 125A circuit breaker and a new 35mm2 underground copper cable for approximately 50m to the Main DB of the proposed new building.

The following design criteria are used for calculation purposes:

Load criteria:

- Convenience shop – 200VA/m2
- Forecourt – 75VA/m2

Diversification factor – 0.7

The calculation of the after diversity maximum demand (ADMD) for the development, in line with the above design criteria, is calculated as being approximately 70 kVA. A heating, ventilation and air-conditioning design

have been conducted for the new convenience shop. All design parameters are to the satisfaction of the local authority and to the national building regulations (SANS 10400).

A number of energy-saving measures are proposed and have been incorporated into the design. These are detailed within the Update EMPr for implementation.

7. NEED & DESIRABILITY

Due to the time lapse of 10 years and the possibility that other filling stations have be established within close proximity of the proposed site, this Report must reflect on how the strategic context of the site, in relation to the broader surrounding area, has been considered in addressing need and desirability.

In keeping with the requirements of an integrated Environmental Impact process, the DEA *Guideline on Need and Desirability* was utilised to provide a concise estimation of the amended activity layout to the existing societal needs. The concept of need and desirability can be explained in terms of its two components where *need* refers to *time* and *desirability* refers to *place*. The questions pertaining to both *NEED* and *DESIRABILITY,* as specified in the Guideline, are answered below:

Need (timing):

Is the proposed development in line with the projects and programmes identified as priorities within the credible IDP?

Considering existing zoning and land use rights, the proposed development and amended layout is in line with the principles of both the IDP and the SDF.

Should the development occur here at this point in time?

The Updated Socio-Economic Impact Assessment confirmed that there remains a need for a filling station at the proposed development site, particularly to serve transient traffic (traffic moving from George Industria and surrounding areas towards the N2), and in particular heavy vehicles that access Nelson Mandela Blvd / Sandkraal Road and the N2 for commercial / business purposes.

Does the community / area need the activity and the associated land use concerned?

Based on fuel sales and traffic counts over both the peak and off-peak times, weekdays and weekends, the Update Traffic & Socio-Economic Impact studies clearly describe the need of the filling station in the current location. The site has been identified as being favourable for a filling station development, to serve particularly the southern-bound traffic of Nelson Mandela Blvd / Sandkraal Road (there are no other filling stations located on the eastern side of Sandkraal Road, north of the N2 highway, travelling out of George), as well as transient traffic accessing the N2 and/or Industrial area for business and commercial purposes.

Are the necessary services with adequate capacity currently available?

The George Municipality has confirmed the availability and capacity for civil services, in addition to the site being an existing Municipal serviced site. *Refer to Appendix D of this EIR for the Municipality's correspondence in this regard.*

Is this development provided for in the infrastructure planning of the municipality?

Yes. The amended filling station layout has responded to and accommodated the existing municipal civil services, and public-transport & pedestrian movement infrastructure & operations in-particular, as required by the Municipality. The necessary road infrastructure is in place and the upgrade of the N2 bridge and Nelson Mandela Blvd have been considered in the Updated TIA.

Is this project part of a national programme to address an issue of national concern or importance?

No.

Desirability (place):

Is the development the best practicable environmental option for this land / site?

The development site described in this report has various points of merit. The site has established business rights and a filling station development is allowed as a primary registered right. There is no remaining indigenous vegetation cover on the site and there is thus no conservation status of value associated with the site. There are also no other biophysical concerns regarding the property.

The original BAR, this EIR and the Updated EMPr highlight impact avoidance, mitigation, management & monitoring measures allowing a best practicable development for the site.

Would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?

No.

Would the approval of this application compromise the integrity of the existing approved environmental management priorities for the area?

No.

Do location factors favour this land use at this place?

The location of the site, on the southern extent & eastern side of Sandkraal Road, a Class 3 Road, as well as the close proximity to the N2 (approximately 300metres north of the Sandkraal / N2 intersection) and the proximity of the Industrial area, north of the N2, are three main factors positively influencing the development site and associated filling station development proposal.

How will the activity or the land use associated with the activity applied for, impact on sensitive natural and cultural areas?

The proposed activity will not impact on any sensitive natural or cultural areas.

How will the development impact on people's health and wellbeing?

Provided that the health and safety conditions and other mitigation measures stipulated in both this EIR & Updated EMPr are complied with, it is not anticipated that the proposed facility will impact on people's safety, health or wellbeing.

Will the proposed activity or the land use associated with the activity applied for, result in unacceptable opportunity costs?

The design of the proposed filling station, although largely dictated by the identified retailer, has aligned with architecture of the existing land uses and surrounding commercial properties of the area in order to blend in with surrounding land uses. The proposed land use is consistent with the current and will include a commercial component. The Update Socio-Economic Impact Assessment has confirmed the need for a filling station development at this site, for specific target markets (transient and traffic travelling south towards the N2), and thus different target markets are applicable when compared to filling stations in the vicinity (three other filling stations are located in Nelson Mandela Blvd / Sandkraal Road – two are located on the western side of Sandkraal Road to the north, servicing traffic travelling towards George; while the Puma filling station is located south of the N2 at entrance to Thembalethu). It is therefore not anticipated that the proposed development will result in unacceptable opportunity costs to other filling stations or their business.

Will the proposed land use result in unacceptable cumulative impacts?

Potential cumulative impacts associated with the proposed facility include the following:

- Economic (potentially positive);
- Pollution (potentially negative – mitigation measures have been recommended to avoid and reduce the potential negative pollution impacts);
- Traffic (potentially negative – depending on the rate of suburban / commercial growth, medium term upgrades may eventually be necessary to avoid cumulative traffic volume impacts); and
- Reduced business/sales for other filling stations in the immediate vicinity of the development site (**unlikely to be significant** as the impact will be spread amongst a number of filling stations).

7.1 MARKET POTENTIAL

The updated Socio-economic Impact Assessment study (Sept.2022) analysed the current, local Filling Stations market potential (demand and supply profile of petrol) within the local fuel industry in George, with the primary purpose to ascertain whether there is *still* an actual demand for another filling station in the current position/location.

The location of the proposed development site is one of the greatest factors that will prevent the facility from impacting on other existing facilities in terms of market share, as the proposed filling, at this development site location, will **serve a different and specific market**, when compared to the markets served by other filling stations in close vicinity to Erf 11221.

The transient market in George is defined as those motorists or vehicles which do not have a permanent residence in George but are rather passing through the city on route to another destination. In George, the majority of the transient market originates from the N2 highway. As Nelson Mandela Blvd is the primary distributor of traffic from the George Industrial area to the N2 and vice versa, it is expected that the proposed **Parkdene Filling Station will experience a large amount of transient traffic passing by the site**, from those vehicles that conduct their business within the industrial area or use the Street to access the N2 in order to conduct business outside the industrial area (for example deliveries, construction work outside the George area, loading and offloading of labour etc.). The **transient traffic is expected to be high along this Street throughout the business year.**

As with the 2012 study, the Updated Economic Impact Assessment (2022) identified the need and desirability for a filling station at this specific site/location, and has shown through traffic counts, interception rate and average fill, that there remains a specific refuelling demand for the **heavy vehicle transient market making use of the N2** at this site, in Nelson Mandela Boulevard / Sandkraal Road.

