

Proposed Increased Storage Capacity of the Easigas LPG Storage Facility in Sidwell, Gqeberha

Draft Basic Assessment Report

Report Prepared for

Easigas (Pty) Ltd



Report Number 565826/1



Report Prepared by

The logo for SRK Consulting consists of a stylized orange 'V' shape followed by the letters 'srk' in a bold orange font, all contained within a larger orange square. To the right of the logo, the word "consulting" is written in a smaller, grey, sans-serif font.

November 2021

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Easigas (Pty) Ltd.

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SRK Project Number 565826

November 2021

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Definitions

Environment	The external circumstances, conditions and objects that affect the existence and development of an individual, organism or group. These circumstances include biophysical, social, economic, historical and cultural aspects.
Basic Assessment	An assessment of the positive and negative effects of a proposed development on the environment. The process involves collecting, organising, analysing, interpreting and communicating information that is relevant to the consideration of an application for environmental authorisation. A simpler process than EIA, that is subject to one phase (Basic Assessment) and generally does not include specialist studies.
Interested and Affected Party	Any person, group of persons or organisation interested in or affected by an activity and any organ of state that may have jurisdiction over any aspect of the activity.
Public Participation Process	A process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters relating to a proposed development.

Abbreviations

+ve	Positive
BAR	Basic Assessment Report
BID	Background Information Document
CBA	Critical Biodiversity Area
DBAR	Draft Basic Assessment Report
DCP	Dry Chemical Powder
DEDEAT	Department of Economic Development, Environmental Affairs and Tourism
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
Easigas	Easigas (Pty) Ltd
ECO	Environmental Control Officer
ECPHRA	Eastern Cape Provincial Heritage Resources Authority
EMPr	Environmental Management Programme
IAP	Interested and Affected Party
LPG	Liquid Petroleum Gas
MHI	Major Hazard Installation
NEMA	National Environmental Management Act
NMBM	Nelson Mandela Bay Municipality
PPP	Public Participation Process
QRS	Quantitative Risk Assessment
RP	Responsible Person
SABS	South African Bureau of Standards
SRK	SRK Consulting
-ve	Negative

Section 1: Summary Report

565826
November 2021



Executive Summary | Draft Basic Assessment Report for the proposed Increased Storage Capacity of the Easigas LPG Storage Facility in Sidwell/ New Brighton, Gqeberha

1. Introduction

Easigas (Pty) Ltd proposes to increase the capacity of their existing Liquid Petroleum Gas (PLG) storage depot in Sidwell / New Brighton through the installation of an additional 400 m³ above ground LPG storage tank. The facility currently stores a total of 315 m³ LPG in five above ground LPG storage tanks (3 x 45 m³ and 2 x 90 m³) and acts as a LPG cylinder filling facility. The new tank will differ from the existing facility in that it will be strategic bulk storage to support the region, and in particular existing industrial customers within the automotive industry (bulk truck offloading and loading), as opposed to cylinder filling.

SRK Consulting South Africa (Pty) Ltd. (SRK) has been appointed by the Easigas as the independent consultants to conduct an Environmental Basic Assessment (BA) for the proposed activity in terms of the National Environmental Management Act (Act no. 107 of 1998) (NEMA) and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended. The DEDEAT ref for the application is ECm1/C/LN1/51/62-2021.

1.1. Purpose and Structure of the BA Report

The NEMA EIA Regulations were promulgated to put into practice the environmental management principles espoused in the Act. The Basic Assessment Report (BAR) provides the competent authority, the Department of Economic Development Environmental Affairs and Tourism (DEDEAT), with all relevant information about the proposed

activity, as well as an assessment of the potential impacts in order to inform the decision as to whether the activity should be approved and, if so, under what conditions.

This BAR comprises of two sections, of which Section 2 is mandatory in terms of the requirements for a Basic Assessment. This Summary Report is intended to provide additional contextual information in support of the application¹. The BAR contains the following sections:

Section 1: Summary Report/ Executive Summary

Section 1 (this section) provides an introduction to the project; describes the approach to the Basic Assessment process and provides a description of the activity. It also describes the public consultation process undertaken during the process, the key findings and recommendations and the way forward. This section provides a summary of the key elements of the Basic Assessment.

Section 2: Completed BAR Form

Section 2 contains the completed BAR form, as prescribed by DEDEAT, submitted in support of the application for Environmental Authorisation of the activity under the NEMA EIA Regulations. Section 2 also contains the Appendices as required by the DEDEAT BAR.

1.2. Approach to the Basic Assessment

The environmental authorisation process prescribed for listed activities under Listing Notices 1, 2 and 3 published in Government Gazette Numbers R327, R325 and R324 respectively (as amended in April 2017) are defined in the

¹ Note that the full report is a collation of sections and not a sequential compilation of report chapters.

Environmental Impact Assessment (EIA) Regulations made under section 24(5) of the National Environmental Management Act, 2008 (Act No. 107 of 1998) (NEMA).

Activity 51, listed in GN R327 (Listing Notice 1) of the NEMA 2014 EIA regulations (as amended) is the main activity associated with the proposed project, calling for an Environmental Basic Assessment process to be followed. Activity 51 is as follows:

GN 327 Item 51: The expansion and related operation of facilities for the storage, or storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by more than 80 cubic metres.

The BA process entails the assessment of the activity and the compilation of a Basic Assessment Report (BAR) (see Section 2) for public comment. Issues and concerns raised by the public after the distribution of the Background Information Document (BID), inform the BAR and concerns raised on the Draft BAR will be incorporated into the Final BAR which, together with the prescribed Comment and Responses Report, will be submitted to DEDEAT for a decision. A typical Basic Assessment process is depicted in the Figure 1.

1.3. Prescribed Requirements for the Basic Assessment

The BAR provides information about the proposed activity, a description of the affected environment, a description of the process undertaken in order to consult the public on the activity, as well as a Basic Assessment of the potential impacts of the activity on the receiving environment.

Several appendices to the BAR are required as supporting documentation. The Appendices included in the BAR are the following:

- Appendix A - Site Plan(s);
- Appendix B - Photographs;
- Appendix C - Facility illustration(s);
- Appendix D – MHI Specialist report;
- Appendix E - Public Participation Documents;
- Appendix F - Environmental Management Programme (EMPr);
- Appendix G – Impact Rating Table; and
- Appendix H - Application Form.

This information is contained in Section 2 of the BAR.

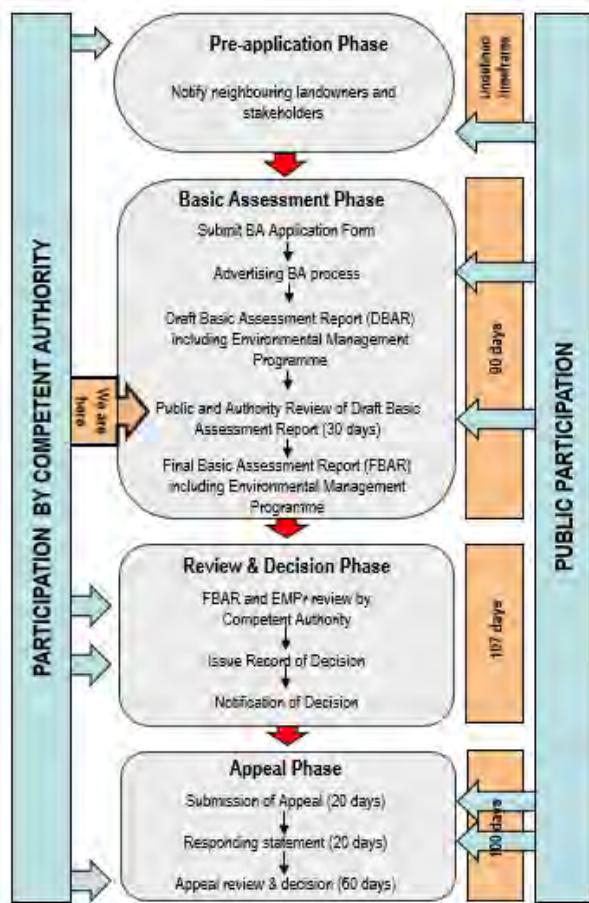


Figure 1: Typical Basic Assessment Process

2. Project Description

The proposed new tank will measure approximately 27 m length x 4 m diameter and will be mounted on a concrete slab (approximately 31.75 m x 7.75 m), via concrete plinths, similar to the existing tanks on the site. Delivery trucks will use the existing access gate to the site (off Eveready road) and the existing access control and security measures for the site (fencing and security guard to control access) will apply. A truck offloading and loading point will be constructed adjacent to the tank, and will include automatic fire monitor systems for fire control. Two fire islands, one on either side of the tank, including a fire hose, and Dry Chemical Powder (DCP), to facilitate the relevant fire emergency control measures including automatic fire monitors (connected to the existing fire water system on the site) are included in the design. The design safety distances for above ground storage tanks shall be in accordance with SANS 10087.

The following LPG storage protection measures are included in the design specifications for the facility:

1. Tank overfill protection (to ensure the tank is not filled beyond the maximum 85% volume);
2. Electrical equipment earthing (to ensure flame and spark-proofing);

3. Earthing and bonding (to control static electricity build-up during LPG offloading);
4. A preventive maintenance programme, including daily inspections of all equipment at the LPG facility;
5. Detailed operating procedures for all sections of the facility, including training of personnel;
6. Perimeter fencing and access control via one gate; and
7. No combustible material or vegetation shall be allowed in the facility.

The following automatic and passive fire protection systems are included in the design:

1. High velocity automatic fire monitors; and
2. Gas detection system, installed at the tank, truck loading/offloading point and LPG pumps area, and linked to the sites safeguarding system.

The daily operation of the new tank will be limited to loading and unloading of supply trucks into and from the 400m³ LPG tank (approximately twice a week). This will be done via LPG pumps installed on the truck trailer and a supply pump, which will be part of the new 400m³ tank installation.

3. Public Consultation Process

A Public Participation Process (PPP) aimed at providing an opportunity for IAPs to be involved is underway. IAPs are encouraged to review the Draft BAR to ensure that any comments have been accurately recorded and understood.

The PPP activities that have been conducted to date as part of this BA process are as follows:

- Placement of an onsite poster, affixed to the entrance gate to the Easigas cylinder filling and LPG storage facility on the 21 October 2021;
- Compilation of an IAP database to include all IAPs identified in terms of the NEMA Regulations, 2014;
- Notify the landowner, all identified authorities, stakeholders, ward councillor, and adjacent landowners and occupiers via email with BID attached (on 25 October 2021) of the proposed development and BA Process as per the requirements of the EIA Regulations;
- Placement of a newspaper notice in The Herald on 02 November 2021 to announce commencement of the BA process and invite IAP registration and comment;
- Distribution of the Executive Summary of the Draft BAR (this report) to all Stakeholders and IAPs identified for this process (proof of the distribution to be included in the Final BAR) on 22 November 2021;
- Distribution of the complete Draft BAR to identified authorities and stakeholders (proof of the distribution to be included in the Final BAR) on 22 November 2021;

- Make an electronic copy of the complete Draft BAR available for download on the SRK Consulting webpage for IAP review and comment
- Make additional copies (hard / electronic) of the Draft BAR available to IAPs for review on request, should they not have access to email or be able to download the report from SRK's website; and
- Provision of a 30-day comment period on the Draft BAR (23 November 2021- 14 January 2022) for all parties.

The PPP activities that will still be conducted as part of this BA process are as follows:

- Collation of comments on the Draft BAR (including responses thereto), and incorporation of these into the final version of the BAR;
- Distribution of the Executive Summary of the Final BAR (including a summary of IAP comments and responses) to all registered IAPs, noting any changes made to the Draft BAR;
- Distribution of the complete Final BAR to identified authorities and stakeholders for informational purposes;
- Make an electronic copy of the complete Final BAR available for download on the SRK Consulting webpage for informational purposes;
- Submission of the Final BAR to DEDEAT for a decision regarding Environmental Authorisation ; and
- Notifying all parties registered for the process of DEDEAT's decision once received.

To date, no comments have been received in response to the Notices of Process distributed.

4. Potential Impacts

4.1. Impact Rating Methodology

The identification of potential impacts of the proposed activity was based on the following factors:

- The legal requirements;
- The nature of the proposed activity;
- The nature of the receiving environment; and
- Issues raised during the public participation process.

Potential impacts were assessed using SRK's impact assessment methodology, detail of which is provided in Appendix G of the BAR. The significance of an impact is defined and assessed as a combination of the consequence of the impact occurring (based on its extent, intensity and duration) and the probability that the impact will occur.

The impact significance rating should be considered by the competent authority in their decision-making process based on the definitions of ratings ascribed below.

- **Insignificant:** the potential impact is negligible and will not have an influence on the decision regarding the proposed activity.

- **Very Low:** the potential impact is very small and should not have any meaningful influence on the decision regarding the proposed activity.
- **Low:** the potential impact may not have any meaningful influence on the decision regarding the proposed activity.
- **Medium:** the potential impact should influence the decision regarding the proposed activity.
- **High:** the potential impact will affect a decision regarding the proposed activity.
- **Very High:** the proposed activity should only be approved under special circumstances.
- **+ve – positive impact;**
- **-ve – negative impact**

Considering these factors, the *key* environmental and social impacts identified as potentially resulting from the proposed development, are summarised below. The impact significance ratings after effective implementation of key management recommendations are also included.

