EXECUTIVE SUMMARY: BASIC ASSESSMENT FOR THE OFFSHORE BYPASS PIPELINES AND ASSOCIATED INFRASTRUCTURE, VOORBAAI, MOSSEL BAY

DFFE Reference Numbers: To be provided

SRK Project Number: 583957 February 2023

1 INTRODUCTION

The Petroleum Oil and Gas Corporation of South Africa SOC Limited (PetroSA) operates and owns a Gas to Liquid (GTL) refinery in Voorbaai, Mossel Bay, that imports and exports hydrocarbon fuels using a Central Buoy Mooring (CBM) facility and a Single-Point Mooring (SPM) facility. The SPM facility is connected to the GTL refinery via three marine pipelines of varying diameters (8", 12" and 14") housed in a single enclosed ~3.4 km long, 36" carrier pipe subsea bundle from the tank farm to the SPM.

Only the 14" pipe is currently utilised for condensate import and diesel export. The 8" and 12" have been inoperative since the early 1990s and 2019 respectively. In order to bypass the corroded section of the 12" and 14" pipeline, PetroSA proposes to modify the existing SPM subsea bundle by installing two new ~1.4 km steel pipelines (12" and 14") (referred to as a dual pipeline) on the seabed, parallel to and ~15 m from the existing pipeline housing structure. The dual pipeline will terminate in a new Pipeline End Manifold (PLEM) seabed structure and be tied into the existing SPM buoy (to be repositioned to align with the new PLEM) and the existing operating bundle. The dual pipelines will be welded together at a pipeline assembly site (fabrication site) at PetroSA's Tank Farm and launched to sea via a temporary launch way (~12 m wide) - see Figure 1. The temporary launch way will extend from PetroSA's Tank Farm (Erf 1349 and RE/Erf 1), over a vegetated dune above the High Water Mark (HWM) (Erf 1358), to the sealine, also referred to as the Low Water Mark (LWM).

SRK Consulting (South Africa) (Pty) Ltd (SRK) was appointed by PetroSA to undertake a Basic Assessment (BA) process which is required in terms of the National Environmental Management Act 107 of 1998 (NEMA) and the Environmental Impact Assessment (EIA) Regulations, 2014, in support of an application for Environmental Authorisation (EA).

See page seven for details on how you can participate in the process.