The market for this filling station is not only aimed at transient market (N2 traffic) alone, but also traffic travelling on the eastern side of Sandkraal Road. There is currently no filling station on the eastern side of the road, north of the N2, catering for vehicles travelling in a southerly direction away from the industrial area towards the N2. A traffic island which stretches the length of Sandkraal Road furthermore creates complications for vehicles travelling in a southerly direction (eastern side of Sandkraal Road). This inconvenience of crossing towards the western side of Sandkraal Road for refuelling, increases with vehicle size, and as such, heavy vehicles in-particular seem to have difficulty in refuelling prior to accessing the N2. The recently established Puma Filling Station, although also located on the eastern side of Nelson Mandela Boulevard, is positioned on the opposite side (south) of the N2 highway, as one enters Thembalethu to the south. This filling station serve the traffic leaving and entering Thembalethu.

For this reason, the amended filling station has been designed to accommodate and service heavy vehicles and trucks (in addition to light & passenger vehicles) on the southern side of the N2 highway.

The **demand for fuel by local taxis and commercial vehicles** (large vehicles or trucks) forms the focus of the study, as is the **intended target market for the filling station development**. The Economic Impact Assessment identified and calculated a steady demand during the week, as well as a lower, but still significant demand for weekends at this development site. The **total fuel demand** for vehicles at the proposed site is an **estimated 529,022 litres/month** between the hours of 06:00 and 18:00 in line with the traffic count. Additional fuel sales will occur between 18:01 and 5:59, but at a much lower level due to traffic patterns. The conservative calculations of 529,022 litres/months is still **well in excess of the 300,000 litres of fuel a month that is considered the minimum to be sustainable**. Taking the above details into account, it is **not anticipated that the proposed filling station at Erf 11221, Sandkraal Road, will impact the feasibility and markets of existing filling stations in close proximity to the development site.**

The George Municipality has confirmed the availability and capacity for civil services, in addition to the site being an existing Municipal serviced site.

Socio-economic study indicated that the amended Parkdene Filling Station has various points of merit. The site has established business rights and a filling station development as a primary registered rights. There is no remaining indigenous vegetation cover on the site and there is thus no conservation status of value associated with the site. There are also no other biophysical concerns regarding the property. This EIR and original the BAR, as well as the updated EMPr, highlight impact avoidance, monitoring and mitigation

measures allowing a best practice development for the site. The development of this Filling Station at this time would not *compromise the integrity of the existing approved and credible municipal IDP and SDF, nor any environmental management priorities for the area.*

8. FEASIBILITY

The section serves to highlight the aspects of continued feasibility of the Parkdene Filling Station, and its amendment layout.

8.1 ACCESSIBILITY & TRAFFIC GROWTH

The Updated Traffic Impact Assessment (TIA)(Corli Havenga Transportation Engineers, April 2021) compared peak morning and afternoon traffic counts taken in 2011, 2018 and 2020 along Nelson Mandela Boulevard and Main Street, as the main access points to the Parkdene Filling Station site.

The traffic flow on Main Street showed a significant drop from 2018 to 2020, but along Nelson Mandela Boulevards there was a slight increase from 2018 to 2020. Total 12-hour (06:00-18:00) traffic volume through intersection: **17 225 vehicles.**

Table 3: In and Out bound traffic along Main Street.

Year	Morning peak hour			Afternoon peak hour		
	Inbound	Outbound	Total	Inbound	Outbound	Total
2011	225	284	509	273	140	413
2018	275	324	599	329	285	614
2020	170	231	401	224	232	456

Source: Corli Havenga Transportation Engineers, 2022

Table 4: In and Out bound traffic along Nelson Mandela Blvd.

Year	Morning peak hour			Afternoon peak hour		
	Inbound	Outbound	Total	Inbound	Outbound	Total
2011	809	585	1394	462	901	1363
2018	851	656	1507	715	995	1710
2020	834	745	1579	802	958	1760

Source: Corli Havenga Transportation Engineers, 2022

Table 5: Transient Traffic Fuel Demand.

Demand Variables	
Average Daily Traffic (ADT) (vehicles per day, 12 hours – (06:00-18:00)	17 225 vehicles
Average fill (litre per vehicle)	29.25 litres
Trading Days (days in the month)	30 days
Interception Rate (%)	3.5%
Transient Market Total (06:00-18:00)	**529,022 litres/month**

Source: Urban Econ, 2022

Given the increased traffic growth, at a conservative interception rate of 3.5%, the total fuel demand for vehicles at the proposed site is an estimated 529,022 litres/month between the hours of 06:00 and 18:00 in line with the traffic count. Additional fuel sales will occur between 18:01 and 5:59 but at a much lower level due to traffic patterns. **The conservative calculations of 529,022 litres/months is still well in excess of the 300,000 litres of fuel a month that is considered the minimum to be sustainable**.

8.2 SPHERE OF COMPETITION & SHARED TRAFFIC STREAMS

There is a total of 25 filling stations located within the George area, including Wilderness and Herold's Bay. 16 of these filling stations fall within the 5km radius / buffer zone of the proposed Parkdene Filling Station, with **only 3 filling stations located within the 2km radius**. *See Table 6 below.*

Of the 16 filling stations located within the 5km radius / buffer zone; 5 are located along York Street (one of the primary distributors & connects with the N2); 5 are located along Courtenay Street (a primary distributor & also connects with the N2 via Knysna Road); 3 are located along Albert Street (which links with Nelson Mandela Blvd); and 3 are located along Nelson Mandela Blvd, which is a primary distributor and connects with the N2. **Nelson Mandela Blvd serves as the main access route for transient traffic** looking to enter the Industrial area from the N2 highway, which is purported to carry large amounts of trucks and heavy vehicles.

Currently there are three existing filling stations in Nelson Mandela Blvd; however, two of these (Atlantic & Total) are located on the western side of the road catering for vehicles travelling in a northerly direction into the George Industrial area away from the N2, while only the Puma Filling Station is located on the eastern side, but south of the N2 in Thembalethu. A traffic island which stretches the length of Nelson Mandela Blvd creates complications for vehicles travelling in a southerly direction (eastern side of street) to access the current filling stations located on the western side, and these complications and inconvenience increases with the size of the motor vehicle, in other words, it is a lot easier for a small motor vehicle to do a complete 180° turn than it is for a large motor vehicle or truck. These 3 competitor filling station service different traffic streams.

The filling stations located within the 2km buffer zone will serve as the main competition for the proposed Parkdene Filling Station development, however all the various filling stations in the George area (including Wilderness) were included in the supply analysis. The 16 filling stations included in the 5km buffer zone are all owner operated and operate as an individual franchise unit for the respective petroleum companies.

Of the 16 filling stations, only 3 are located within a 2km radius are regarded as relevant competitors, the remaining 13 filling stations are located in other market segments more than 2km from the proposed development.

Table 6: Filling Stations within 5km zone, indicating facilities less than 2km in grey.