4.2. Impact Assessment

The following potential construction impacts were identified:

- General construction related impacts

Due to the nature of the site (i.e. a brownfields site on an existing industrial site) and limited development footprint (~250 m²) and construction duration, general construction related impacts are expected to be of INSIGNIFICANT (-ve) significance rating both with and without mitigation measures, and have therefore not been rated individually. General construction good management measures are included in the EMPr to manage these impacts. These impacts relate to air quality (from dust due to earth moving activities on site), construction related noise, general construction waste management and potential spills of cement and other construction related material on site

- Socio-economic benefits

Construction activities will result in a limited number of temporary job opportunities as well as indirect economic benefits (industries that provide construction materials and services for the project). Due to the small size of the project and limited construction requirements and duration (construction is anticipated to last for six weeks), the positive socio economic impact of the development was rated to be INSIGNIFICANT (+ve), without and VERY LOW (-ve) with enhancement measures to maximise local employment opportunities.

- Soil, stormwater and groundwater impacts resulting from excavation of potentially contaminated soil material

There is the potential, due to the historical nature of activities on the site, that the soil that is to be

excavated and spoilt may be contaminated to the extent that it is classified as a hazardous waste. A specialist assessment is underway to determine if this is the case and will be completed before the final BAR is submitted to DEDEAT. The specialist assessment will determine whether the soil is suitable for disposal as inert waste, whether it can be disposed of at one of the municipal landfill sites, or whether it requires disposal at a hazardous waste disposal site. The volume of excavated soil to be disposed of is estimated to be 35-70 m³.

Depending on the nature of contaminants present in the soil, potential impacts on the marine environment are predicted to be of LOW (-ve) significance, should adequate mitigation measures not be in place. With mitigation this rating could be reduced to INSIGNIFICANT (-ve).

These measures include suppression of dust during construction, minimal stockpiling of soil (if required at all), disposal of excess soil material at a registered landfill, and limiting the disturbed area to the minimum required. The soil material must be tested for contamination prior to commencement of construction, and should it be confirmed to be hazardous as per the waste classification criteria, disposed of at a hazardous landfill site.

- Traffic flow and safety impacts:

Due to the small construction footprint and timeframe, potential impacts on traffic will be very limited. The most significant piece of equipment to be transported to the site will be the new tank itself, which will be delivered to the site via truck. Access to the site via the gate on the eastern side of the site along the old (decommissioned) gasworks railway entrance to the site will temporarily be used for this delivery. All other construction related traffic will be related to general construction activities (cement work etc) and will use the existing access roads to the site, which are designed to accommodate trucks for the operation of the site. No significant impacts on traffic flow or safety are expected to result from general construction traffic. It is recommended that a transportation expert is consulted pre-construction to advise on any relevant safety or other traffic requirements relating to delivery of the new tank to site.

The impact was rated as VERY LOW (-ve) and can be reduced to INSIGNIFICANT if the recommended mitigation measures are applied.

The following potential operational impacts were identified:

- Safety risk impacts:

The facility is classified as a Major Hazard Installation (MHI) in terms of the MHI regulations (R.692 of 30 July 2001), because a major incident at the site will impact members of the public outside the boundaries of the premises. Easigas is therefore required to undertake MHI assessments every five years, and prior to

installation of any new infrastructure relevant to its MHI status, for submission to the local authorities. The safety risks have been assessed and through a MHI Study conducted by Dr Alfonso Niemand of Nature & Business Alliance Africa (A copy of the specialist report can be found in Appendix D of the DBAR). A total of 24 hazard scenarios were analysed in the risk assessment. The impacts relating to the safety risks to surrounding communities have been rated by the EAP based on the findings of the specialist report and all mitigation measures listed in the report are included in the EMPr. It is noted that the surrounding land uses are largely industrial, as well as open space. The closest residential development is approximately 300 m from the site and falls outside the safety risk contours identified by the specialist based on modelling of risks for various scenarios.

The report made the following findings:

- a) The LPG tank installation on the premises comprises an MHI, because a major incident on site would impact on members of the public outside the boundaries of the site e.g. a BLEVE (Boiling liquid expanding vapour explosion) or VCE (Vapour cloud explosion) on the LPG storage tanks or LPG delivery road tanker, respectively.
- b) The LPG delivery road tanker comprises an MHI while it is parked on the premises of Easigas. However, this risk is lower than when the road tanker drives in streets as a result of possible collisions with vehicles.
- c) No development conflicts for the site were identified at the time of the risk assessment (i.e. based on current land uses surrounding the site with the installation of the new 400 m³ tank).
- d) If new development around the site is planned, the local authority must take the land-use planning zones in Figure 1 in the DBAR into consideration
- e) No major hazard installations were identified within reach of the worst-case major incident that can occur at this site;
- f) The highest risks at the site are quite manageable, namely a BLEVE on the LPG storage tanks or on the delivery road tanker.
- g) The risk associated with the operations on this site were determined by the specialist as follows:
- h) The cumulative individual safety risks for the site is 1.39×10^{-2} deaths/person/year.
- i) Individual risk at the site is higher than tolerable for the public (1.0×10^{-4} d/p/yr) and for employees (1.0×10^{-3} d/p/yr) on site.
- j) The individual risk transect indicates that the risks are lower than the norm for employees and the public.

- k) Societal safety risks on this site are acceptably low.

The impact is rated by the EAP to be HIGH (-ve) without mitigation and LOW (-ve) with mitigation. The probability, intensity and extent of the potential impact would be reduced with implementation of the mitigation measures listed by the specialist, many of which are legal requirements and have been incorporated into the design of the new tank (and the existing facility). It is also noted that in addition to the legal requirements with regard to safety measures as per the MHI regulations, Easigas has also taken into account recommended safety distances in the design of the new tank.

4.3. Key Management Recommendations

With effective implementation of the Environmental Management Programme (EMPr) included as Appendix F of the DBAR, it is anticipated that the significance of all negative potential impacts identified can be reduced to low or less.

Key management measures included in the EMPr for the construction phase include:

- Implementation of standard mitigation measures to manage potential dust, noise, waste and spills during construction;
- Local contractors and labour to be considered for the construction phase.
- Prior to commencement of construction, conduct a contamination assessment of the soil material to be excavated to determine whether it meets the classification criteria for hazardous waste;
- Based on the outcome of contamination assessment, the material must either be immediately removed for disposal as hazardous waste (if confirmed to be hazardous), or removed for disposal as general waste at a registered landfill site;
- Implementation of strict traffic safety measures and speed limits for all construction related traffic; and
- A transportation specialist must be consulted to advise on any specific measures that may be required to ensure safety measures and permits are in place for delivery of the new tank to site.

Management measures included in the EMPr and recommended by the MHI specialist to minimise safety risks that may result from catastrophic failure of the LPG tank during the operational phase include:

- The application of ALARP (As Low As Reasonably Practicable) mitigation measures, to minimise risks, as outlined in the MHI report;
- Various design and operational measures for fire safety, leak detection, and emergency procedures, most of which are legal requirements for MHI facilities;

- Notification of the relevant NMBM departments (fire, emergency services, etc); and
- Various plans for maintenance, security and emergency management, to ensure the facility is operated in a safe manner.

Impact ratings are summarised in Table 1.

5. The Way Forward

The public participation process will give the IAPs the opportunity to assist with identification of issues and potential impacts and provides an additional opportunity to gauge 'public acceptance' of the proposed project. The Draft Basic Assessment Report (DBAR) has been released to IAPs, stakeholders & the relevant organs of state for a 30 day review period as per the requirements of the 2014 NEMA EIA Regulations, as amended (23 November 2021- 14 January 2022)

Thereafter the final version of the BAR will be submitted to DEDEAT to make a decision on the environmental acceptability of the proposed development and whether to grant or refuse the Environmental Authorisation (EA).

This Executive Summary of the draft BAR (this report) has been distributed to all IAPs. An electronic copy of the full report is also available for download via the Public Documents tab on the SRK Consulting website: <https://www.srk.com/en/public-documents/basic-assessment-for-the-easigas-lpg-storage-facility-in-sidwellnew-brighton-gqeberha>.

Comments on the DBAR can be sent to:

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Email: Avannierop@srk.co.za
Fax: (041) 509 4850

Disclaimer

The Protection of Personal Information Act 4 of 2013 (POPIA), which aims to promote protection of personal information, came into effect on 1 July 2021. The EIA Regulations, 2014 require, inter alia, transparent disclosure of registered stakeholders and their comments. In terms of the EIA Regulations, 2014, stakeholders who submit comment, attend a meeting or request registration in writing are deemed registered stakeholders who must be added to the project stakeholder database. By registering, stakeholders are deemed to give their consent for relevant information (including contact details) to be processed and disclosed, in fulfilment of the requirements of the EIA Regulations, 2014 and the National Appeal Regulations, 2014.

Impact	Significance during Construction		Significance during Operation		Confidence Rating
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Fire and safety risk	N/A	N/A	High (-ve)	Low (-ve)	High
General construction impacts	Insignificant (-ve)	Insignificant (-ve)	N/A	N/A	High
Traffic Impacts	Very Low (-ve)	Insignificant (-ve)	N/A	N/A	High
Soil, stormwater and groundwater contamination from excavated soil	Low (-ve)	Insignificant (-ve)	N/A	N/A	High
Socio-economic benefits	Insignificant (+ve)	Very Low (+ve)	N/A	N/A	High
No-go alternative:					
Socio-economic impacts	Very Low (-ve)	N/A	Low (-ve)	N/A	Medium

Table 1: Summary of Impact Significance Rating Summary Table for the preferred and no-go alternatives



Figure 2: Site Locality Plan

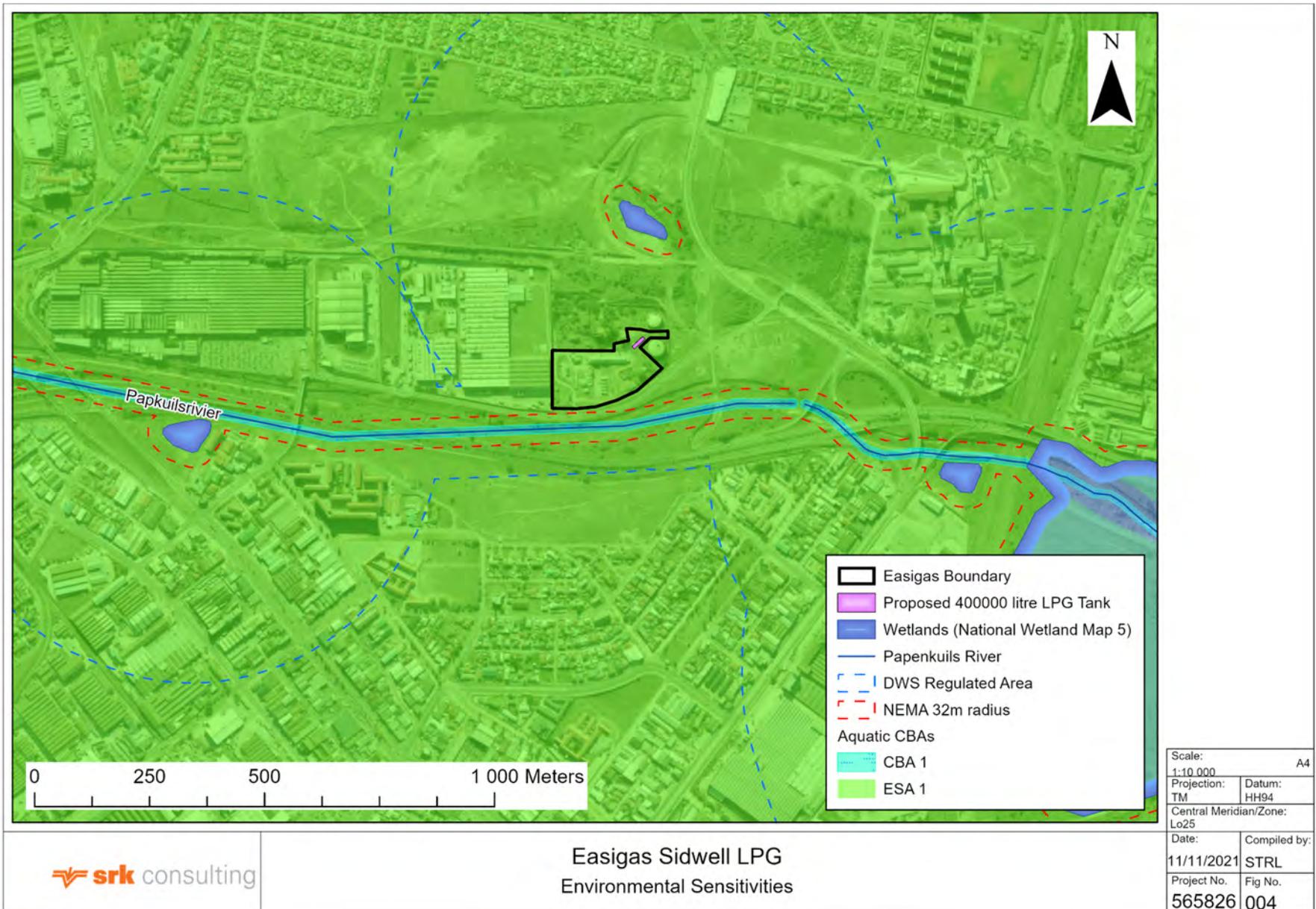


Figure 3: Environmental sensitivities of the site and surrounding area

Section 2: DEDEAT Basic Assessment Report

BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

NEAS Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014 as amended, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority **unless indicated otherwise by the Department**.
7. No faxed or e-mailed reports will be accepted **unless indicated otherwise by the Department**.
8. The report must be compiled by an independent environmental assessment practitioner (EAP).
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

	NO <input checked="" type="checkbox"/>
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If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

Easigas proposes to increase the capacity of their existing Liquid Petroleum Gas (PLG) storage depot in Sidwell / New Brighton through the installation of an additional 400 m³ above ground LPG storage tank. The facility currently stores a total of 315 m³ LPG in five above ground LPG storage tanks (3 x 45 m³ and 2 x 90 m³) and acts as a LPG cylinder filling facility. The new tank will differ from the existing facility in that it will be for strategic bulk storage to support the region, and in particular existing industrial customers within the automotive industry (bulk truck offloading and loading), as opposed to cylinder filling.