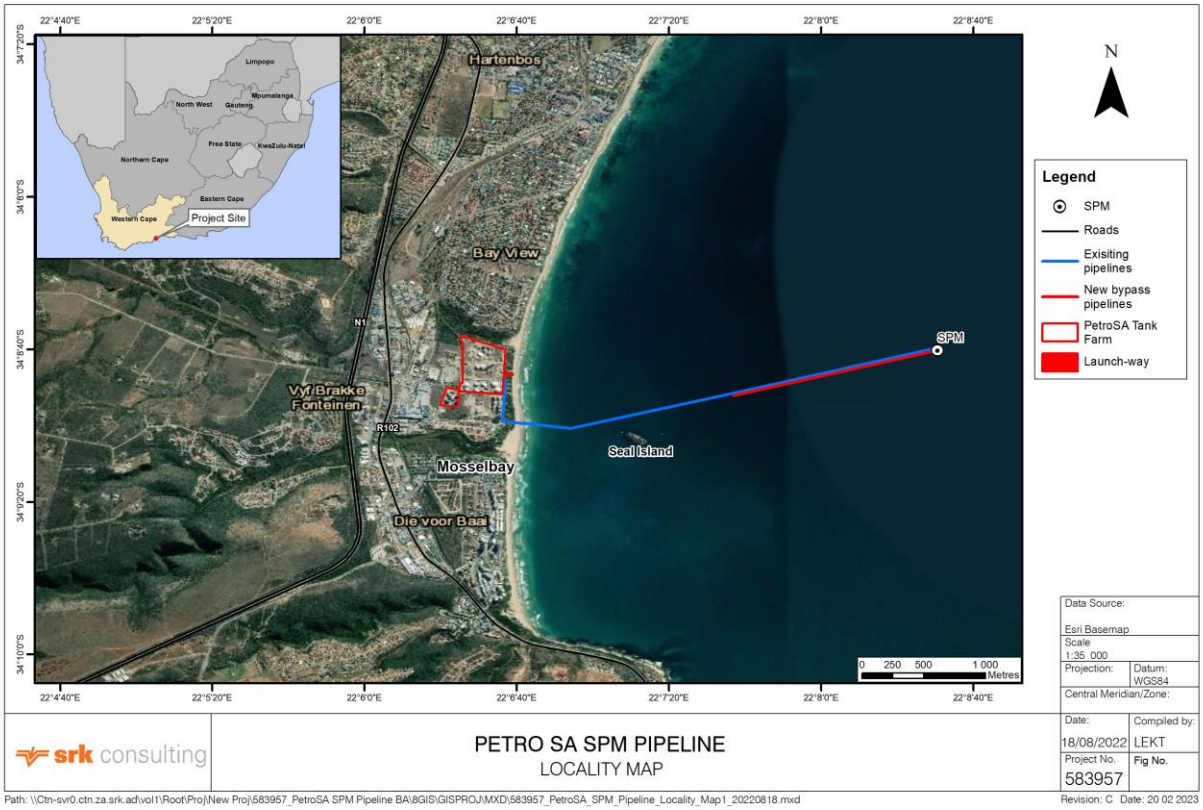

Figure 1: Locality Plan

2 GOVERNANCE FRAMEWORK

Sections 24 and 44 of NEMA make provision for the promulgation of regulations that identify activities which may not commence without an EA issued by the competent authority (in this case the Department of Forestry, Fisheries and the Environment [DFFE]). In this context, the EIA Regulations, 2014, promulgated in terms of NEMA, govern the process, methodologies and requirements for the undertaking of BAs in support of EA applications. Listing Notices 1-3 in terms of NEMA list activities that require EA ("NEMA listed activities").

The EIA Regulations 2014 lay out two alternative authorisation processes. Depending on the type of activity that is proposed, either a BA process or a Scoping and Environmental Impact Reporting (S&EIR) process is required to obtain EA. Listing Notice (LN) 1 lists activities that require a BA process, while LN 2 lists activities that require S&EIR. LN 3 lists activities in certain sensitive geographic areas that also require a BA process.

SRK has determined that the proposed project triggers activities listed in terms of LN 1 EIA Regulations, 2014, requiring a BA. The equivalent activities in terms of the EIA Regulations, 2014 are included in Table 1.

Consequently, the proponent is obliged to apply for EA for the project. Since activities listed under Regulation GN R982 (LN1) apply to the project, a BA process is required

Table 1: Listed activities triggered by the project

No	Description
LN1 (requiring BA)	
19A	The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from- (i) the seashore; (ii) the littoral active zone, an estuary or a distance of 100 metres inland of the high-water mark of the sea or an estuary, whichever distance is the greater; or (iii) the sea;
54	The expansion of facilities- (i) in the sea; in respect of- (e) infrastructure or structures where the development footprint is expanded by 50 square metres or more
65	The expansion and related operation of (i) an anchored platform; (ii) or any other structure or infrastructure on or along the sea bed, where the expansion will constitute an increased development footprint,

3 ENVIRONMENTAL PROCESS

The EIA Regulations, 2014 define the detailed approach to the BA process (see Figure 1).