Nr	Type	Street Address	Distance	Relevance	Level of Competition
1	Agri-Fuel Filling Station	York Street	4.18 km	☒	Low
2	BP Filling Station	York Street	5.04 km	☒	Low
3	Caltex Filling Station	York Street	5.21 km	☒	Low
4	Caltex Filling Station	Discovery Street	3.56 km	☒	Low
5	Engen Filling Station	Discovery Street	3.51 km	☒	Low
6	Atlantic Oil Station	Nelson Mandela Blvd	1.91 km	☑	Moderate
7	Total (Bonjour) Filling Station	Nelson Mandela Blvd	0.84 km	☑	High
8	Caltex Filling Station	c/o Courtenay Street & Symmonds Street	5.86 km	☒	Low
9	Total (Bonjour) Filling Station	Courtenay Street	5.38 km	☒	Low
10	Shell Filling Station	29 Courtenay Street	5.85 km	☒	Low
11	Caltex Filling Station	12 Courtenay Street	6.16 km	☒	Low
12	Engen Filling Station	41 Knysna Road	4.42 km	☒	Low
13	Excel Filling Station	42 Albert Street	2.26 km	☒	Low
14	Engen Filling Station	Albert Street	3.69 km	☒	Low
15	Sasol Filling Station	Albert Street	2.5 km	☒	Low

16	Puma Filling Station	c/o Nelson Mandela Blvd & Ngcakani Road	0.94km	☑	High

Source: Urban Econ, November 2022.

8.2.1 Impact on Competitor Filling Stations

There are three filling stations within a 2km radius of the proposed Parkdene Filling Station.

Atlantic Oil Filling Station, located along Nelson Mandela Blvd on the western side is approximately 1.91km north from the Parkdene Filling Station site. As it is located on the western side of Nelson Mandela Blvd it caters mostly for vehicles traveling in a northernly direction towards the CBD of George as having to access it coming out of George requires travellers to cross double lane oncoming traffic. Almost all vehicles intercepted here will be travelling north on Nelson Mandela Blvd. The impact significance is deemed to be low to moderate.

Total Filling Station, located along Nelson Mandela Blvd on the western side is approximately 0.84km north from the Parkdene Filling Station site. As it is located on the western side of Nelson Mandela Blvd it caters mostly for vehicles traveling in a northernly direction away from the N2 as having to access it coming out of George requires travellers to cross double lane oncoming traffic. Almost all vehicles intercepted here will be travelling north on Nelson Mandela Blvd. The impact significance will therefore be moderate in nature.

Puma Filling Station, located along Nelson Mandela Blvd on the eastern side is approximately 0.94km south from the Parkdene Filling Station site, and south of the N2 route in Thembalethu. This filling station is on the eastern side of Nelson Mandela and intercepts vehicles travelling in a southernly direction south of the N2 towards Thembalethu, with access from the shopping centre as well as Ngcakani Road. The impact significance on this facility is deemed to be Moderate to High.

As the Atlantic Oil and Total Filling stations are mostly reliant on the traffic moving north on Nelson Mandela Blvd towards the George CBD the impact on their feasibility as a result of the Parkdene Filling Station will be minimal considering the Parkdene Filling Station will be reliant on intercepting traffic moving south towards the N2. The Puma Filling Station in Thembalethu will be impacted more significantly in that they are reliant on the same traffic stream moving south. As the Puma Filling Station serves mainly the communities and traffic moving in and around Thembalethu, as well as traffic moving south of the N2 from the George CBD the impact on the will be more severe. However, considering the low interception rate utilised in this study to determine the fuel sales volume for feasibility purposes it is expected that the impact on the Puma Filling Station will be moderate in nature.

It is noted that the Sasol Oasis filling Station, located along Albert Street (which becomes Nelson Mandel Blvd), on the eastern side approximately 2.5km from the Parkdene Filling Station site falls outside the scope of 'relevant competitors' as defined in the socio-economic assessment's 'area of direct impact'.

8.3 INTERCEPTION RATE

Support for Existing Filling Stations: The interception rate refers to the percentage of the total transient traffic which would turn into the proposed filling station. The interception rate is estimated between 2% and 5%. This figure is based on the research of the National Roads Agency and is regarded as industry standard. For the purpose of the filling station calculations a more **standard inception rate of 3.5%** will be used, thus making the inception rate not too conservative, while at the same time not pushing the maximum industry inception rate, making the results **more realistic and applicable to the Parkdene Filling Station development**. The purpose of capturing the total local market demand is to include members of the local municipal communities which may make use of the proposed filling station, however as they do not work in the industrial area or use Nelson Mandela Blvd on a regular basis and thus where not included in the transient market demand (calculated in Section 6.3 below).

Support for a new filling station marks the number of individuals that would make use of the station or expressed a demand (Urban-Econ Local Market Survey) for the proposed filling station in Nelson Mandela Blvd. The expected inception rate or support for the new filling station is calculated to be 3.5% for the transient market, as with the local market.

Average Transient Market Fill: This is an indicator of the average fill for each vehicle type based on the average tank capacity and the assumption that each vehicle is filled up to 65% of its capacity when visiting the filling station. Table 4.2 below shows the average fill per vehicle for the transient demand.

Table 7: Average fill per vehicle (litres).

Vehicle Type	L/L Truck	Bus	Minibus	Private car	Motorcycle
Average Fill	**97.5**	**227.5**	**45.5**	**29.25**	**19.5**

As the transient demand model is broken up into light and heavy vehicles specifically, the average fill figures that will be used from the table above are the 97.5 litres for large trucks (heavy vehicle) and the 29.25 litres for private motor vehicles (light vehicles) as these two categories made up the largest percentage of light and heavy vehicles in the traffic counts.

Active Days/Months: For this study the day's variable represents the number of days in which the development will be operational. As fuel supplies, average fill are the traffic count volumes were calculated on a weekly basis, the number of active weeks will be 52, representing the total number of days/weeks in which the filling station will be operative.

Leakage factor: The leakage factor is a consideration of vehicles that choose to be fuelled at alternative filling stations in the area. For the purpose of the study the leakage factor is disregarded since only the intercepted transient traffic is considered.

8.4 TRANSIENT MARKET

The transient market in George is defined as those motorists or vehicles which do not have a permanent residence in George but are rather passing through the city on route to another destination. In George, the majority of the transient market originates from the N2 highway, either via York Street from the Mossel Bay side; along Knysna and Courtenay Streets from the Knysna, Wilderness and Mossel Bay directions via the N2; or via Nelson Mandela Blvd into the Industrial area with traffic coming from the N2 from both the Mossel Bay and Knysna directions. As Nelson Mandela Blvd is the primary distributor of traffic from the George Industrial area to the N2 and vice versa, it is expected that the proposed development will experience a large amount of transient traffic passing by the site, from those vehicles that conduct their business within the industrial area or use the Street to access to the N2 in order to conduct business outside the industrial area (for example deliveries, construction work outside the George area, loading and offloading of labour etc.). The transient traffic is expected to be high along this Street throughout the business year.

The purpose of the transient demand model and thus capturing demand for this market is that this represents the demand from motorists that make use of Nelson Mandela Blvd on a weekly basis which is them converted to a monthly demand total. The demand derived from this market will represent the primary market of the proposed filling station development. The transient demand represents the fuel demand at the site is purported to be significantly larger than the local market demand.

The demand for fuel in terms of the transient market is a function of the total petroleum that is consumed monthly, and the diesel consumed in the same time period by the transient market. This is presented in the following function.

9. UPDATED IMPACT ASSESSMENTS

This section of the report was completed with input from the following specialists:

- Updated Socio Economic Impact Assessment (Urban Econ, Sept.2022);
- Updated Traffic Impact Assessment (TIA) & Statement (Corli Havenga Transportation Engineers, April 2021 & Sept.2022);
- Civil Services (Elements Consulting Engineers, Sept.2022) – *see Services Section above*.

The sections below provide the conclusionary statements from the Socio-economic and Traffic specialists, as well as an indication of any changes to the impact ratings and mitigations defined by these specialists. This section must be read in conjunction with the specialist reports attached in *Appendix E & F*.