The daily operation of the new tank will be limited to loading and unloading of supply trucks into and from the 400m³ LPG tank (approximately twice a week). This will be done via LPG pumps installed on the truck trailer and a supply pump, which will be part of the new 400m³ tank installation.

The proposed new tank will measure approximately 27 m length x 4 m diameter and will be mounted on a concrete slab (approximately 31.75 m x 7.75 m), via concrete plinths, similar to the existing tanks on the site. Delivery trucks will use the existing access gate to the site (off Eveready road) and the existing access control and security measures for the site (fencing and security guard to control access) will apply. A truck offloading and loading point will be constructed adjacent to the tank, and will include automatic fire monitor systems for fire control. Two fire islands, one on either side of the tank, including a fire hose, and Dry Chemical Powder (DCP), to facilitate the relevant fire emergency control measures including automatic fire monitors (connected to the existing fire water system on the site) are included in the design. The design safety distances for above ground storage tanks shall be in accordance with SANS 10087.

The following LPG storage protection measures are included in the design specifications for the facility:

1. Tank overfill protection (to ensure the tank is not filled beyond the maximum 85% volume);
2. Electrical equipment earthing (to ensure flame and spark-proofing);
3. Earthing and bonding (to control static electricity build-up during LPG offloading);
4. A preventive maintenance programme, including daily inspections of all equipment at the LPG facility;
5. Detailed operating procedures for all sections of the facility, including training of personnel;
6. Perimeter fencing and access control via one gate; and
7. No combustible material or vegetation shall be allowed in the facility

The following automatic and passive fire protection systems are included in the design:

1. High velocity automatic fire monitors; and
2. Gas detection system, installed at the tank, truck loading/offloading point and LPG pumps area, and linked to the sites safeguarding system.

The property is leased from the NMBM by Easigas, who have been operating the facility since the early 1990's. The existing LPG tanks and associated facilities on the site were installed in 1988 and thereabouts (prior to the NEMA EIA regulations coming into effect). Prior to this a municipal coal-fired gasworks, with pipelines to supply gas to parts of Port Elizabeth, operated on the site. The old gasworks' storage tanks, infrastructure and pipelines were decommissioned in 2016, but have not yet removed from the site. This infrastructure is visible in the north-eastern part of the site and falls outside the leased area. The tanks have been certified safe for use for advertising purposes only (i.e. not for storage purposes). The NMBM's future plans with regard to the old gasworks infrastructure are unknown, however, at best, substantial refurbishment would be required to safely use this infrastructure (for any purpose).

A number of decommissioned (empty) LPG storage tanks are currently stored on and close to the site where the proposed new tank will be positioned. These tanks will be removed from the site for re-use on other sites prior to installation of the new tank.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

No site or activity alternatives are proposed or assessed as the proposed development is on an existing site and is in accordance with current operations on the site. Due to space constraints within the site and the required safety distance and truck access considerations, no other locations within the site are considered to be feasible.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites if applicable.

Latitude (S): Longitude (E):

Alternative:

Alternative S1¹ (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

33 °	54.736'	25°	35.779'
0	°	0	'
0	°	0	'

In the case of linear activities:

Alternative:

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Latitude (S): Longitude (E):

0	°	0	'
0	°	0	'
0	°	0	'

Alternative S2 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

0	°	0	'
0	°	0	'
0	°	0	'

Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

0	°	0	'
0	°	0	'
0	°	0	'

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

~250 m ²
m ²
m ²

¹ "Alternative S.." refer to site alternatives.

² "Alternative A.." refer to activity, process, technology or other alternatives.

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

m
m
m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

m ²
m ²
m ²

5. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES NO

m

Describe the type of access road planned:

Delivery of the 400m³ tank will be via the dedicated existing rail siding. Access for the purpose of all other construction and operational activities will be via the existing access road to the site.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):

- rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invaded with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

R 4.1 million

What is the expected yearly income that will be generated by or as a result of the activity?

No direct additional income. However, additional tank capacity will support local customers operations

Will the activity contribute to service infrastructure?

YES	NO <input checked="" type="checkbox"/>
-----	--

Is the activity a public amenity?

YES	NO <input checked="" type="checkbox"/>
-----	--

How many new employment opportunities will be created in the development phase of the activity?	Approximately 15
What is the expected value of the employment opportunities during the development phase?	~R3 million
What percentage of this will accrue to previously disadvantaged individuals?	~70%
How many permanent new employment opportunities will be created during the operational phase of the activity?	None – existing staff at the facility will be used
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	N/A – no new employment opportunities

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The intention of the proposed new tank is to meet increasing LPG demand in the region and provide existing customers, including the motor industry, with improved storage capacity and security of supply.

Indicate any benefits that the activity will have for society in general:

The development is proposed to ensure continued security of LPG supply to existing customers as well as potential new customers. As many of the customers are commercial / other industries, lack of security of supply (as a result of not installing the new tank) could have far reaching knock-on negative effects on the local economy, especially for the motor industry, which is a key customer group.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Where possible local labour will be used for the construction phase of the project.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:

Administering authority:

Date:

National Environmental Management Act (NEMA, Act 107 of 1998)	DEDEAT	27 November 1998
National Environmental Management Act (NEMA, Act 107 of 1998), 2014 Environmental Impact Assessment Regulations (as amended in 2017)	DEDEAT	8 December 2014

Noise Control Regulations in terms of the Environmental Conservation Act (Act 73 of 1989)	DEDEAT	10 January 1992
Government Gazette No. 38108: Guideline Series 9 Need and Desirability	DEDEAT	10 January 1992
Government Gazette No. 35769: Guideline Series 7 Public Participation in the EIA process	DEDEAT	October 2012
National Water Act (Act 36 of 1998), as amended	DWS	26 August 1998

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES <input checked="" type="checkbox"/>	NO
Minimal amounts	

If yes, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

Solid construction waste will be stored in suitable containers such as skips until such time that it can be transported away and disposed of at a registered landfill site.

Where will the construction solid waste be disposed of (describe)?

Should any of the soil material removed from the site during construction be confirmed to be hazardous in nature, it will be removed by a registered hazardous waste contractor and disposed of at Aloes Hazardous landfill site. Such material will not be stored on the site.

Will the activity produce solid waste during its operational phase?

YES	NO <input checked="" type="checkbox"/>
m ³	

If yes, what estimated quantity will be produced per month?

How will the solid waste be disposed of (describe)?

N/A – the operation of the new tank will not produce solid waste

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A– the operation of the new tank will not produce solid waste

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

UNCERTAIN	NO
<input checked="" type="checkbox"/>	

If yes, inform the competent authority and request a change to an application for scoping and EIA.

There is the potential, due to the historical nature of activities on the site, that the soil that is to be excavated and spoiled may be contaminated to the extent that it is classified as a hazardous waste. A specialist assessment is underway to determine if this is the case and will be completed before the final BAR is submitted to DEDEAT. The specialist assessment will determine whether the soil is suitable for disposal as inert waste, whether it can be disposed of at one of the municipal landfill sites, or whether it requires disposal at a hazardous waste disposal site. The volume of excavated soil to be disposed of is estimated to be 35-70 m³

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, what estimated quantity will be produced per month?

m ³	
Yes	NO <input checked="" type="checkbox"/>

Will the activity produce any effluent that will be treated and/or disposed of on site?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, provide the particulars of the facility:

Facility name:

--

Contact person:

--

Postal address:

--

Postal code:

--

Telephone:

Cell:	
-------	--

E-mail:

Fax:	
------	--

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

N/A – no waste water will be produced

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, is it controlled by any legislation of any sphere of government?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise?

YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Minimal amounts of noise will result from construction and operation of the facility. This is expected to be in line with the noise levels currently resulting from the operation of the site (trucks idling, and general construction noise), and will be subject to the NMBM noise control bylaws.

The noise level is not anticipated to be of concern as the facility is adjacent to an industrial area and is alongside a national highway with the closest residential area located approximately 300 m away (and on the opposite side of the N2).

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

Fire water will only be required in the event of an emergency fire event. The fire sprinkler system will be tested monthly as per the legal

requirements and uses minimal water	
UNCERTAIN	NO <input checked="" type="checkbox"/>

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

The site is located within 500 m (approximately 250 m to the south) of a wetland according to the 2018 national wetland layer for the area. While the presence and condition of this wetland have not been verified by a specialist on site, based on aerial imagery it does not appear to be a functional wetland or connected to any natural watercourse in the area. Various linear infrastructure exists between the site and the wetland, including roads and railwaylines, all of which would prevent flow of surface water between the site and the wetland. The wetland is also located up-gradient of the site. It is therefore considered to be extremely unlikely that the proposed development will result in any impacts on the wetland or vice versa. Confirmation will be sought from DWS during the DBAR comment period and if necessary the required Section 21 c& i Water use authorization process will be undertaken.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

N/A – the proposed new tank and existing operations require minimal amounts of energy to operate

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A – the proposed new tank and existing operations require minimal amounts of energy to operate

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g.
A):

- Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES <input checked="" type="checkbox"/>	NO
---	----

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat <input checked="" type="checkbox"/>	1:50 – 1:20	–	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

Alternative S1:

Alternative S2 (if any):

Alternative S3 (if any):

Shallow water table (less than 1.5m deep)

YES	NO <input checked="" type="checkbox"/>
-----	--

YES	NO
-----	----

YES	NO
-----	----

Dolomite, sinkhole or doline areas	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
An area sensitive to erosion	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition
- 4.2 Natural veld – scattered aliens
- 4.3 Natural veld with heavy alien infestation
- 4.4 Veld dominated by alien species
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens (lawn) <input checked="" type="checkbox"/>
Sport field	Cultivated land	Paved surface <input checked="" type="checkbox"/>	Building or other structure	Bare soil <input checked="" type="checkbox"/>

If any of the boxes marked with an "E" is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area
 5.2 Low density residential
 5.3 Medium density residential
 5.4 High density residential
 5.5 Informal residential
 5.6 Retail commercial & warehousing
 5.7 Light industrial
 5.8 Medium industrial ^{AN}

5.9 Heavy industrial ^{AN}
 5.10 Power station
 5.11 Office/consulting room
 5.12 Military or police base/station/compound
 5.13 Spoil heap or slimes dam^A
 5.14 Quarry, sand or borrow pit

5.15 Dam or reservoir
 5.16 Hospital/medical centre
 5.17 School
 5.18 Tertiary education facility
 5.19 Church

5.20 Old age home
 5.21 Sewage treatment plant^A
 5.22 Train station or shunting yard ^N
 5.23 Railway line ^N

5.24 Major road (4 lanes or more) ^N
 5.25 Airport ^N
 5.26 Harbour
 5.27 Sport facilities
 5.28 Golf course
 5.29 Polo fields
 5.30 Filling station ^H
 5.31 Landfill or waste treatment site
 5.32 Plantation
 5.33 Agriculture

- 5.34 River, stream or wetland
- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity.

No roads or railway lines will be impacted by the proposed activity as it is part of an existing operation.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

The property adjacent to the site includes Eveready batteries (battery manufacturing plant). No impacts on this or any other industries in the surrounding area are anticipated.

If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

YES	NO <input checked="" type="checkbox"/>
-----	--

Archaeological or palaeontological sites, on or close (within 20m) to the site?

Unlikely

If YES, explain:

The proposed location of the LPG tank is within a brownfields site that is already being operated by the proponent. The site was previously used for a municipal coal fired gasworks, which has since been decommissioned, however some of the gasworks' infrastructure remains on property (in the area surrounding the Easigas lease area). Due to the previous and current activities on the site, it is assumed that any heritage items present on the site would have been discovered previously. It is also noted that due to the small site footprint (~250m²) a heritage study is not triggered in terms of the National Heritage Resources Act, and that any excavations required for installation of the new LPG tank will be minimal. A chance finds procedure is included in the EMPr, and no additional heritage studies are proposed.

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?

YES	NO <input checked="" type="checkbox"/>
-----	--

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any 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 the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;

- (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners 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;
 - (iv) 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;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (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;
- (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 local 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 subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
- (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

The following information/documents pertaining to the public participation process are attached to this report in Appendix E, together with a brief explanation of the public participation process undertaken to date and those activities still to be completed:

- Summary of public participation activities -E1;
- Newspaper Advertisement tearsheet – E2;
- Photos of on-site poster – E3;
- Background Information Document (BID) – E4;
- IAP Register – E5;
- Proof of notification to relevant stakeholders – E6; and
- Correspondence with IAPs – E7.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

Authorities and key stakeholders that have been notified of the project (via distribution of a BID on 25 October 2021) include the following:

- Provincial Department of Economic Development Environmental Affairs and Tourism;
- South African Heritage Resource Agency;
- EC Provincial Heritage Resource Agency;
- Department of Water and Sanitation;
- Department of Mineral Resources;
- Nelson Mandela Bay Municipality Departments:
 - Environmental Services,
 - Fire & Emergency Services,
 - Roads & Stormwater,
 - Housing & Land,
 - Disaster Management,
 - Air Pollution & noise control,
 - Corporate services (in charge of lease agreement);
- Ward councillor;
- Transnet;
- Sanral; and
- Eskom.

List of authorities from whom comments have been received:

None

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES	NO <input checked="" type="checkbox"/>
-----	--

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

N/A

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Neighbouring landowner offered assistance with additional space if required.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

Comment was conveyed to the applicant.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

The potential impacts discussed below have been rated using SRK Consulting's standard rating method or taken from the associated specialist impact assessment where indicated. SRK's rating method is described in Appendix I. The complete rating table is also included in Appendix I.

For completeness the Development Area Environmental Sensitivities identified in the DFFE screening tool report are provided below, with a revised sensitivity rating based on site specific verification by the EAP, and explanations for the revised ratings.