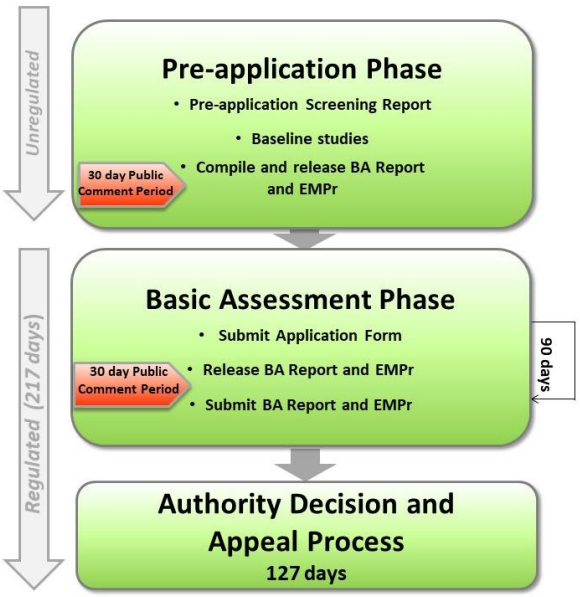

Figure 1: BA Process

***Note:** EMPr = Environmental Management Programme*

The objectives of the BA process are to:

- Identify relevant authorities and key stakeholders to engage in the stakeholder engagement process;
- Facilitate the dissemination of information to the relevant authorities and stakeholders and provide them with an opportunity to raise issues or concerns related to the project;
- Identify potential issues and environmental impacts;
- Assess the significance of the potential environmental impacts identified;
- Describe and investigate alternatives that have been and / or could be considered; and
- Provide feasible mitigation measures to address any significant impacts identified.

The above objectives are achieved through the technical evaluation of the proposed activity, the undertaking of the stakeholder engagement process and the submission of the relevant information and documentation to the DFFE.

4 DESCRIPTION OF THE SITE AND ENVIRONMENT

4.1 Offshore Bypass Pipelines and Associated Infrastructure

The project area / corridor for the bypass pipelines and associated infrastructure extends from ~1.5 km to ~3 km offshore of Voorbaai in Mossel Bay (See Figure 1). The launch way corridor is ~720 m north east off the Mossel Bay Seal Island Nature Reserve, a protected area comprising Seal Island.

The bypass dual pipelines will be installed on the seabed, parallel to and ~15 m from the existing SPM pipeline

housing structure, predominantly in an area that is already disturbed/transformed.

4.2 Fabrication Yard and Launch Way Corridor

The dual pipelines will be welded together at a fabrication site (pipeline assembly site) at PetroSA's existing Tank Farm (Erf 1349 and Remainder of Erf 13) and placed on a pipe string roller line within the yard. The pipe string roller line (temporary launch way) will extend in a straight line towards the sea within the launch way corridor (see Figure 3). Part of the launch way corridor (above the HWM) is located on a vegetated dune, ~15 m above mean sea level (amsl), on Erf 1358 owned by the Mossel Bay Municipality. The temporary launch way will extend from PetroSA's Tank Farm to the sealine (also referred to as the Low Water Mark), on coastal public property.

The launch way corridor (see Figure 3), within which the ~12 m wide launch way will be constructed, is ~20 m wide and 100 m long. It is located on a continuous aeolian dune ridge that stretches between Mossel Bay and the Hartenbos River mouth.

The launch way corridor comprises Cape Seashore Vegetation (*Least Threatened*) and Hartenbos Dune Thicket (*Endangered*), the latter only recently being classified as *Endangered* in the Revised National List of Ecosystems that are Threatened and in Need of Protection (2022), promulgated in terms of National Environmental Management: Biodiversity Act 10 of 2004 (NEM:BA). Despite Hartenbos Dune Thicket's *Endangered* status, the terrestrial plant theme sensitivity is considered by the botanical specialist to be *low*. Only 15 plant species were recorded within the launch way corridor, none of which are Species of Conservation Concern (SCC). The vegetation is degraded due to development in the area and the launch way corridor is invaded by *Acacia cyclops*, a Category 1b invasive species. Approximately 15 *Sideroxylon inerme* (milkwood) trees were recorded within the launch way corridor. *Sideroxylon inerme* is listed as Least Concern in the International Union for Conservation of Nature Red List, and is therefore not a SCC.