9.1 SOCIO-ECONOMIC IMPACTS

As part of the Updated Socio-economic Impact Assessment study, the specialist (Urban Econ., Sept.2022) confirmed the following regarding the current socio-economic context and the proposed amended layout of the Parkdene Filling Station:

The direct or immediate socio-economic Area of Impact (AOI) of the proposed Filling Station is indicated by the red circle in the figure below. In order to determine the impact, specific attention was given to existing land uses, movement corridors, industrial, green zones and commercial zones defining 9 zones.

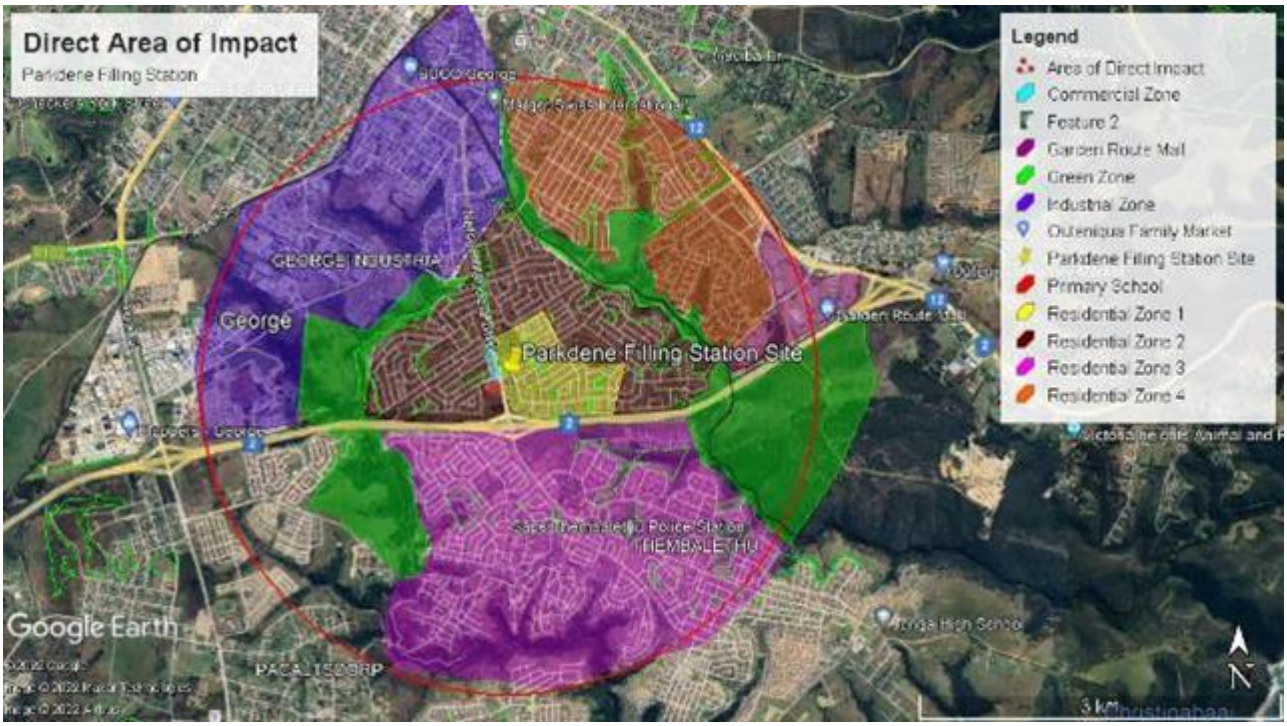


Figure 14: Area of Impact of the Parkdene Filling Station in George (Urban Econ, 2022).

All four of the surrounding suburbs (Lawaaikamp to the west; Parkdene to the east; Thembalethu to the south; and Conville to the north) are traditionally low middle to low-income areas. A large percentage of households in the area own only one vehicle or less and rely on taxi's, lifts and walking on foot to commute.

Nelson Mandela Blvd which serves as a Primary distributor where transient traffic can access the industrial area, as well as the main street used by Thembalethu commuters to get into and out of George. As such this distributor carries a large amount of traffic, especially during weekdays (Monday to Friday) this includes motor vehicles, large trucks, or vehicles as well as heavy construction and agricultural vehicles looking to transport goods and materials into the industrial area.

Just beyond Nelson Mandela Blvd lies the Mzoxolo Primary School in the suburb of Lawaaikamp. To the northwest of the site are a few commercial vendors, distributing mainly convenience goods and food items. The areas surrounding the site are low to low middle income households, and as such the actual vehicle

ownership rate in the area is assumed to be low, with majority of the residents, using taxi's or walking to get to and from work. Although demand for the filling station from these residential areas would be considered the secondary target market, as the **main target market as highlighted by the developers are large trucks and heavy vehicles.**

- Residential Zone 1 (Huis Outeniekwa & Ballotsview suburb), Mzoxolo Primary School and the small commercial zone north-west of the site (e.g. Usave, Mafouta Electronics & a few retail vendors) will be the most impacted on during the construction and operational phases. The biggest impacts will relate to the impact of movement patterns during construction as heavy vehicles utilising the surrounding roads for access to bring in building material on site. Nuisance impacts will also be present in the form of noise and dust, with construction taking place during work hours, most likely 08:00 to 17:00. During the operational phase the only noticeable impact will be the impact on movement patterns as the vehicles utilising the filling station will put some pressure on the mobility and movement of traffic on Main Street and Golf Street where they will turn in and out of the filling station. These negative impacts will be reduce to low with the implementation of recommended mitigation measures, as contained in the updated EMPr.
- The proposed Parkdene filling station will lead to the improvement of standards and living of local households.
- The development will likely create a positive impact on the local economic development and the socio-economic environment in the municipality in general.
- Positive impacts outweigh the potential negative impacts that might occur.

The detailed impact & mitigation tables are available in Section 7 of the attached Updated Socio-Economic Impact Assessment Report, attached as Appendix F.

A summary of the potential positive and negatives associated with the 2022 revised layout & impacts is presented in Table 8.

Table 8: Summary of Socio-Economic Impacts (2022).

Socio-Economic Impacts	Status	Significance before Mitigation / Enhancement	Significance after Mitigation / Enhancement
Construction phase			
Impact on Production	Positive	Moderate	Moderate
Impact on GDP	Positive	Moderate	Moderate
Impact on Employment Creation	Positive	Low to Moderate	Low to Moderate
Skills Development	Positive	Low	Low
Improved Standard & Living	Positive	Moderate	Moderate
Safety and security impacts	Negative	Moderate	Low
Impacts on daily movement pattern	Negative	Moderate	Low
Nuisance impact (noise & dust)	Negative	Low to Moderate	Low
Sense of Place	Negative	Low to Moderate	Low
Operational phase			
Impact on Production	Positive	Moderate	Moderate
Impact on GDP	Positive	Low to Moderate	Low to Moderate
Impact on Employment Creation	Positive	Low	Low
Improved Standard of Living	Positive	Very Low	Very Low
Skills Development	Positive	Very Low	Very Low
Increased Government Revenue	Positive	Moderate	Moderate
Impact on daily movement patterns	Negative	Moderate	Low to Moderate
Sense of Place	Negative	Low	Very Low
Decommissioning – *impacts similar to construction phase & short-term*			

It is unlikely that the proposed development would be decommissioned as it is ongoing in duration. If for some reason the development was to be decommissioned, the land will be rehabilitated to pre-project condition.