Table 1: Development Area Environmental Sensitivities identified in the DFFE screening tool report

Theme	Sensitivity (as per screening tool)	Revised sensitivity (by EAP)	Explanation
Agriculture	Very high	Low	The site is within an existing operation and within the applicant's lease area. No impacts on agriculture are expected.
Animal Species	High	Low	The site is part of an existing operation and the proposed activity is in accordance with existing activities on the site. No impacts on surrounding fauna are expected.

Aquatic biodiversity	Very high	Low	The site is located within 500 m (approximately 250 m to the south) of a wetland according to the 2018 national wetland layer for the area. While the presence and condition of this wetland have not been verified by a specialist on site, based on aerial imagery it does not appear to be a functional wetland or connected to any natural watercourse in the area. Various linear infrastructure exists between the site and the wetland, including roads and railwaylines, all of which would prevent flow of surface water between the site and the wetland. The wetland is also located up-gradient of the site. It is therefore considered to be extremely unlikely that the proposed development will result in any impacts on the wetland or vice versa. Confirmation will be sought from DWS during the DBAR comment period and if necessary the required Section 21 c& i Water use authorization process will be undertaken.
Archaeology and cultural heritage	Low	Low	The site has previously been developed and the development footprint is below the threshold for requiring a heritage assessment. Chance finds procedure is included in the EMPr.
Defence	Very high	Low	The site is part of an existing operation and the proposed activity is in accordance with existing activities on the site. No additional impacts relating to defence are therefore expected.
Palaeontology	Medium	Low	The site has previously been developed and the development footprint is below the threshold for requiring a heritage assessment. Chance finds procedure is included in the EMPr.
Plant species	Medium	Low	The site is part of an existing operation and will be limited to the existing lease area. No indigenous vegetation is present on the site.
Terrestrial biodiversity	Low	Low	The site has previously been developed and the surrounding habitat has been heavily transformed. No impacts in terrestrial biodiversity in the surrounding area are expected.

PLANNING AND DESIGN PHASE

Alternative (preferred alternative)

No impacts are anticipated to occur during the planning and design phase of the proposed development.

Direct impacts:

None.

Indirect impacts:

None.

Cumulative impacts:

None.

No-Go Alternative

Direct impacts:

None.

Indirect impacts:

None.

Cumulative impacts:

None.

Mitigation measures that may eliminate or reduce the potential impacts listed above:

- The standard procedures pertaining to development planning and design as specified in the Environmental Management Programme (EMPr) should be complied with.
- It must be confirmed whether the material on the site is hazardous in nature prior to commencement of construction, so that the relevant arrangements with regard to disposal thereof can be made.

CONSTRUCTION PHASE

Alternative (preferred alternative)

Direct impacts:

General construction related impacts:

Due to the nature of the site (i.e. a brownfields site on an existing industrial site) and limited development footprint (~250 m²) and construction duration, general construction related impacts are expected to be of INSIGNIFICANT (-ve) significance rating both with and without mitigation measures, and have therefore not been rated individually. General construction good management measures are included in the EMPr to manage these impacts. These impacts relate to air quality (from dust due to earth moving activities on site), construction related noise, heritage impacts, general construction waste management and potential spills of cement and other construction related material on site.

Socio-economic impacts:

Construction activities will result in a limited number of temporary job opportunities as well as indirect economic benefits (industries that provide construction materials and services for the project). Due to the small size of the project and limited construction requirements and duration (construction is anticipated to last for six weeks), the positive socio economic impact of the development was rated to be INSIGNIFICANT (+ve), without and VERY LOW (+ve) with enhancement measures to maximise local employment opportunities.

Soil, stormwater and groundwater impacts resulting from excavation of potentially contaminated soil material:

There is the potential, due to the historical nature of activities on the site, that the soil that is to be excavated and spoiled may be contaminated to the extent that it is classified as a hazardous waste. A specialist assessment is underway to determine if this is the case and will be completed before the final BAR is submitted to DEDEAT. The specialist assessment will determine whether the soil is suitable for disposal as inert waste, whether it can be disposed of at one of the municipal landfill sites, or whether it requires disposal at a hazardous waste disposal site. The volume of excavated soil to be disposed of is estimated to be 35-70 m³.

Depending on the nature of contaminants present in the soil, potential impacts on the marine environment are predicted to be of LOW (-ve) significance, should adequate mitigation measures not be in place. With mitigation this rating could be reduced to INSIGNIFICANT (-ve).

These measures include suppression of dust during construction, minimal stockpiling of soil (if required at all), disposal of excess soil material at a registered landfill, and limiting the disturbed area to the minimum required. The soil material must be tested for contamination prior to commencement of construction, and should it be confirmed to be hazardous as per the waste classification criteria, disposed of at a hazardous landfill site.

Traffic flow and safety impacts:

Due to the small construction footprint and timeframe, potential impacts on traffic will be very limited. The most significant piece of equipment to be transported to the site will be the new tank itself, which will be delivered to the site via truck. It is likely that access to the site via the gate on the eastern side of the site along the old (decommissioned) gasworks railway entrance to the site will temporarily be used for this delivery. All other construction related traffic will be related to general construction activities (cement work etc) and will use the existing access roads to the site, which are designed to accommodate trucks for the operation of the site. No significant impacts on traffic flow or safety are expected to result from general construction traffic. It is recommended that a transportation expert is consulted pre-

construction to advise on any relevant safety or other traffic requirements relating to delivery of the new tank to site.

The impact was rated as VERY LOW (-ve) and can be reduced to INSIGNIFICANT if the recommended mitigation measures are applied.

Indirect impacts:

Indirect socio-economic benefits related to provision of goods and services as well as employment may result from the project, due to use of local suppliers and service providers.

Cumulative impacts:

None

No-Go Alternative

The No-Go alternative would mean that the potential positive socio-economic benefits related to the temporary employment opportunities and provision of goods and services would not materialise.

Direct impacts:

None.

Indirect impacts:

None.

Cumulative impacts:

None.

Mitigation measures that may eliminate or reduce the potential impacts listed above:

General construction impacts mitigation measures:

Dust impacts:

- Minimise disturbed areas of soil and excavations to what is absolutely necessary;
- Minimise stockpiling of excavated soil material on site;
- If stockpiling of soil is required for any period, soil/sand stockpiles are to be covered with appropriate material (e.g. hessian, shade cloth or plastic);

Noise impacts:

- Construction activities must be in accordance with the Noise Control By-Law of the NMBM;

Soil and groundwater impacts relating to construction related spills:

- The proper storage and handling of any hazardous substances (hydrocarbons and chemicals) used during construction needs to be administered on site. If hazardous liquids are stored/ used on site, spill kits must be available;
- Hazardous materials must be stored on an impermeable, bunded surface within a weather-proof structure;
- No wash water from washing of mechanical plant or equipment may be discharged into the surrounding environment. All construction effluent (e.g. cement wastewater) must be collected in a container and allowed to evaporate prior to disposal;
- Cement batching activities should occur in the construction area, as far as possible, and conducted on an impermeable surface;
- Drip-trays must be provided beneath standing vehicles and machinery, and routine checks should be done to ensure that these are in a good condition.

Construction Waste management impacts:

- Standard waste management practices must be implemented;

- All staff shall be trained on correct waste management;
- No on-site burning, burying or dumping of any waste materials, litter or refuse shall occur;
- All waste must be removed from the site on a regular basis and disposed of at a registered landfill site;
- Records of disposal of all waste generated on site shall be maintained for auditing purposes

Other impact mitigation:

Socio-economic impacts:

- Local contractors and labour to be considered for the construction phase.

Handling of potentially hazardous soil material:

- Prior to commencement of construction, conduct a contamination assessment of the soil material to be excavated to determine whether it meets the classification criteria for hazardous waste;
- Based on the outcome of contamination assessment, the material must either be immediately removed for disposal as hazardous waste (if confirmed to be hazardous), or removed for disposal as general waste at a registered landfill site;
- Minimise stockpiling of removed soil material and promptly remove it from site for disposal;
- Hazardous waste must not be stored on the site but must be disposed of at a registered hazardous landfill facility and proof of correct disposal should be obtained.

Traffic flow and safety impacts:

- Implementation of strict traffic safety measures and speed limits for all construction related traffic;
- A transportation specialist must be consulted to advise on any specific measures that may be required to ensure safety measures and permits are in place for delivery of the new tank to site;
- All signage and road markings at the proposed site should be in accordance with the South African Road Traffic Signs Manual.

OPERATIONAL PHASE

Alternative (preferred alternative)

Direct impacts:

The operation of the facility will not result in generation of any waste, effluent, noise or air emissions, over and above what is already generated at the site (which is minimal). Traffic impacts as a result of the new facility are also negligible, as it is an existing facility and it is anticipated that the new LPG tank will result in approximately two truck deliveries per week. It is also not anticipated that any new employment opportunities will result from the proposed new tank, as staff at the existing operation will be used to run it. These impacts therefore have not been rated and specific mitigation measures relating to these impacts are not considered to be necessary.

Safety risk impacts:

The facility is classified as a Major Hazard Installation (MHI) in terms of the MHI regulations (R.692 of 30 July 2001), because a major incident at the site will impact members of the public outside the boundaries of the premises. Easigas is therefore required to undertake MHI assessments every five years, and prior to installation of any new infrastructure relevant to its MHI status, for submission to the local authorities. The proposed installation of the new 400 m³ LPG tank on the site was included in the assessment, as well as all existing permanent storage (consisting of 315 m³ (in total) in above ground storage tanks), and temporary LPG storage (a 45 m³ road tanker and 10,000 LPG cylinders) on the site . The safety risks have been assessed and through a MHI Study conducted by Dr Alfonso Niemand of Nature & Business Alliance Africa (A copy of the specialist report can be found in Appendix D., as well as the required specialist declaration). A total of 24 hazard scenarios were analysed in the risk assessment. The impacts relating to the safety risks to

surrounding communities have been rated by the EAP based on the findings of the specialist report and all mitigation measures listed in the report are included in the EMPr. It is noted that the surrounding land uses are largely industrial, as well as open space. The closest residential development is approximately 300 m from the site and falls outside the safety risk contours identified by the specialist based on modelling of risks for various scenarios. Maps showing the surrounding land uses and zonings are provided in Appendix A.

The report made the following findings:

- a) The LPG tank installation on the premises comprises an MHI, because a major incident on site would impact on members of the public outside the boundaries of the site e.g. a BLEVE (Boiling liquid expanding vapour explosion) or VCE (Vapour cloud explosion) on the LPG storage tanks or LPG delivery road tanker, respectively.
- b) The LPG delivery road tanker comprises an MHI while it is parked on the premises of Easigas. However, this risk is lower than when the road tanker drives in streets as a result of possible collisions with vehicles.
- c) No development conflicts for the site were identified at the time of the risk assessment (i.e. based on current land uses surrounding the site with the installation of the new 400 m³ tank).
- d) If new development around the site is planned, the local authority must take the land-use planning zones in Figure 1 into consideration
- e) No major hazard installations were identified within reach of the worst-case major incident that can occur at this site;
- f) The highest risks at the site are quite manageable, namely a BLEVE on the LPG storage tanks or on the delivery road tanker.
- g) The risk associated with the operations on this site were determined by the specialist as follows:
- h) The cumulative individual safety risks for the site is 1.39×10^{-2} deaths/person/year.
- i) Individual risk at the site is higher than tolerable for the public (1.0×10^{-4} d/p/yr) and for employees (1.0×10^{-3} d/p/yr) on site.
- j) The individual risk transect indicates that the risks are lower than the norm for employees and the public.
- k) Societal safety risks on this site are acceptably low.



Figure 1: Safety Risk isopleth map for the site, including the new proposed 400 m³ tank

The risk isopleths identified for the site are based on the following criteria:

- I) Red: Inner zone > 10 chances of a major incident per million per annum (1.0×10^{-5} per year).
- m) Orange: Middle zone > 1 chance of a major incident per million per annum (1.0×10^{-6} per year).
- n) Yellow: Outer zone > 0.3 chances of a major incident per million per annum (3.0×10^{-7} per year).

The assessment found the risk to the public and employees on the site to fall within the “broadly acceptable” range, based on a predicted frequency of deaths per person per year of less than 1.0×10^{-6} for the public and 1.0×10^{-5} for employees. It is recommended that ALARP (As Low As Reasonably Practicable) mitigation measures are applied at this site, as outlined above in this report.

The risk of 3×10^{-7} fatalities per person per year isopleth indicates the extent for land-use that would be unsuitable for vulnerable populations, such as hospitals, retirement homes, nursery schools, prisons, large gatherings in the open, and so forth. No facility within the 3×10^{-7} fatality per person per year isopleth should be approved without first evaluating the impacts on the proposed facility and potential land usage. Such developments would not be in accordance with the current zoning of the surrounding land and therefore are not considered to be a likely scenario.

The extent of the impact is rated to be regional, as it would extend outside the site boundary as demonstrated by the risk isopleths. The potential duration is rated as permanent and the intensity as high (in the case of potential fatality). The likelihood of the impact occurring is however extremely unlikely (improbable), ranging from 10 per million per annum for the inner zone (a radius of 115 m around the tank site) to 0.3 per million per annum for the outer zone (radius of 276 m around the site). The probability, intensity and extent of the potential impact would be further reduced with implementation of the mitigation measures listed by the specialist, many of which are legal requirements and have been incorporated into the design of the new tank (and the existing facility). It is also noted that in addition to the legal requirements with regard to safety measures as per the MHI regulations, Easigas has also taken into account recommended safety distances in the design of the new tank. The impact is rated by the EAP to be HIGH (-ve) without mitigation and LOW (-ve) with mitigation.

Indirect impacts:

None.

Cumulative impacts:

None.

No-Go Alternative

Direct impacts:

If the project were not to be developed, Easigas may lose existing customers due to potential LPG supply limitations and would not benefit from potential expansion of their current customer base.