Financial provision will be made (as a condition of the site licence) for that rehabilitation. All positive & negative impacts will cease to exist. The spending on the disassembly of the components and rehabilitation of land will increase the demand for construction services and other industries, thus stimulating economic activity in the local area, albeit over a temporary period. Mitigations and enhancement measures suggested for the construction phase would apply. Overall, the impact that would ensue during the decommissioning phase will mostly be of low significance and should not affect the decision regarding the proposed development.

9.1.1 Comparison Between 2012 & 2022 Assessments

The anticipated socio-economic impacts noted between the 2012 & 2022 impact assessment studies have largely remained the same, however the impact ratings and methodology has changed as a result of the changes to EIA legislation and the introduction of NEMA guidelines/protocols. The comparison of impact significance ratings expected during construction and operation, is detailed below:

Table 9: Comparison of socio-economic post-mitigation impacts during construction phase.

Impacts	Status	Impact Significance (2012)	Impacts Significance (2022)
Impact on Production	Positive	**Moderate**	**Moderate**
Impact on GDP	Positive	**Medium**	**Moderate**
Impact on Employment Creation	Positive	**Low to very low**	**Low to Moderate**
Skills Development	Positive	**N/A**	**Low**
Improved Standard of Living	Positive	**N/A**	**Moderate**
Safety and security impacts	Negative	**N/A**	**Low**
Impacts on daily movement patterns	Negative	**N/A**	**Low**
Nuisance impact (noise and dust)	Negative	**N/A**	**Low**
Sense of Place	Negative	**Low to very low**	**Low**

Table 10: Comparison of socio-economic post-mitigation impacts during operational phase.

Impacts	Status	Impact Significance (2012)	Impact Significance (2022)
Impact on Production	Positive	**Medium**	**Moderate**
Impact on GDP	Positive	**Low to very low**	**Low to Moderate**
Impact on Employment Creation	Positive	**Low to very low**	**Low**
Improved Standard of Living	Positive	**N/A**	**Very Low**
Skills Development	Positive	**N/A**	**Very Low**
Increased Government Revenue	Positive	**N/A**	**Moderate**
Impact on daily movement patterns	Negative	**N/A**	**Low to Moderate**
Sense of Place	Negative	**Low to very low**	**Very Low**
Impact on Filling Stations within a 2km radius of the Parkdene Site	Negative	**N/A**	**Moderate**

The number of impacts evaluated during 2022 is higher than in 2012, however the impacts that were evaluated in 2012 and 2022 are still very similar with **no significant change in the significance of impacts**.

9.2 TRAFFIC IMPACTS

The Updated Traffic Impact Assessment (TIA)(Corli Havenga Transportation Engineers, April 2021) was requested by George Local Municipality on review of the revised Filling Station Site Development Plan and access Layout, and in relation to the new “Go-George” bus stops. Although this TIA Report was approved by George Local Municipality (letter dated 29 June 2021), a number of shortcomings were identified. These have been address in the Traffic Statements (Sept. & Nov.2022). *Refer to Appendix E*. These Reports conclude the following with regards to the proposed amendment of the Parkdene Filling Station in terms of the current traffic context:

9.2.1 Public Transport & Pedestrian Movement

Three new Go-George bus stops were constructed on or adjacent to the site since the original 2012 study, on Nelson Mandela Boulevard, Main and Golf Streets. The Bus stop along Main Street is a formal asphalt pull-

over. The proposed amended layout of Parkdene Filling station has responded to this public transport infrastructure and operations by limiting the accessibility to:

- Main Street to entrance only (no exit), and
- Full access will be along Golf Street.
- There will be no entrance / exit from Sandkraal Road / Nelson Mandela Boulevard.

As the amended layout has already been designed to accommodate the existing public transport infrastructure, it will have **no** impact on Go-George bus stop / operations. In addition, the entrance to the filling station along Main Street, will **not** be affected by busses standing at the bus stop. The kerbing of the bus stop is already lowered to accommodate entrance to the filling station along Main Street.

The new Go-George bus stop increases pedestrian movement (approximately 1300 persons/hr) through the area. Sufficient Universal Accessible (UA) sidewalks need to be provided for. Existing sidewalks on both sides of Main Street and Golf Street have already been built by the Municipality to accommodate increased pedestrian traffic. The access design of the amended Layout already indicates how the sidewalks from the access points of the filling station are to link to these existing sidewalks. Main Street also has an existing pedestrian crossing.

9.2.2 Trip Generation

The South African Trip Data Manual does not consider a filling station, nor its associated convenience store, as peak hour trip generator. The **primary business is fuelling of motor vehicles**. The South African Trip Generation Rates (1995) made recommendations for trip generation rates for filling stations; in urban areas a trip attraction rate of 4% with a 50:50 directional split. The filling station industry currently uses rates of between 2% and 4.5% depending on the approach. The market study only used the outbound traffic flow along Nelson Mandela Boulevard and the traffic flow along Main Street for the feasibility study of the filling station. In line with this the same was done for trip generation purposes. An **attraction rate of 3% was applied on the Nelson Mandela Boulevard outbound approach** resulting in the expected number of peak hour trips for the filling station as depicted in table below:

Table 11: Expected weekday morning & afternoon peak hour trip generation.

Peak hour	Peak hour Traffic volume	Attraction rate	Directional split (in/out)	Total number of peak hour trips	New trips in	New trips out
Nelson Mandela Boulevard approach						
Weekday (a.m.)	645	3%	50:50	20	10	10
Weekday (p.m.)	828	3%	50:50	24	12	12
Main Street approach						
Inbound (a.m.)	312	4%	50:50	12	6	6
Outbound (a.m.)	305	4%	50:50	12	6	6
Inbound (p.m.)	350	4%	50:50	14	7	7
Outbound (p.m.)	285	4%	50:50	11	6	5

9.2.3 Capacity Analysis

The results of the capacity analysis indicate that **both the intersections** adjacent to the site, the signalised Nelson Mandala Boulevard / Main Street and the two-way-stop at Main / Golf Streets, **operate at acceptable levels** of service during both peak hours and for both design scenarios:

Scenario 1: 2020 - existing weekday a.m. & p.m. peak hour traffic demand, and

Scenario 2: 2025 expected weekday a.m. & p.m. peak hour traffic demand (with 2% & 3.3% per annum background traffic growth & expected traffic demand from the proposed development, respectively). Scenario 2 also considered the proposed upgrading of the N2 bridge (currently under construction) and additional through-lane in-bound approach on Nelson Mandela Boulevard.

The **amended filling station layout is supported from a traffic flow point of view**.

9.2.4 Required Road Upgrades

Given the changes to the context (new bus stop & associated pedestrian sidewalks), as well as the responsive changes to the new preferred layout (2021) to these existing conditions, the road upgrade recommendations contained in the original TIA (VelaVKE, 2011), which were applicable to the previously approved layout, are no longer required / possible, for the following reasons (*refer to Traffic Statement, Nov.2022)*:

- A turning lane with a 12metre storage length be constructed on the western approach of Main Street:

As result of the Go-George facilities in the road reserve of Main Street, the road reserve width has become inadequate to accommodate an additional turning lane. The access as proposed in the 2012 report needs to move closer to the intersection with Golf Street and is now located only ±22m from Golf Street. The access spacing, Go-George facilities and road reserve width was contributing factors to **omit the right-turn lane for the 2021 proposal**.

- A stop line and sign should be placed at the access junctions with Main and Golf Street:

There were geometric issues with the access on Golf Street and the intersection with Main Street to accommodate the swept path for the fuel delivery trucks. Upgrades were proposed and incorporated in the site plan, none of these were required in the 2012 report. The **stop-line at the access junction on Golf Street is still part of the access, but not required at the entrance on Main Street.**

- An additional phase should be implemented within the Sandkraal Road / Main Road signalised intersection, to prevent the future expected right turning saturation problem:

The **upgrade of Sandkraal Road to a dual-carriage-way road from Main Street to the N2** was taken into account in the 2021 report. The additional through-lane on Sandkraal Road through the intersection resulted in **the signal upgrade no longer required**.

In terms of the revised / current preferred layout, the swept path and turning radii for fuel filler trucks (single unit truck and trailer = 19m long), entering the site from Golf and Main Streets and exiting the site at Golf Street (turning within site), require the following upgrades:

- a **turning radius at the intersection** of Main Street and Golf Street needs widening;
- the **full access on Golf Street also needs widening** as depicted in Figure 15.

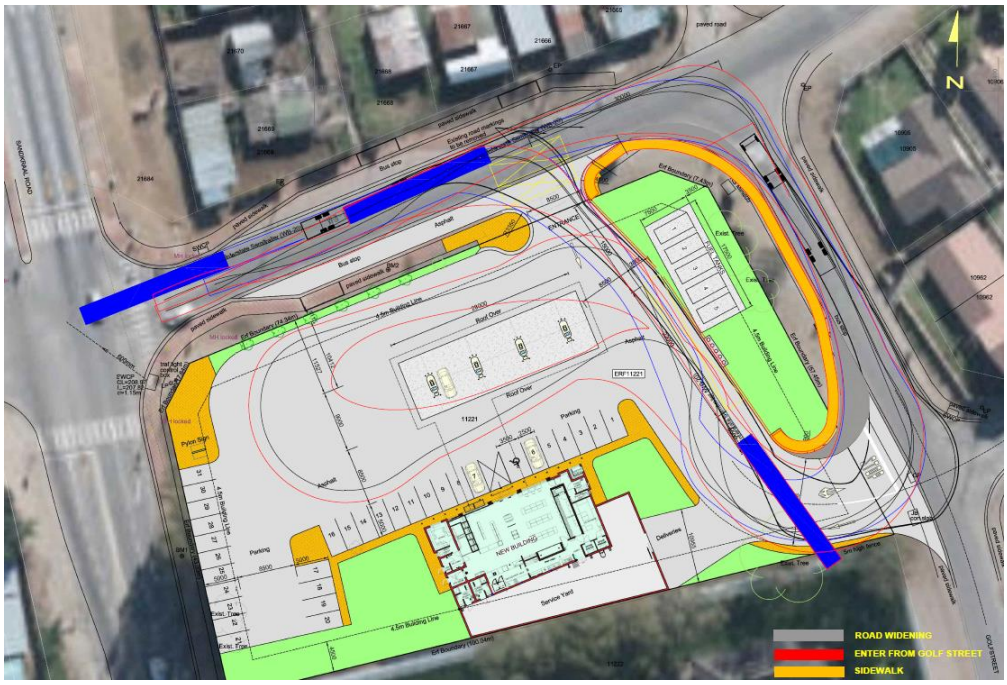


Figure 15: Amended layout to accommodate new traffic constraints and larger vehicles.

10 IMPACT SUMMARY

None of the participating specialists identified any negative impacts that remain high after mitigation.

As can be seen in the table below, the participating specialists did not identify any significant changes to the nature of the impacts, nor are there any increases in the level of significance of the impacts associated with the amendment of the layout.

Additional mitigations associated with the current context, needed to achieve the significance ratings detailed above, have already been accommodated / responded to in the design of the amended layout and will be included in the Updated EMPr for implementation.

Table 12: The table below provides a summary of the nature and post mitigation level of impacts currently applicable to amended Parkdene Filling Station layout & context.

Nature of Impact	Level & Status of Impact – Parkdene Filling Station as Amended
SOCIO-ECONOMIC - CONSTRUCTION	
Impact on Production	Moderate - Positive
Impact on GDP	Moderate – Positive
Impact on Employment Creation	Low to Moderate – Positive
Skills Development	Low – Positive
Improved Standard & Living	Moderate - Positive
Safety and security impacts	Low - Negative
Impacts on daily movement pattern	Low – Negative
Nuisance impact (noise & dust)	Low – Negative
Sense of Place	Low - Negative
SOCIO-ECONOMIC - OPERATION	
Impact on Production	Moderate - Positive
Impact on GDP	Low to Moderate – Positive
Impact on Employment Creation	Low - Positive
Improved Standard of Living	Very Low - Positive
Skills Development	Very Low - Positive
Increased Government Revenue	Moderate - Positive
Impact on daily movement patterns	Low to Moderate - Negative
Sense of Place	Very Low - Negative
TRAFFIC	
Impact on Go-George bus stop infrastructure and operations	Negligible
Ingress into filling station along Main Street affected by busses standing at the bus stop.	Negligible

11 MITIGATION MEASURES

The table below summarises the mitigation measures recommended by both the specialists and are equally applicable to the Parkdene Filling Station as authorised, as well as the proposed amendment.

Table 13: Mitigation measures required for the construction and operation amended Parkdene Filling Station development.

Mitigation	Included in EMPr
SOCIO-ECONOMIC	
The project developer should use locally sourced inputs where feasible in order to maximize the benefit to the local economy. Sub-contracting of local construction companies to occur as far as possible for the construction of facilities.	X
Organise local community meetings to advise the local labour on the project that is planned to be established and the jobs that can potentially be applied for. Where feasible, effort must be made to employ locally in order to create maximum benefit for the local households & communities.	X
In order to maximise the positive impact, it is suggested that the project company provide training courses for employees where feasible to ensure that employees gain as much as possible from the work experience. Facilitate the transfer of knowledge between experienced employees and the staff. Perform a skills audit to determine the potential skills that could be sourced in the area.	X
24-hour security on site and increased patrol in the neighbourhood	X
Comply to traffic regulations and management to ensure minimal impact on traffic. Limit traveling times of construction vehicles in peak times.	X

Mitigation	Included in EMPr
Comply to policies regarding noise and dust regulation methods close to roads and other existing infrastructure.	X
Comply to mitigation measures proposed within the visual impact assessment.	X
The project developer should make effort to use locally sourced inputs where feasible in order to maximize the benefit to the local economy. Local Small and Medium Enterprises are to be approached to investigate the opportunities for supplying inputs required for the maintenance and operation of the facility, as far as feasible.	X
Where feasible, effort must be made to employ locally in order to create maximum benefit for the communities.	X
Employing locally will increase benefit to local households and the local area.	X
TRAFFIC	
Access off Main Street is limited to entrance only (8.5m and radii of 3.4m and 4.0m) and a full access provised off Golf Street.	X
A turning radius at the intersection of Main Street and Golf Street needs widening;	X
The full access on Golf Street also needs widening: 12.9m and inside radius of 7.9m.	X
Sufficient Universal Accessible (UA) sidewalks need to be provided for. Additional sidewalks must be created and link to existing sidewalks on both sides of Main Street and Golf Street already been built by the Municipality to accommodate increased pedestrian traffic.	X

12 PUBLIC PARTICIPATION & STAKEHOLDER ENGAGEMENT

Section 41 in Chapter 6 of Regulation 982 details the public participation process required as part of an environmental process.