Indirect impacts:

If the project were not to be developed, security of LPG supply to existing and potential new customers, including the automotive industry, may be compromised, which could potentially result in significant negative impacts on their production processes and economic development and security in the region in general.

Cumulative impacts:

None.

Mitigation measures that may eliminate or reduce the potential impacts listed above:

Safety risk mitigation

The following mitigation measures are taken from the MHI report, a copy of which is included in Appendix D:

- The national and provincial Chief Inspectors of the Department of Employment and Labour must be notified about the status of the proposed LPG installation.
- The NMBM Fire Department must be notified about the status of the proposed LPG installation.
- In accordance with the MHI regulations, an advertisement must be published in a local community newspaper, notifying the public of the proposed MHI installation and a comment period provided
- A permanent warning sign must be installed at the entrance to the site
- Ensure that no flammable or explosive liquid or gas is stored in the redundant municipal gas storage tank next to the proposed new 400 m³ LPG tank.
- The emergency management plan for the site must be updated when changes in personnel or contact details occur, in accordance with the in the MHI report.
- Operating procedures for the site must be kept up to date to include preventative measures against the uncontrolled release of the following hazardous substances:
 - LPG from the delivery road tanker.
 - LPG from the storage tank.
 - LPG from the cylinder filling platform
- The outcome of the risk assessment must be brought to the attention of all the employees at the site.
- A Maintenance Plan must be compiled and kept up to date for all the hazardous equipment used on the facility. The Plan must contain at least the following:
 - List of all equipment and facilities on the facility.
 - Maintenance frequency.
 - Particulars of maintenance activities that must be performed on the listed equipment.
 - Responsible person.

- All hazardous equipment and facilities on the site must be inspected on a regular basis by means of an Inspection Register. The Register must contain at least the following:
 - List of all equipment and facilities on the facility.
 - Equipment items that must be inspected.
 - Facilities that must be inspected.
 - Areas that must be inspected.
 - Inspection findings.
 - Responsible person who carried out the inspection
- All authorised operators must be trained in the application of the operating procedures applicable to their jobs.
- All operating personnel at the facility must be aware at all times of the dangers involving LPG.
- The facility must remain under safety and security access control for 24 hours per day. The security guard on site must comply with the following requirements:
 - The guard must be trained in the potential major incidents that could occur at the site as well as the emergency procedure that must be followed.
 - The guard must be linked via SMS or cellular phone with a responsible standby person at the site.
 - The guard must be able to contact the local Fire Department immediately.
- The Emergency Evacuation Procedure aimed at workers and visitors must be updated at least annually in collaboration with the NMBM emergency services.
- The LPG delivery road tanker shall not reverse on site.
- The LPG road tanker must be inspected on entry to the site, for possible overheated tyres, smell of heated rubber, LPG leaks or other defects that could place the site at risk.
- The Emergency Management Plan and Emergency Evacuation Procedure must be tested at least annually by means of mock emergencies. The NMBM emergency services must be invited to participate in these tests.
- Customer and staff parking bays must be located in an area where public vehicles will not cause obstruction to emergency vehicles.
- Prior to any construction work on site, the local office of the Department of Employment and Labour must be notified in writing, in accordance with the Construction Regulations of the Department of Employment and Labour.
- No additional modifications may be made to the facilities on site unless an MHI risk assessment has been done beforehand.
- All staff must be trained in emergency preparedness for a LPG leak, in collaboration with the NMBM fire department.
- The nameplates on all LPG storage tanks must be clearly visible and legible.
- The deluge systems at the road tanker loading bays must be tested at least monthly to ensure they are in good working order and effective.
- The site CCTV surveillance system must be inspected regularly to ensure its good functional operation and all employees in the control room must be trained in the use of the system.
- Ensure that the windsock on site remains in a good functional state.
- The LPG detection and alarm system at the site must be inspected and tested regularly to ensure that it remains in a good working order.

DECOMMISSIONING AND CLOSURE PHASE

Alternative (preferred alternative)

There are no plans to decommission the facility and therefore this has not been assessed. Should unexpected decommissioning of the plant or any part thereof be required for any reason, the impacts

are expected to be similar to those for construction. All dangerous goods stored on the site would need to be removed in a safe manner for disposal at a hazardous landfill site or use elsewhere.

Indirect impacts:

None

Cumulative impacts:

None.

No-Go Alternative

Direct impacts:

N/A

Indirect impacts:

N/A

Cumulative impacts:

N/A

Mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

3.

ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

Due to the nature of the site (being a brownfields site and part of an existing similar operation, in a largely industrial area), as well as the nature of the proposed development, very few impacts of significance are anticipated to result from the construction and operation of the new LPG tank.

Positive socio-economic impacts due to job creation during construction will be limited (rated as very low significance with enhancement measures implemented), and general construction, soil and groundwater contamination, and traffic impacts are all rated as insignificant negative impacts during construction, with mitigation measures in place. These include testing of the soil prior to commencement of construction, to determine if the excavated material would be classified as hazardous waste, and therefore need to be disposed of as such.

During operation, potential safety risks to the surrounding area are considered to be the most significant (and only impact of significance) resulting from a catastrophic failure of the proposed new LPG tank. This has been

assessed by a MHI specialist, who has confirmed that the risks from the site are acceptable with the implementation of the recommended mitigation measures listed in the MHI report (and EMPr). While the probability of such impacts occurring is very low, due to the nature of the impact (possible fatalities) it is rated as high intensity and duration. The surrounding land is largely industrial or undeveloped, and the closest residential areas to the site lie beyond the risk isopleths determined by the MHI specialist. No land that is zoned for residential use is located within the boundaries of the identified risk isopleths, and no other MHI facilities were identified in close proximity to the site. No land use planning conflicts were identified. The impact is rated as low negative significance with implementation of the mitigation measures specified by the specialist, many of which are legal requirements and have been incorporated into the design of the new tank.

No-go alternative (compulsory)

If the project were not to be developed, Easigas may lose existing customers due to potential LPG supply limitations and would not benefit from potential expansion of their current customer base. The anticipated positive socio-economic impacts associated with construction of the new tank, while extremely limited, also would not materialise. Indirect impacts to customers, as a result of potential LPG supply disruptions, may also occur, potentially affecting the automotive industry in the region, amongst others. The no-go option is therefore rated as being of LOW negative significance due to its regional extent, medium duration and intensity and possibility of occurrence.

Refer to impact rating summary table below and full impact rating methodology and rating provided in Appendix G

Impact Significance Rating Summary Table for the preferred and no-go alternatives

Impact	Significance during Construction		Significance during Operation		Confidence Rating
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Fire and safety risk	N/A	N/A	High (-ve)	Low (-ve)	High
General construction impacts	Insignificant (-ve)	Insignificant (-ve)	N/A	N/A	High
Traffic Impacts	Very Low (-ve)	Insignificant (-ve)	N/A	N/A	High
Soil & groundwater contamination	Low (-ve)	Insignificant (-ve)	N/A	N/A	High
Socio-economic benefits	Insignificant (+ve)	Very Low (+ve)	N/A	N/A	High
No-go alternative:					
Socio-economic impacts	Very Low (-ve)	N/A	Low (-ve)	N/A	Medium

SECTION E. RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO

Is an EMPr attached?

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

A project specific Environmental Management Programme (EMPr) has been compiled and can be found under Appendix F of this document. It is recommended that an Environmental Control Officer be appointed to conduct independent audits to ensure compliance with the EMPr during construction.

If the proposed development is to be approved, then it is recommended that all of the mitigation measures described in this report and the EMPr (Appendix F) should be included as conditions of authorisation.

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Impact Rating

Appendix H: DEDEAT Application Form

BASIC ASSESSMENT REPORT

(For official use only)

File Reference Number:

NEAS Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014 as amended, promulgated in terms of the National Environmental Management Act, 1998(Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 as amended and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
3. Where applicable **tick** the boxes that are applicable or **black out** the boxes that are not applicable in the report.
4. An incomplete report may be returned to the applicant for revision.
5. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
6. This report must be handed in at offices of the relevant competent authority as determined by each authority **unless indicated otherwise by the Department**.
7. No faxed or e-mailed reports will be accepted **unless indicated otherwise by the Department**.
8. The report must be compiled by an independent environmental assessment practitioner (EAP).
9. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.

10. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

	NO <input checked="" type="checkbox"/>
--	--

If YES, please complete form XX for each specialist thus appointed:

Any specialist reports must be contained in Appendix D.

1. ACTIVITY DESCRIPTION

Describe the activity, which is being applied for, in detail

Easigas proposes to increase the capacity of their existing Liquid Petroleum Gas (PLG) storage depot in Sidwell / New Brighton through the installation of an additional 400 m³ above ground LPG storage tank. The facility currently stores a total of 315 m³ LPG in five above ground LPG storage tanks (3 x 45 m³ and 2 x 90 m³) and acts as a LPG cylinder filling facility. The new tank will differ from the existing facility in that it will be for strategic bulk storage to support the region, and in particular existing industrial customers within the automotive industry (bulk truck offloading and loading), as opposed to cylinder filling.

The daily operation of the new tank will be limited to loading and unloading of supply trucks into and from the 400m³ LPG tank (approximately twice a week). This will be done via LPG pumps installed on the truck trailer and a supply pump, which will be part of the new 400m³ tank installation.

The proposed new tank will measure approximately 27 m length x 4 m diameter and will be mounted on a concrete slab (approximately 31.75 m x 7.75 m), via concrete plinths, similar to the existing tanks on the site. Delivery trucks will use the existing access gate to the site (off Eveready road) and the existing access control and security measures for the site (fencing and security guard to control access) will apply. A truck offloading and loading point will be constructed adjacent to the tank, and will include automatic fire monitor systems for fire control. Two fire islands, one on either side of the tank, including a fire hose, and Dry Chemical Powder (DCP), to facilitate the relevant fire emergency control measures including automatic fire monitors (connected to the existing fire water system on the site) are included in the design. The design safety distances for above ground storage tanks shall be in accordance with SANS 10087.

The following LPG storage protection measures are included in the design specifications for the facility:

1. Tank overfill protection (to ensure the tank is not filled beyond the maximum 85% volume);
2. Electrical equipment earthing (to ensure flame and spark-proofing);
3. Earthing and bonding (to control static electricity build-up during LPG offloading);
4. A preventive maintenance programme, including daily inspections of all equipment at the LPG facility;
5. Detailed operating procedures for all sections of the facility, including training of personnel;
6. Perimeter fencing and access control via one gate; and
7. No combustible material or vegetation shall be allowed in the facility

The following automatic and passive fire protection systems are included in the design:

1. High velocity automatic fire monitors; and
2. Gas detection system, installed at the tank, truck loading/offloading point and LPG pumps area, and linked to the sites safeguarding system.

The property is leased from the NMBM by Easigas, who have been operating the facility since the early 1990's. The existing LPG tanks and associated facilities on the site were installed in 1988 and thereabouts (prior to the NEMA EIA regulations coming into effect). Prior to this a municipal coal-fired gasworks, with pipelines to supply gas to parts of Port Elizabeth, operated on the site. The old gasworks' storage tanks, infrastructure and pipelines were decommissioned in 2016, but have not yet removed from the site. This infrastructure is visible in the north-eastern part of the site and falls outside the leased area. The tanks have been certified safe for use for advertising purposes only (i.e. not for storage purposes). The NMBM's future plans with regard to the old gasworks infrastructure are unknown, however, at best, substantial refurbishment would be required to safely use this infrastructure (for any purpose).

A number of decommissioned (empty) LPG storage tanks are currently stored on and close to the site where the proposed new tank will be positioned. These tanks will be removed from the site for re-use on other sites prior to installation of the new tank.

2. FEASIBLE AND REASONABLE ALTERNATIVES

“**alternatives**”, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed. The determination of whether site or activity (including different processes etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

Paragraphs 3 – 13 below should be completed for each alternative.

No site or activity alternatives are proposed or assessed as the proposed development is on an existing site and is in accordance with current operations on the site. Due to space constraints within the site and the required safety distance and truck access considerations, no other locations within the site are considered to be feasible.

3. ACTIVITY POSITION

Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

List alternative sites if applicable.

Latitude (S): Longitude (E):

Alternative:

Alternative S1¹ (preferred or only site alternative)

Alternative S2 (if any)

Alternative S3 (if any)

33 °	54.736'	25°	35.779'
0	°	0	'
0	°	0	'

In the case of linear activities:

Alternative:

Alternative S1 (preferred or only route alternative)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

Latitude (S): Longitude (E):

0	°	0	'
0	°	0	'
0	°	0	'

Alternative S2 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

0	°	0	'
0	°	0	'
0	°	0	'

Alternative S3 (if any)

- Starting point of the activity
- Middle point of the activity
- End point of the activity

0	°	0	'
0	°	0	'
0	°	0	'

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

4. PHYSICAL SIZE OF THE ACTIVITY

Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:

Alternative A1² (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the activity:

~250 m ²
m ²
m ²

¹ "Alternative S.." refer to site alternatives.

² "Alternative A.." refer to activity, process, technology or other alternatives.

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

m
m
m

Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

m ²
m ²
m ²

5. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES NO

m

Describe the type of access road planned:

Delivery of the 400m³ tank will be via the dedicated existing rail siding. Access for the purpose of all other construction and operational activities will be via the existing access road to the site.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

6. SITE OR ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- 6.1 the scale of the plan which must be at least a scale of 1:500;
- 6.2 the property boundaries and numbers of all the properties within 50 metres of the site;
- 6.3 the current land use as well as the land use zoning of each of the properties adjoining the site or sites;
- 6.4 the exact position of each element of the application as well as any other structures on the site;
- 6.5 the position of services, including electricity supply cables (indicate above or underground), water supply pipelines, boreholes, street lights, sewage pipelines, storm water infrastructure and telecommunication infrastructure;
- 6.6 all trees and shrubs taller than 1.8 metres;
- 6.7 walls and fencing including details of the height and construction material;
- 6.8 servitudes indicating the purpose of the servitude;
- 6.9 sensitive environmental elements within 100 metres of the site or sites including (but not limited thereto):

- rivers;
 - the 1:100 year flood line (where available or where it is required by DWA);
 - ridges;
 - cultural and historical features;
 - areas with indigenous vegetation (even if it is degraded or invaded with alien species);
- 6.9 for gentle slopes the 1 metre contour intervals must be indicated on the plan and whenever the slope of the site exceeds 1:10, the 500mm contours must be indicated on the plan; and
- 6.10 the positions from where photographs of the site were taken.

7. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this form. It must be supplemented with additional photographs of relevant features on the site, if applicable.

8. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

9. ACTIVITY MOTIVATION

9(a) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

R 4.1 million

What is the expected yearly income that will be generated by or as a result of the activity?

No direct additional income. However, additional tank capacity will support local customers operations

Will the activity contribute to service infrastructure?

YES	NO <input checked="" type="checkbox"/>
-----	--

Is the activity a public amenity?

YES	NO <input checked="" type="checkbox"/>
-----	--

How many new employment opportunities will be created in the development phase of the activity?	Approximately 15
What is the expected value of the employment opportunities during the development phase?	~R3 million
What percentage of this will accrue to previously disadvantaged individuals?	~70%
How many permanent new employment opportunities will be created during the operational phase of the activity?	None – existing staff at the facility will be used
What is the expected current value of the employment opportunities during the first 10 years?	N/A
What percentage of this will accrue to previously disadvantaged individuals?	N/A – no new employment opportunities

9(b) Need and desirability of the activity

Motivate and explain the need and desirability of the activity (including demand for the activity):

The intention of the proposed new tank is to meet increasing LPG demand in the region and provide existing customers, including the motor industry, with improved storage capacity and security of supply.

Indicate any benefits that the activity will have for society in general:

The development is proposed to ensure continued security of LPG supply to existing customers as well as potential new customers. As many of the customers are commercial / other industries, lack of security of supply (as a result of not installing the new tank) could have far reaching knock-on negative effects on the local economy, especially for the motor industry, which is a key customer group.

Indicate any benefits that the activity will have for the local communities where the activity will be located:

Where possible local labour will be used for the construction phase of the project.

10. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline:	Administering authority:	Date:
National Environmental Management Act (NEMA, Act 107 of 1998)	DEDEAT	27 November 1998
National Environmental Management Act (NEMA, Act 107 of 1998), 2014 Environmental Impact Assessment Regulations (as amended in 2017)	DEDEAT	8 December 2014

Noise Control Regulations in terms of the Environmental Conservation Act (Act 73 of 1989)	DEDEAT	10 January 1992
Government Gazette No. 38108: Guideline Series 9 Need and Desirability	DEDEAT	10 January 1992
Government Gazette No. 35769: Guideline Series 7 Public Participation in the EIA process	DEDEAT	October 2012
National Water Act (Act 36 of 1998), as amended	DWS	26 August 1998

11. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

11(a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES <input checked="" type="checkbox"/>	NO
---	----

If yes, what estimated quantity will be produced per month?

Minimal amounts

How will the construction solid waste be disposed of (describe)?

Solid construction waste will be stored in suitable containers such as skips until such time that it can be transported away and disposed of at a registered landfill site.

Where will the construction solid waste be disposed of (describe)?

Should any of the soil material removed from the site during construction be confirmed to be hazardous in nature, it will be removed by a registered hazardous waste contractor and disposed of at Aloes Hazardous landfill site. Such material will not be stored on the site.

Will the activity produce solid waste during its operational phase?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, what estimated quantity will be produced per month?

m³

How will the solid waste be disposed of (describe)?

N/A – the operation of the new tank will not produce solid waste

Where will the solid waste be disposed if it does not feed into a municipal waste stream (describe)?

N/A – the operation of the new tank will not produce solid waste

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the relevant legislation?

UNCERTAIN <input checked="" type="checkbox"/>	NO
---	----

If yes, inform the competent authority and request a change to an application for scoping and EIA.

There is the potential, due to the historical nature of activities on the site, that the soil that is to be excavated and spoiled may be contaminated to the extent that it is classified as a hazardous waste. A specialist assessment is underway to determine if this is the case and will be completed before the final BAR is submitted to DEDEAT. The specialist assessment will determine whether the soil is suitable for disposal as inert waste, whether it can be disposed of at one of the municipal landfill sites, or whether it requires disposal at a hazardous waste disposal site. The volume of excavated soil to be disposed of is estimated to be 35-70 m³

Is the activity that is being applied for a solid waste handling or treatment facility? YES NO

If yes, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

11(b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, what estimated quantity will be produced per month?

m ³	
Yes	NO <input checked="" type="checkbox"/>

Will the activity produce any effluent that will be treated and/or disposed of on site?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, provide the particulars of the facility:

Facility name:

--

Contact person:

--

Postal address:

--

Postal code:

--

Telephone:

Cell:	
-------	--

E-mail:

Fax:	
------	--

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

N/A – no waste water will be produced

11(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, is it controlled by any legislation of any sphere of government?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the emissions in terms of type and concentration:

N/A

11(d) Generation of noise

Will the activity generate noise?

YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO

If yes, is it controlled by any legislation of any sphere of government?

If yes, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If no, describe the noise in terms of type and level:

Minimal amounts of noise will result from construction and operation of the facility. This is expected to be in line with the noise levels currently resulting from the operation of the site (trucks idling, and general construction noise), and will be subject to the NMBM noise control bylaws.

The noise level is not anticipated to be of concern as the facility is adjacent to an industrial area and is alongside a national highway with the closest residential area located approximately 300 m away (and on the opposite side of the N2).

12. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es)

municipal	water board	groundwater	river, stream, dam or lake	other	the activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate

the volume that will be extracted per month:

Fire water will only be required in the event of an emergency fire event. The fire sprinkler system will be tested monthly as per the legal

requirements and uses minimal water	
UNCERTAIN	NO <input checked="" type="checkbox"/>

Does the activity require a water use permit from the Department of Water Affairs?

If yes, please submit the necessary application to the Department of Water Affairs and attach proof thereof to this application if it has been submitted.

The site is located within 500 m (approximately 250 m to the south) of a wetland according to the 2018 national wetland layer for the area. While the presence and condition of this wetland have not been verified by a specialist on site, based on aerial imagery it does not appear to be a functional wetland or connected to any natural watercourse in the area. Various linear infrastructure exists between the site and the wetland, including roads and railwaylines, all of which would prevent flow of surface water between the site and the wetland. The wetland is also located up-gradient of the site. It is therefore considered to be extremely unlikely that the proposed development will result in any impacts on the wetland or vice versa. Confirmation will be sought from DWS during the DBAR comment period and if necessary the required Section 21 c& i Water use authorization process will be undertaken.

13. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:

N/A – the proposed new tank and existing operations require minimal amounts of energy to operate

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A – the proposed new tank and existing operations require minimal amounts of energy to operate

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section C and indicate the area, which is covered by each copy No. on the Site Plan.

Section C Copy No. (e.g.
A):

- Paragraphs 1 - 6 below must be completed for each alternative.

3. Has a specialist been consulted to assist with the completion of this section?

YES <input checked="" type="checkbox"/>	NO
---	----

If YES, please complete form XX for each specialist thus appointed:

All specialist reports must be contained in Appendix D.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat <input checked="" type="checkbox"/>	1:50 – 1:20	–	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
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2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

- 2.1 Ridgeline
- 2.2 Plateau
- 2.3 Side slope of hill/mountain
- 2.4 Closed valley
- 2.5 Open valley
- 2.6 Plain
- 2.7 Undulating plain / low hills
- 2.8 Dune
- 2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following (tick the appropriate boxes)?

Alternative S1:

Alternative S2 (if any):

Alternative S3 (if any):

Shallow water table (less than 1.5m deep)

YES	NO <input checked="" type="checkbox"/>
-----	--

YES	NO
-----	----

YES	NO
-----	----

Dolomite, sinkhole or doline areas	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO
An area sensitive to erosion	YES	NO <input checked="" type="checkbox"/>	YES	NO	YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. (Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted).

4. GROUNDCOVER

Indicate the types of groundcover present on the site:

- 4.1 Natural veld – good condition
- 4.2 Natural veld – scattered aliens
- 4.3 Natural veld with heavy alien infestation
- 4.4 Veld dominated by alien species
- 4.5 Gardens
- 4.6 Sport field
- 4.7 Cultivated land
- 4.8 Paved surface
- 4.9 Building or other structure
- 4.10 Bare soil

The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens (lawn) <input checked="" type="checkbox"/>
Sport field	Cultivated land	Paved surface <input checked="" type="checkbox"/>	Building or other structure	Bare soil <input checked="" type="checkbox"/>

If any of the boxes marked with an "E" is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

5. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

5.1 Natural area
 5.2 Low density residential
 5.3 Medium density residential
 5.4 High density residential
 5.5 Informal residential
 5.6 Retail commercial & warehousing
 5.7 Light industrial
 5.8 Medium industrial ^{AN}

5.9 Heavy industrial ^{AN}
 5.10 Power station
 5.11 Office/consulting room
 5.12 Military or police base/station/compound
 5.13 Spoil heap or slimes dam^A
 5.14 Quarry, sand or borrow pit

5.15 Dam or reservoir
 5.16 Hospital/medical centre
 5.17 School
 5.18 Tertiary education facility
 5.19 Church

5.20 Old age home
 5.21 Sewage treatment plant^A
 5.22 Train station or shunting yard ^N
 5.23 Railway line ^N

5.24 Major road (4 lanes or more) ^N
 5.25 Airport ^N
 5.26 Harbour
 5.27 Sport facilities
 5.28 Golf course
 5.29 Polo fields
 5.30 Filling station ^H
 5.31 Landfill or waste treatment site
 5.32 Plantation
 5.33 Agriculture

- 5.34 River, stream or wetland
- 5.35 Nature conservation area
- 5.36 Mountain, koppie or ridge
- 5.37 Museum
- 5.38 Historical building
- 5.39 Protected Area
- 5.40 Graveyard
- 5.41 Archaeological site
- 5.42 Other land uses (describe)

If any of the boxes marked with an "N" are ticked, how will this impact / be impacted upon by the proposed activity.

No roads or railway lines will be impacted by the proposed activity as it is part of an existing operation.

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

The property adjacent to the site includes Eveready batteries (battery manufacturing plant). No impacts on this or any other industries in the surrounding area are anticipated.

If YES, specify:

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity.

If YES, specify and explain:

If YES, specify:

6. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including

YES	NO <input checked="" type="checkbox"/>
-----	--

Archaeological or palaeontological sites, on or close (within 20m) to the site?

Unlikely

If YES, explain:

The proposed location of the LPG tank is within a brownfields site that is already being operated by the proponent. The site was previously used for a municipal coal fired gasworks, which has since been decommissioned, however some of the gasworks' infrastructure remains on property (in the area surrounding the Easigas lease area). Due to the previous and current activities on the site, it is assumed that any heritage items present on the site would have been discovered previously. It is also noted that due to the small site footprint (~250m²) a heritage study is not triggered in terms of the National Heritage Resources Act, and that any excavations required for installation of the new LPG tank will be minimal. A chance finds procedure is included in the EMPr, and no additional heritage studies are proposed.

If uncertain, conduct a specialist investigation by a recognised specialist in the field to establish whether there is such a feature(s) present on or close to the site.

Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?

YES	NO <input checked="" type="checkbox"/>
-----	--

Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO <input checked="" type="checkbox"/>
-----	--

If yes, please submit or, make sure that the applicant or a specialist submits the necessary application to SAHRA or the relevant provincial heritage agency and attach proof thereof to this application if such application has been made.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT

The person conducting a public participation process must take into account any 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 the application which is subjected to public participation by—

- (a) fixing a notice board (of a size at least 60cm by 42cm; and must display the required information in lettering and in a format as may be determined by the competent authority) at a place conspicuous to the public at the boundary or on the fence of—
 - (i) the site where the activity to which the application relates is or is to be undertaken; and
 - (ii) any alternative site mentioned in the application;
- (b) giving written notice to—
 - (i) the owner or person in control of that land if the applicant is not the owner or person in control of the land;

- (ii) the occupiers of the site where the activity is or is to be undertaken or to any alternative site where the activity is to be undertaken;
 - (iii) owners 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;
 - (iv) 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;
 - (v) the municipality which has jurisdiction in the area;
 - (vi) any organ of state having jurisdiction in respect of any aspect of the activity; and
 - (vii) any other party as required by the competent authority;
- (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;
- (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 local 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 subregulation 54(c)(ii); and
- (e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desiring of but unable to participate in the process due to—
- (i) illiteracy;
 - (ii) disability; or
 - (iii) any other disadvantage.

2. CONTENT OF ADVERTISEMENTS AND NOTICES

A notice board, advertisement or notices must:

- (a) indicate the details of the application which is subjected to public participation; and
- (b) state—
 - (i) that the application has been submitted to the competent authority in terms of these Regulations, as the case may be;
 - (ii) whether basic assessment or scoping procedures are being applied to the application, in the case of an application for environmental authorisation;
 - (iii) the nature and location of the activity to which the application relates;
 - (iv) where further information on the application or activity can be obtained; and
 - (iv) the manner in which and the person to whom representations in respect of the application may be made.

3. PLACEMENT OF ADVERTISEMENTS AND NOTICES

Where the proposed activity may have impacts that extend beyond the municipal area where it is located, a notice must be placed in at least one provincial newspaper or national newspaper, indicating that an application will be submitted to the competent authority in terms of these regulations, the nature and location of the activity, where further information on the proposed activity can be obtained and the manner in which representations in respect of the application can be made, unless a notice has been placed in any *Gazette* that is published specifically for the purpose of providing notice to the public of applications made in terms of the EIA regulations.