A Public Participation Plan has been prepared for this Amendment Application and approved by the DEA&DP (copy of the Public Participation Plan is attached in Appendix K1 and the approval Thereof is attached in Appendix J). Further details on the outcome of the public participation process and proof of all actions that have taken place will be included in the Final EIReport for submission to the competent authority.

The public participation plan was submitted in compliance with regulation GNR660, published on 05 June 2020 in terms of the Disaster Management Act .In compliance with Section 5.1 and Annexure 2 of these regulations a public participation plan must be presented to the competent authority for approval prior to implementation.

Section 40(2) in Chapter 6 of regulation 982 requires that the public participation process contemplated in this regulation must provide access to all information that reasonably has or may have the potential to influence any decision with regard to an application unless access to that information is protected by law and must include consultation with—

(a) the competent authority;
(b) every State department that administers a law relating to a matter affecting the environment relevant to an application for an environmental authorisation;
(c) all organs of state which have jurisdiction in respect of the activity to which the application relates; and
(d) all potential, or, where relevant, registered interested and affected parties.

12.1 POTENTIAL I&APS & STAKEHOLDERS

A **stakeholder register** has been opened for this project and will be continuously updated as registrations are received or changes made to already registered stakeholders. The EAP will make use of & update (where necessary) the original list of registered I&APs associated with the original BA process.

Registered I&APs from the original environmental process (2012) and subsequent (2017) amendment application will be contacted and extended the opportunity to register as I&APs for this Part 2 Amendment Application in a similar fashion as all of the other potential I&APs.

All potential I&APs will be provided with notifications by the following hierarchy: **email, fax, post** (where such details are available to the EAP). All I&APs are provided with the option to change their preferences (of communication) at any stage, provided correct information is supplied.

The following **neighbouring properties** have been identified a direct neighbours for purposes of notification in terms of the Regulations: Erven 16023, 21669, 21668, 21667, 21666, 21665, 25354, 10905, 10962 & 10963. **Letter drops** of the DEIR availability notification will be undertaken at these premises.

The following State Departments / Organs of State will be notified and requested to provide comment:

- Dept.of Mineral Resources & Energy – Lungisile Pakati
- SANRAL – Nicole Abrahams
- Evan Burger – Provincial Roads
- Dept .of Agriculture – Cor van der Walt
- George Municipality (Planning) – Clinton Pietersen
- George Municipality (Technical) – Ricus Fivas & Lindsay Mooiman
- George Municipality (Environmental) – Priscilla Burgoyne
- Garden Route District Municipality – Johan Compion
- CapeNature – Megan Simons
- Breede Gouritz Catchment Management Agency (BGCMA) – Carlo Abrahams
- Heritage Western Cape - Waseefa Dhansey

12.2 GENERAL REQUIREMENTS

Section 41 in Chapter 6 of regulation 982 details the public participation process that has to take place as part of an environmental process. The table below provides lists these requirements along with the proposed actions in order to comply with both Section 41 in regulation 982 as well as well as section 5.1 and annexure 2 of regulation 660.

Table 14: General Requirements in terms of Section 41 of Chapter 6 of the EIA Regulations.

Regulated Requirement	Proposed Actions
(1) If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for an environmental authorisation in respect of such activity, obtain the written consent of the landowner or person in control of the land to undertake such activity on that land. (2) Subregulation (1) does not apply in respect of-. (a) linear activities;	The proponent is the person in control of the land.
The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of an application or proposed application which is subjected to public participation by -	
(a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of - (i) the site where the activity to which the application or proposed application relates is or is to be undertaken; and (ii) any alternative site;	Site notices will be placed on the existing erf boundary fence where the activity will take place i.e. at the proposed entrance to the Filing Station and facing the busy Sandkraal Road. The site notice will provide all regulated information required for an I&AP to contact the EAP in order to register. The site notice/s also identifies listed activities & stipulates the applicable legislation. No deviation or additional actions in terms of regulation 660 are required.
(b) giving written notice, in any of the manners provided for in section 47D of the Act, to -	
(i) the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	There are no occupiers on the property. There is a security guard employed to deter trespassing and illegal dumping and to let a community member onto the property from time-to-time to graze a horse. Guard has already been verbally notified.
(ii) owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;	Owners of adjacent properties will be notified of this environmental process and will be provided with access to digital copies of the documents via email or digital platforms. George Municipality will be approached to confirm neighbouring property details. It is noted with concern that obtaining contact details from the Municipality under the new POPIA requirements is a very time consuming process that can impact on the overall project programme.
(iii) the municipal councillor of the ward in which the site or alternative site is situated and any organisation of ratepayers that represent the community in the area;	The Councillor of Ward 7, within which the property falls, will be notified of this environmental process and will be provided access to a digital copy of the documentation.

Regulated Requirement	Proposed Actions
(iv) the municipality which has jurisdiction in the area;	The George Municipality (Environmental / Planning / Technical Departments) will be notified of this environmental process and will be provided with access to digital copies of all documentation.
(v) any organ of state having jurisdiction in respect of any aspect of the activity; and	All organs of state that have jurisdiction in respect of the activity will be notified of this environmental process and will be provided with access to digital copies of all documentation.
(vi) any other party as required by the competent authority;	DEA&DP & DMRE will be given an opportunity to comment on the Draft EIR and Updated EMPr. Should they identify additional parties that need to provide comment, copies of the documentation and opportunity to comment will be provided to such parties.
(c) placing an advertisement in - (i) one local newspaper; or (ii) any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	An advert will be placed in the George Herald calling for I&APs to register and advising on what documentation is available and how to access it. There is currently no official EIA Gazette that has been published specifically for the purpose of providing public notice of applications.
(d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c)(ii);and	Adverts will not be placed in provincial or national newspapers, as the potential impacts will not extend beyond the borders of the municipal area.
(e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to - (i) illiteracy; (ii) disability; or (iii) any other disadvantage.	Written notifications will include provision for alternative engagement in the event of illiteracy, disability or any other disadvantage. In such instances, *Cape EAPrac* will engage with such individuals in such a manner as agreed on with the competent authority. Virtual meetings / telephone calls as reasonable alternative methods of public participation will be utilised, where I&APs request such, because they are unable to utilise some of the methods provided. Should it become necessary to consult in person with such stakeholders focus group or public meetings will be scheduled.
(3) A notice, notice board or advertisement referred to in subregulation (2) must - (a) give details of the application or proposed application which is subjected to public participation; and (b) state - (i) whether basic assessment or S&EIR procedures are being applied to the application; (ii) the nature and location of the activity to which the application relates; (iii) where further information on the application or proposed application can be obtained; and (iv) the manner in which and the person to whom representations in respect of the application or proposed application may be made.	All notification and adverts will comply with this requirement. No deviation or additional actions in terms of regulation 660 are required.
(4) A notice board referred to in subregulation (2) must - (a) be of a size at least 60cm by 42cm; and (b) display the required information in lettering and in a format as may be determined by the competent authority.	The notice boards that will be placed on the site will comply with this requirement.
(5) Where public participation is conducted in terms of this regulation for an application or proposed application, subregulation (2)(a), (b), (c) and (d) need not be complied with again during the additional public participation process contemplated in regulations 19(1)(b) or 23(1)(b) or the public participation process contemplated in regulation 21(2)(d), on condition that - (a) such process has been preceded by a public participation process which included compliance with subregulation (2)(a), (b), (c) and (d); and	This will be complied with if final reports are produced later in the environmental process.

Regulated Requirement	Proposed Actions
(b) written notice is given to registered interested and affected parties regarding where the - (i) revised basic assessment report or, EMPr or closure plan, as contemplated in regulation 19(1)(b); (ii) revised environmental impact report or EMPr as contemplated in regulation 23(1)(b);or (iii) environmental impact report and EMPr as contemplated in regulation 21(2)(d); may be obtained, the manner in which and the person to whom representations on these reports or plans may be made and the date on which such representations are due.	
(6) When complying with this regulation, the person conducting the public participation process must ensure that - (a) information containing all relevant facts in respect of the application or proposed application is made available to potential interested and affected parties; and (b) participation by potential or registered interested and affected parties is facilitated in such a manner that all potential or registered interested and affected parties are provided with a reasonable opportunity to comment on the application or proposed application. (7) Where an environmental authorisation is required in terms of these Regulations and an authorisation, permit or licence is required in terms of a specific environmental management Act, the public participation process contemplated in this Chapter may be combined with any public participation processes prescribed in terms of a specific environmental management Act, on condition that all relevant authorities agree to such combination of processes.	All reports that are submitted to the competent authority will be subject to a public participation process of 30 days. These include: - Draft Environmental Impact Report - Updated EMPr - All specialist reports that form part of this environmental process. A pre-application assessment report was not circulated due to time constraints linked to the validity of the existing EA.

12.3 AVAILABILITY OF DRAFT EIR

Automatically registered I&AP's will be notified of the availability of the Draft Environmental Impact Report for review and comment. This Draft EIR will be available for a **30-day review and comment period extending from 28 November 2022 to 18 January 2023** (excluding the December break, 15 Dec.to 5 Jan.)

All comments received on this Draft EIR will be considered, responded to and included in the Final EIR for submission to the competent authority for consideration.

The DEIR will be made available on the *Cape EAPrac* Website: www.cape-eaprac.co.za (under Active Projects, Parkdene Filling Station).

All notifications (including the site notice and advert) have made provisions for potential I&AP's to contact *Cape EAPrac*, should they not have access to the digital platforms provided. In such instances, *Cape EAPrac* will arrange other suitable mechanisms for them to be able to access the relevant information.

13 CONCLUSION AND RECOMMENDATIONS

Cape EAPrac is of the opinion that the information contained in this Impact Report and the documentation attached hereto, is sufficient to allow the competent authority to apply their minds to the potential negative and/or positive impacts associated with the proposed *amendment* of the approved site plan and extension, in respect of the activities authorised. Furthermore, given the delays associated with obtaining all of the necessary approvals, including accommodating critical changes associated with the Go-George bus stop erected at the approved entrance of the filling station, a reasonable decision would be to extend the EA to enable implementation.

The Economic Impact Assessment identified that there is a definite need for this filling station at the proposed development site, particularly to serve transient traffic (traffic moving through George and surrounding areas towards the N2), and in particular heavy vehicles that access Sandkraal Road from N2 for commercial /

business purposes i.e. a specific demand market that other filling stations in the area cannot necessarily accommodate either due to site limitations or distance from the N2.

The proposed project is therefore likely to (still) create a positive impact on the local economic development and the socio-economic environment in the municipality in general. Overall, several positive socio-economic impacts will occur as a result of the filling station development and these **positive impacts outweigh the potential negative impacts that might occur** should the layout not be amended and an extension not be granted.

Considering that the specialist/technical assessments have not identified any fatal flaws with the proposed amendment of the layout/time frame extension, it is the reasoned view of the EAO that the amendments can be considered for authorisation subject to implementation of the updated EMPr and compliance with all applicable conditions of approval.

1. DECLARATION OF THE HOLDER OF THE EA

I **… Aboobaker Ismail .**, ID number **…4710235088085…**in my personal capacity or duly authorised thereto hereby declare/affirm that all the information submitted or to be submitted as part of this application form is true and correct, and that:

- I am fully aware of my responsibilities in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA"), the Environmental Impact Assessment ("EIA") Regulations, and any relevant Specific Environmental Management Act and that failure to comply with these requirements may constitute an offence in terms of relevant environmental legislation;
- I am aware of my general duty of care in terms of Section 28 of the NEMA;
- I am aware that it is an offence in terms of Section 24F of the NEMA should I commence with a listed activity prior to obtaining an Environmental Authorisation;
- I appointed the Environmental Assessment Practitioner ("EAP") (if not exempted from this requirement) which:
  - meets all the requirements in terms of Regulation 13 of the NEMA EIA Regulations; or
  - meets all the requirements other than the requirement to be independent in terms of Regulation 13 of the NEMA EIA Regulations, but a review EAP has been appointed who does meet all the requirements of Regulation 13 of the NEMA EIA Regulations;
- I will provide the EAP and any specialist, where applicable, and the Competent Authority with access to all information at my disposal that is relevant to the application;
- I will be responsible for the costs incurred in complying with the NEMA EIA Regulations and other environmental legislation including but not limited to –
  - costs incurred for the appointment of the EAP or any legitimately person contracted by the EAP;
  - costs in respect of any fee prescribed by the Minister or MEC in respect of the NEMA EIA Regulations;
  - Legitimate costs in respect of specialist(s) reviews; and
  - the provision of security to ensure compliance with applicable management and mitigation measures;
- I am responsible for complying with conditions that may be attached to any decision(s) issued by the Competent Authority, hereby indemnify, the government of the Republic, the Competent Authority and all its officers, agents and employees, from any liability arising out of the content of any report, any procedure or any action for which I or the EAP is responsible in terms of the NEMA EIA Regulations and any Specific Environmental Management Act.

Note: If acting in a representative capacity, a certified copy of the resolution or power of attorney must be attached.

Click or tap to enter a date.

Signature of the Holder of the EA: Date:

Name of company (if applicable):

HOLDER OF THE EA SIGNATURE TO BE SUBMITTED WITH FINAL EIR SUBMISSION TO THE COMPETENT AUTHORITY

2. DECLARATION OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER ("EAP")

I **Ms Louise-Mari van Zyl**, EAPASA Registration number **…2019/1444 ..** as the appointed EAP hereby declare/affirm the correctness of the:

- Information provided in this EIR and any other documents/reports submitted in support of this EIR;
- The inclusion of comments and inputs from stakeholders and I&APs;
- The inclusion of inputs and recommendations from the specialist reports where relevant; and
- Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties, and that:
- In terms of the general requirement to be independent:
    - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
    - am not independent, but another EAP that meets the general requirements set out in Regulation 13 of NEMA EIA Regulations has been appointed to review my work (Note: a declaration by the review EAP must be submitted);
- In terms of the remainder of the general requirements for an EAP, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- I have disclosed, to the Holder of the EA, the specialist (if any), the Competent Authority and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Competent Authority or the objectivity of any report, plan or document prepared or to be prepared as part of this application;
- I have ensured that information containing all relevant facts in respect of the application was distributed or was made available to registered interested and affected parties and that participation will be facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments;
- I have ensured that the comments of all interested and affected parties were considered, recorded, responded to and submitted to the Competent Authority in respect of this application;
- I have ensured the inclusion of inputs and recommendations from the specialist reports in respect of the application, where relevant;
- I have kept a register of all interested and affected parties that participated in the public participation process; and
- I am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations;

Signature of the EAP:	Date: 2022/11/23

Cape Environmental Assessment Practitioners (Cape EAPrac)

Name of company (if applicable):