Advertisements and notices must make provision for all alternatives.

4. DETERMINATION OF APPROPRIATE MEASURES

The practitioner must ensure that the public participation is adequate and must determine whether a public meeting or any other additional measure is appropriate or not based on the particular nature of each case. Special attention should be given to the involvement of local community structures such as Ward Committees, ratepayers associations and traditional authorities where appropriate. Please note that public concerns that emerge at a later stage that should have been addressed may cause the competent authority to withdraw any authorisation it may have issued if it becomes apparent that the public participation process was inadequate.

5. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments and respond to each comment of the public before the application is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to this application. The comments and response report must be attached under Appendix E.

The following information/documents pertaining to the public participation process are attached to this report in Appendix E, together with a brief explanation of the public participation process undertaken to date and those activities still to be completed:

- Summary of public participation activities -E1;
- Newspaper Advertisement tearsheet – E2;
- Photos of on-site poster – E3;
- Background Information Document (BID) – E4;
- IAP Register – E5;
- Proof of notification to relevant stakeholders – E6; and
- Correspondence with IAPs – E7.

6. AUTHORITY PARTICIPATION

Authorities are key interested and affected parties in each application and no decision on any application will be made before the relevant local authority is provided with the opportunity to give input. The planning and the environmental sections of the local authority must be informed of the application at least 30 (thirty) calendar days before the submission of the application.

List of authorities informed:

Authorities and key stakeholders that have been notified of the project (via distribution of a BID on 25 October 2021) include the following:

- Provincial Department of Economic Development Environmental Affairs and Tourism;
- South African Heritage Resource Agency;
- EC Provincial Heritage Resource Agency;
- Department of Water and Sanitation;
- Department of Mineral Resources;
- Nelson Mandela Bay Municipality Departments:
 - Environmental Services,
 - Fire & Emergency Services,
 - Roads & Stormwater,
 - Housing & Land,
 - Disaster Management,
 - Air Pollution & noise control,
 - Corporate services (in charge of lease agreement);
- Ward councillor;
- Transnet;
- Sanral; and
- Eskom.

List of authorities from whom comments have been received:

None

7. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for linear activities, or where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that subregulation to the extent and in the manner as may be agreed to by the competent authority.

Any stakeholder that has a direct interest in the site or property, such as servitude holders and service providers, should be informed of the application at least 30 (thirty) calendar days before the submission of the application and be provided with the opportunity to comment.

Has any comment been received from stakeholders?

YES	NO <input checked="" type="checkbox"/>
-----	--

If "YES", briefly describe the feedback below (also attach copies of any correspondence to and from the stakeholders to this application):

N/A

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 as amended, and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

List the main issues raised by interested and affected parties.

Neighbouring landowner offered assistance with additional space if required.

Response from the practitioner to the issues raised by the interested and affected parties (A full response must be given in the Comments and Response Report that must be attached to this report):

Comment was conveyed to the applicant.

2. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

List the potential direct, indirect and cumulative property/activity/design/technology/operational alternative related impacts (as appropriate) that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed.

The potential impacts discussed below have been rated using SRK Consulting's standard rating method or taken from the associated specialist impact assessment where indicated. SRK's rating method is described in Appendix I. The complete rating table is also included in Appendix I.

For completeness the Development Area Environmental Sensitivities identified in the DFFE screening tool report are provided below, with a revised sensitivity rating based on site specific verification by the EAP, and explanations for the revised ratings.

Table 1: Development Area Environmental Sensitivities identified in the DFFE screening tool report

Theme	Sensitivity (as per screening tool)	Revised sensitivity (by EAP)	Explanation
Agriculture	Very high	Low	The site is within an existing operation and within the applicant's lease area. No impacts on agriculture are expected.
Animal Species	High	Low	The site is part of an existing operation and the proposed activity is in accordance with existing activities on the site. No impacts on surrounding fauna are expected.

Aquatic biodiversity	Very high	Low	The site is located within 500 m (approximately 250 m to the south) of a wetland according to the 2018 national wetland layer for the area. While the presence and condition of this wetland have not been verified by a specialist on site, based on aerial imagery it does not appear to be a functional wetland or connected to any natural watercourse in the area. Various linear infrastructure exists between the site and the wetland, including roads and railwaylines, all of which would prevent flow of surface water between the site and the wetland. The wetland is also located up-gradient of the site. It is therefore considered to be extremely unlikely that the proposed development will result in any impacts on the wetland or vice versa. Confirmation will be sought from DWS during the DBAR comment period and if necessary the required Section 21 c& i Water use authorization process will be undertaken.
Archaeology and cultural heritage	Low	Low	The site has previously been developed and the development footprint is below the threshold for requiring a heritage assessment. Chance finds procedure is included in the EMPr.
Defence	Very high	Low	The site is part of an existing operation and the proposed activity is in accordance with existing activities on the site. No additional impacts relating to defence are therefore expected.
Palaeontology	Medium	Low	The site has previously been developed and the development footprint is below the threshold for requiring a heritage assessment. Chance finds procedure is included in the EMPr.
Plant species	Medium	Low	The site is part of an existing operation and will be limited to the existing lease area. No indigenous vegetation is present on the site.
Terrestrial biodiversity	Low	Low	The site has previously been developed and the surrounding habitat has been heavily transformed. No impacts in terrestrial biodiversity in the surrounding area are expected.

PLANNING AND DESIGN PHASE

Alternative (preferred alternative)

No impacts are anticipated to occur during the planning and design phase of the proposed development.

Direct impacts:

None.

Indirect impacts:

None.

Cumulative impacts:

None.

No-Go Alternative

Direct impacts:

None.

Indirect impacts:

None.

Cumulative impacts:

None.

Mitigation measures that may eliminate or reduce the potential impacts listed above:

- The standard procedures pertaining to development planning and design as specified in the Environmental Management Programme (EMPr) should be complied with.
- It must be confirmed whether the material on the site is hazardous in nature prior to commencement of construction, so that the relevant arrangements with regard to disposal thereof can be made.

CONSTRUCTION PHASE

Alternative (preferred alternative)

Direct impacts:

General construction related impacts:

Due to the nature of the site (i.e. a brownfields site on an existing industrial site) and limited development footprint (~250 m²) and construction duration, general construction related impacts are expected to be of INSIGNIFICANT (-ve) significance rating both with and without mitigation measures, and have therefore not been rated individually. General construction good management measures are included in the EMPr to manage these impacts. These impacts relate to air quality (from dust due to earth moving activities on site), construction related noise, heritage impacts, general construction waste management and potential spills of cement and other construction related material on site.

Socio-economic impacts:

Construction activities will result in a limited number of temporary job opportunities as well as indirect economic benefits (industries that provide construction materials and services for the project). Due to the small size of the project and limited construction requirements and duration (construction is anticipated to last for six weeks), the positive socio economic impact of the development was rated to be INSIGNIFICANT (+ve), without and VERY LOW (+ve) with enhancement measures to maximise local employment opportunities.

Soil, stormwater and groundwater impacts resulting from excavation of potentially contaminated soil material:

There is the potential, due to the historical nature of activities on the site, that the soil that is to be excavated and spoiled may be contaminated to the extent that it is classified as a hazardous waste. A specialist assessment is underway to determine if this is the case and will be completed before the final BAR is submitted to DEDEAT. The specialist assessment will determine whether the soil is suitable for disposal as inert waste, whether it can be disposed of at one of the municipal landfill sites, or whether it requires disposal at a hazardous waste disposal site. The volume of excavated soil to be disposed of is estimated to be 35-70 m³.

Depending on the nature of contaminants present in the soil, potential impacts on the marine environment are predicted to be of LOW (-ve) significance, should adequate mitigation measures not be in place. With mitigation this rating could be reduced to INSIGNIFICANT (-ve).

These measures include suppression of dust during construction, minimal stockpiling of soil (if required at all), disposal of excess soil material at a registered landfill, and limiting the disturbed area to the minimum required. The soil material must be tested for contamination prior to commencement of construction, and should it be confirmed to be hazardous as per the waste classification criteria, disposed of at a hazardous landfill site.

Traffic flow and safety impacts:

Due to the small construction footprint and timeframe, potential impacts on traffic will be very limited. The most significant piece of equipment to be transported to the site will be the new tank itself, which will be delivered to the site via truck. It is likely that access to the site via the gate on the eastern side of the site along the old (decommissioned) gasworks railway entrance to the site will temporarily be used for this delivery. All other construction related traffic will be related to general construction activities (cement work etc) and will use the existing access roads to the site, which are designed to accommodate trucks for the operation of the site. No significant impacts on traffic flow or safety are expected to result from general construction traffic. It is recommended that a transportation expert is consulted pre-

construction to advise on any relevant safety or other traffic requirements relating to delivery of the new tank to site.

The impact was rated as VERY LOW (-ve) and can be reduced to INSIGNIFICANT if the recommended mitigation measures are applied.

Indirect impacts:

Indirect socio-economic benefits related to provision of goods and services as well as employment may result from the project, due to use of local suppliers and service providers.

Cumulative impacts:

None

No-Go Alternative

The No-Go alternative would mean that the potential positive socio-economic benefits related to the temporary employment opportunities and provision of goods and services would not materialise.

Direct impacts:

None.

Indirect impacts:

None.

Cumulative impacts:

None.

Mitigation measures that may eliminate or reduce the potential impacts listed above:

General construction impacts mitigation measures:

Dust impacts:

- Minimise disturbed areas of soil and excavations to what is absolutely necessary;
- Minimise stockpiling of excavated soil material on site;
- If stockpiling of soil is required for any period, soil/sand stockpiles are to be covered with appropriate material (e.g. hessian, shade cloth or plastic);

Noise impacts:

- Construction activities must be in accordance with the Noise Control By-Law of the NMBM;

Soil and groundwater impacts relating to construction related spills:

- The proper storage and handling of any hazardous substances (hydrocarbons and chemicals) used during construction needs to be administered on site. If hazardous liquids are stored/ used on site, spill kits must be available;
- Hazardous materials must be stored on an impermeable, bunded surface within a weather-proof structure;
- No wash water from washing of mechanical plant or equipment may be discharged into the surrounding environment. All construction effluent (e.g. cement wastewater) must be collected in a container and allowed to evaporate prior to disposal;
- Cement batching activities should occur in the construction area, as far as possible, and conducted on an impermeable surface;
- Drip-trays must be provided beneath standing vehicles and machinery, and routine checks should be done to ensure that these are in a good condition.

Construction Waste management impacts:

- Standard waste management practices must be implemented;

- All staff shall be trained on correct waste management;
- No on-site burning, burying or dumping of any waste materials, litter or refuse shall occur;
- All waste must be removed from the site on a regular basis and disposed of at a registered landfill site;
- Records of disposal of all waste generated on site shall be maintained for auditing purposes

Other impact mitigation:

Socio-economic impacts:

- Local contractors and labour to be considered for the construction phase.

Handling of potentially hazardous soil material:

- Prior to commencement of construction, conduct a contamination assessment of the soil material to be excavated to determine whether it meets the classification criteria for hazardous waste;
- Based on the outcome of contamination assessment, the material must either be immediately removed for disposal as hazardous waste (if confirmed to be hazardous), or removed for disposal as general waste at a registered landfill site;
- Minimise stockpiling of removed soil material and promptly remove it from site for disposal;
- Hazardous waste must not be stored on the site but must be disposed of at a registered hazardous landfill facility and proof of correct disposal should be obtained.

Traffic flow and safety impacts:

- Implementation of strict traffic safety measures and speed limits for all construction related traffic;
- A transportation specialist must be consulted to advise on any specific measures that may be required to ensure safety measures and permits are in place for delivery of the new tank to site;
- All signage and road markings at the proposed site should be in accordance with the South African Road Traffic Signs Manual.

OPERATIONAL PHASE

Alternative (preferred alternative)

Direct impacts:

The operation of the facility will not result in generation of any waste, effluent, noise or air emissions, over and above what is already generated at the site (which is minimal). Traffic impacts as a result of the new facility are also negligible, as it is an existing facility and it is anticipated that the new LPG tank will result in approximately two truck deliveries per week. It is also not anticipated that any new employment opportunities will result from the proposed new tank, as staff at the existing operation will be used to run it. These impacts therefore have not been rated and specific mitigation measures relating to these impacts are not considered to be necessary.

Safety risk impacts:

The facility is classified as a Major Hazard Installation (MHI) in terms of the MHI regulations (R.692 of 30 July 2001), because a major incident at the site will impact members of the public outside the boundaries of the premises. Easigas is therefore required to undertake MHI assessments every five years, and prior to installation of any new infrastructure relevant to its MHI status, for submission to the local authorities. The proposed installation of the new 400 m³ LPG tank on the site was included in the assessment, as well as all existing permanent storage (consisting of 315 m³ (in total) in above ground storage tanks), and temporary LPG storage (a 45 m³ road tanker and 10,000 LPG cylinders) on the site . The safety risks have been assessed and through a MHI Study conducted by Dr Alfonso Niemand of Nature & Business Alliance Africa (A copy of the specialist report can be found in Appendix D., as well as the required specialist declaration). A total of 24 hazard scenarios were analysed in the risk assessment. The impacts relating to the safety risks to

surrounding communities have been rated by the EAP based on the findings of the specialist report and all mitigation measures listed in the report are included in the EMPr. It is noted that the surrounding land uses are largely industrial, as well as open space. The closest residential development is approximately 300 m from the site and falls outside the safety risk contours identified by the specialist based on modelling of risks for various scenarios. Maps showing the surrounding land uses and zonings are provided in Appendix A.

The report made the following findings:

- a) The LPG tank installation on the premises comprises an MHI, because a major incident on site would impact on members of the public outside the boundaries of the site e.g. a BLEVE (Boiling liquid expanding vapour explosion) or VCE (Vapour cloud explosion) on the LPG storage tanks or LPG delivery road tanker, respectively.
- b) The LPG delivery road tanker comprises an MHI while it is parked on the premises of Easigas. However, this risk is lower than when the road tanker drives in streets as a result of possible collisions with vehicles.
- c) No development conflicts for the site were identified at the time of the risk assessment (i.e. based on current land uses surrounding the site with the installation of the new 400 m³ tank).
- d) If new development around the site is planned, the local authority must take the land-use planning zones in Figure 1 into consideration
- e) No major hazard installations were identified within reach of the worst-case major incident that can occur at this site;
- f) The highest risks at the site are quite manageable, namely a BLEVE on the LPG storage tanks or on the delivery road tanker.
- g) The risk associated with the operations on this site were determined by the specialist as follows:
- h) The cumulative individual safety risks for the site is 1.39×10^{-2} deaths/person/year.
- i) Individual risk at the site is higher than tolerable for the public (1.0×10^{-4} d/p/yr) and for employees (1.0×10^{-3} d/p/yr) on site.
- j) The individual risk transect indicates that the risks are lower than the norm for employees and the public.
- k) Societal safety risks on this site are acceptably low.



Figure 1: Safety Risk isopleth map for the site, including the new proposed 400 m³ tank

The risk isopleths identified for the site are based on the following criteria:

- I) Red: Inner zone > 10 chances of a major incident per million per annum (1.0×10^{-5} per year).
- m) Orange: Middle zone > 1 chance of a major incident per million per annum (1.0×10^{-6} per year).
- n) Yellow: Outer zone > 0.3 chances of a major incident per million per annum (3.0×10^{-7} per year).

The assessment found the risk to the public and employees on the site to fall within the “broadly acceptable” range, based on a predicted frequency of deaths per person per year of less than 1.0×10^{-6} for the public and 1.0×10^{-5} for employees. It is recommended that ALARP (As Low As Reasonably Practicable) mitigation measures are applied at this site, as outlined above in this report.

The risk of 3×10^{-7} fatalities per person per year isopleth indicates the extent for land-use that would be unsuitable for vulnerable populations, such as hospitals, retirement homes, nursery schools, prisons, large gatherings in the open, and so forth. No facility within the 3×10^{-7} fatality per person per year isopleth should be approved without first evaluating the impacts on the proposed facility and potential land usage. Such developments would not be in accordance with the current zoning of the surrounding land and therefore are not considered to be a likely scenario.

The extent of the impact is rated to be regional, as it would extend outside the site boundary as demonstrated by the risk isopleths. The potential duration is rated as permanent and the intensity as high (in the case of potential fatality). The likelihood of the impact occurring is however extremely unlikely (improbable), ranging from 10 per million per annum for the inner zone (a radius of 115 m around the tank site) to 0.3 per million per annum for the outer zone (radius of 276 m around the site). The probability, intensity and extent of the potential impact would be further reduced with implementation of the mitigation measures listed by the specialist, many of which are legal requirements and have been incorporated into the design of the new tank (and the existing facility). It is also noted that in addition to the legal requirements with regard to safety measures as per the MHI regulations, Easigas has also taken into account recommended safety distances in the design of the new tank. The impact is rated by the EAP to be HIGH (-ve) without mitigation and LOW (-ve) with mitigation.

Indirect impacts:

None.

Cumulative impacts:

None.

No-Go Alternative

Direct impacts:

If the project were not to be developed, Easigas may lose existing customers due to potential LPG supply limitations and would not benefit from potential expansion of their current customer base.

Indirect impacts:

If the project were not to be developed, security of LPG supply to existing and potential new customers, including the automotive industry, may be compromised, which could potentially result in significant negative impacts on their production processes and economic development and security in the region in general.

Cumulative impacts:

None.

Mitigation measures that may eliminate or reduce the potential impacts listed above:

Safety risk mitigation

The following mitigation measures are taken from the MHI report, a copy of which is included in Appendix D:

- The national and provincial Chief Inspectors of the Department of Employment and Labour must be notified about the status of the proposed LPG installation.
- The NMBM Fire Department must be notified about the status of the proposed LPG installation.
- In accordance with the MHI regulations, an advertisement must be published in a local community newspaper, notifying the public of the proposed MHI installation and a comment period provided
- A permanent warning sign must be installed at the entrance to the site
- Ensure that no flammable or explosive liquid or gas is stored in the redundant municipal gas storage tank next to the proposed new 400 m³ LPG tank.
- The emergency management plan for the site must be updated when changes in personnel or contact details occur, in accordance with the in the MHI report.
- Operating procedures for the site must be kept up to date to include preventative measures against the uncontrolled release of the following hazardous substances:
 - LPG from the delivery road tanker.
 - LPG from the storage tank.
 - LPG from the cylinder filling platform
- The outcome of the risk assessment must be brought to the attention of all the employees at the site.
- A Maintenance Plan must be compiled and kept up to date for all the hazardous equipment used on the facility. The Plan must contain at least the following:
 - List of all equipment and facilities on the facility.
 - Maintenance frequency.
 - Particulars of maintenance activities that must be performed on the listed equipment.
 - Responsible person.

- All hazardous equipment and facilities on the site must be inspected on a regular basis by means of an Inspection Register. The Register must contain at least the following:
 - List of all equipment and facilities on the facility.
 - Equipment items that must be inspected.
 - Facilities that must be inspected.
 - Areas that must be inspected.
 - Inspection findings.
 - Responsible person who carried out the inspection
- All authorised operators must be trained in the application of the operating procedures applicable to their jobs.
- All operating personnel at the facility must be aware at all times of the dangers involving LPG.
- The facility must remain under safety and security access control for 24 hours per day. The security guard on site must comply with the following requirements:
 - The guard must be trained in the potential major incidents that could occur at the site as well as the emergency procedure that must be followed.
 - The guard must be linked via SMS or cellular phone with a responsible standby person at the site.
 - The guard must be able to contact the local Fire Department immediately.
- The Emergency Evacuation Procedure aimed at workers and visitors must be updated at least annually in collaboration with the NMBM emergency services.
- The LPG delivery road tanker shall not reverse on site.
- The LPG road tanker must be inspected on entry to the site, for possible overheated tyres, smell of heated rubber, LPG leaks or other defects that could place the site at risk.
- The Emergency Management Plan and Emergency Evacuation Procedure must be tested at least annually by means of mock emergencies. The NMBM emergency services must be invited to participate in these tests.
- Customer and staff parking bays must be located in an area where public vehicles will not cause obstruction to emergency vehicles.
- Prior to any construction work on site, the local office of the Department of Employment and Labour must be notified in writing, in accordance with the Construction Regulations of the Department of Employment and Labour.
- No additional modifications may be made to the facilities on site unless an MHI risk assessment has been done beforehand.
- All staff must be trained in emergency preparedness for a LPG leak, in collaboration with the NMBM fire department.
- The nameplates on all LPG storage tanks must be clearly visible and legible.
- The deluge systems at the road tanker loading bays must be tested at least monthly to ensure they are in good working order and effective.
- The site CCTV surveillance system must be inspected regularly to ensure its good functional operation and all employees in the control room must be trained in the use of the system.
- Ensure that the windsock on site remains in a good functional state.
- The LPG detection and alarm system at the site must be inspected and tested regularly to ensure that it remains in a good working order.

DECOMMISSIONING AND CLOSURE PHASE

Alternative (preferred alternative)

There are no plans to decommission the facility and therefore this has not been assessed. Should unexpected decommissioning of the plant or any part thereof be required for any reason, the impacts

are expected to be similar to those for construction. All dangerous goods stored on the site would need to be removed in a safe manner for disposal at a hazardous landfill site or use elsewhere.

Indirect impacts:

None

Cumulative impacts:

None.

No-Go Alternative

Direct impacts:

N/A

Indirect impacts:

N/A

Cumulative impacts:

N/A

Mitigation measures that may eliminate or reduce the potential impacts listed above:

Alternative (preferred alternative)

Direct impacts:

Indirect impacts:

Cumulative impacts:

3.

ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

Due to the nature of the site (being a brownfields site and part of an existing similar operation, in a largely industrial area), as well as the nature of the proposed development, very few impacts of significance are anticipated to result from the construction and operation of the new LPG tank.

Positive socio-economic impacts due to job creation during construction will be limited (rated as very low significance with enhancement measures implemented), and general construction, soil and groundwater contamination, and traffic impacts are all rated as insignificant negative impacts during construction, with mitigation measures in place. These include testing of the soil prior to commencement of construction, to determine if the excavated material would be classified as hazardous waste, and therefore need to be disposed of as such.

During operation, potential safety risks to the surrounding area are considered to be the most significant (and only impact of significance) resulting from a catastrophic failure of the proposed new LPG tank. This has been

assessed by a MHI specialist, who has confirmed that the risks from the site are acceptable with the implementation of the recommended mitigation measures listed in the MHI report (and EMPr). While the probability of such impacts occurring is very low, due to the nature of the impact (possible fatalities) it is rated as high intensity and duration. The surrounding land is largely industrial or undeveloped, and the closest residential areas to the site lie beyond the risk isopleths determined by the MHI specialist. No land that is zoned for residential use is located within the boundaries of the identified risk isopleths, and no other MHI facilities were identified in close proximity to the site. No land use planning conflicts were identified. The impact is rated as low negative significance with implementation of the mitigation measures specified by the specialist, many of which are legal requirements and have been incorporated into the design of the new tank.

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No-go alternative (compulsory)

If the project were not to be developed, Easigas may lose existing customers due to potential LPG supply limitations and would not benefit from potential expansion of their current customer base. The anticipated positive socio-economic impacts associated with construction of the new tank, while extremely limited, also would not materialise. Indirect impacts to customers, as a result of potential LPG supply disruptions, may also occur, potentially affecting the automotive industry in the region, amongst others. The no-go option is therefore rated as being of LOW negative significance due to its regional extent, medium duration and intensity and possibility of occurrence.

Refer to impact rating summary table below and full impact rating methodology and rating provided in Appendix G

Impact Significance Rating Summary Table for the preferred and no-go alternatives

Impact	Significance during Construction		Significance during Operation		Confidence Rating
	Without mitigation	With mitigation	Without mitigation	With mitigation	
Fire and safety risk	N/A	N/A	High (-ve)	Low (-ve)	High
General construction impacts	Insignificant (-ve)	Insignificant (-ve)	N/A	N/A	High
Traffic Impacts	Very Low (-ve)	Insignificant (-ve)	N/A	N/A	High
Soil & groundwater contamination	Low (-ve)	Insignificant (-ve)	N/A	N/A	High
Socio-economic benefits	Insignificant (+ve)	Very Low (+ve)	N/A	N/A	High
No-go alternative:					
Socio-economic impacts	Very Low (-ve)	N/A	Low (-ve)	N/A	Medium

SECTION E. RECOMMENDATIONS OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES <input checked="" type="checkbox"/>	NO
YES <input checked="" type="checkbox"/>	NO

Is an EMPr attached?

The EMPr must be attached as Appendix F.

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment):

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application:

A project specific Environmental Management Programme (EMPr) has been compiled and can be found under Appendix F of this document. It is recommended that an Environmental Control Officer be appointed to conduct independent audits to ensure compliance with the EMPr during construction.

If the proposed development is to be approved, then it is recommended that all of the mitigation measures described in this report and the EMPr (Appendix F) should be included as conditions of authorisation.

SECTION F: APPENDICES

The following appendixes must be attached as appropriate:

Appendix A: Site plan(s)

Appendix B: Photographs

Appendix C: Facility illustration(s)

Appendix D: Specialist reports

Appendix E: Comments and responses report

Appendix F: Environmental Management Programme (EMPr)

Appendix G: Other information

SRK Report Distribution Record

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Mr Jeff Govender	DEDEAT	1	Electronic	19 November 2021	R Gardiner
Ms Marisa Bloem	DWS	2	Electronic	19 November 2021	R Gardiner
Ms Jill Miller	NMBM: Environmental Management	3	Electronic	19 November 2021	R Gardiner
Mr Johan Potgieter	NMBM: Fire & Emergency Services	4	Electronic	19 November 2021	R Gardiner
Mr Shane Brown	NMBM: Director of Disaster Management	5	Electronic	19 November 2021	R Gardiner
Ms Talani Mathebula	Easigas (Pty) Ltd	6	Electronic	19 November 2021	R Gardiner
Mr Sello Mokhanya	ECPHRA	7	Electronic	19 November 2021	R Gardiner
Ms D Buti	Ward 14 Ward Councillor		Electronic	19 November 2021	R Gardiner
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ECONOMIC DEVELOPMENT,
ENVIRONMENTAL AFFAIRS & TOURISM



www.dedea.gov.za

Appendix A: Site Plan(s) and Locality Plan



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Appendix B: Photographs

"Innovation for Sustainable Development"

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Appendix C: Facility Illustration(s)

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Appendix D: MHI Specialist Report

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Appendix E: Public Participation Process (Comments & Responses Report)

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Appendix E1: Public Participation Process Summary

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Appendix E2: Newspaper Advertisement tearsheet

"Innovation for Sustainable Development"

¹ Floor Room 274 • Beacon Hill • Hockley Close • Kind William's Town • 5600 | Private Bag X0054 • 5605 • Republic of South Africa
Tel: 043 605 7099 • Fax: 043 605 7300 | Email: • Web: www.dedeat.gov.za

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Appendix E3: Photos of on-site poster

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Appendix E4: Background Information Document (BID)

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Appendix E5: IAP Register

In the interest of protection of personal information, delivery receipts will only be made available to the Competent Authority

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Appendix E6: Proof of notification to relevant stakeholders

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Appendix E7: Correspondence with IAPs

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Appendix F: Draft Environmental Management Programme (EMPr)



Appendix G: Impact Rating

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Appendix H: DEDEAT Application Form



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