Figure 3: Launch way corridor (on Erf 1358)

5 ALTERNATIVES

Appendix 1 Section 3 (h)(i) of the EIA Regulations, 2014, requires that all BA processes must identify and describe feasible and reasonable alternatives. Alternatives considered during screening phases of the project, include:

- Location alternatives;
- Technology alternatives;
- Activity alternatives;
- Pipeline installation alternatives; and
- The No-Go alternative

The outcome of this screening phase investigation is reported in the BA Report.

6 STAKEHOLDER ENGAGEMENT

Stakeholder engagement is a key component of the BA process and is being undertaken in accordance with the requirements of the EIA Regulations, 2014. The stakeholder engagement activities are summarised in Table 2.

Relevant local, provincial and national authorities, conservation bodies, local forums and surrounding landowners and occupants have been notified of the BA process and the release of the Draft BA Report (BAR) for comment.

Table 2: Stakeholder Engagement during Basic Assessment Phase

Activity	Date
Place posters at the entrance to the PetroSA Tank Farm and at the Langberg Mall	24 February 2023
Advertise commencement of BA process and release of BAR for public comment period	24 February 2023
Public comment period	24 February 2023 to 27 March 2023
Compile Issues and Responses Summary and Finalise BAR	27 March 2023 - 7 April 2023
Submit BAR (and Issues and Responses Summary) to DFFE	Before 30 April 2023

7 ASSESSMENT OF POTENTIAL IMPACTS

Specialist studies were undertaken to investigate key potential direct, indirect and cumulative impacts, as follows:

- Terrestrial Ecology Assessment;
- Marine Ecology Specialist Statement; and
- Heritage Impact Assessment.

Socio-economic impacts were assessed by SRK specialists and Environmental Assessment Practitioners (EAPs), although a stand-alone specialist study was not considered necessary.

For all potentially significant impacts, the significance of the anticipated impact was rated without and with recommended mitigation measures. These impacts are presented in Table 3.

Table 3 below summarises:

- The impacts assessed in the BA; and
- Their significance before and following the implementation of essential mitigation measures, on which the significance rating is based.

Impact Significance Ratings Legend:

Rating	+ve	-ve
Insignificant	I	I
Very Low	VL	VL
Low	L	L
Medium	M	M
High	H	H
Very High	VH	VH

Based on the professional experience of the EAP and the specialists, the key potential (direct) environmental and socio-economic impacts and potential benefits associated with the project were identified and are presented Table 3. Cumulative impacts are considered to be of relatively low significance.

Table 3: Summary of Impacts

Impact	Significance rating	
	Without	With
CONSTRUCTION PHASE IMPACTS		
Impaired air quality due to dust fallout	VL	I
Increased noise levels due to project activities	I	I
Degradation and / or loss of terrestrial habitat and endangered and protected species	L	L
Displacement and / or loss of terrestrial fauna	L	I
Spread of alien and invasive terrestrial plant species	VL	I
Displacement and / or loss of marine fauna	VL	VL
Increased employment and income	L	L
Loss or damage to land-based heritage resources	M	I
Loss or damage to marine-based heritage resources	M	I
OPERATIONAL PHASE IMPACTS		
Displacement and / or loss of marine fauna from leaks	I	I
Economic growth from increased fuel supply	M	M

Key recommendations, which are considered essential, are:

- Implement EMPr (including site specific mitigation) to guide construction and operation activities and to provide a framework for the ongoing assessment of environmental performance.
- Appoint an ECO to oversee the implementation of the EMPr and supervise construction activities.
- Restrict the width of the launch way development footprint to 12 m within the launch way corridor.
- Appoint a qualified professional to rehabilitate all disturbed areas within the launch way corridor following construction, which may require seed propagation from surrounding areas.
- Ensure the EMPr is included with contracts made with vessel operators and contractors for them to comply with the EMPr requirements.
- Ensure the appointed vessel operators have the requisite Safety Certificate and Emergency Contingency Plan to cover potential risks associated with oil discharge incidents

8 FINDINGS AND RECOMMENDATIONS

This Draft BAR has identified and assessed the potential biophysical and socio-economic impacts associated with the proposed offshore bypass pipelines and associated infrastructure in Mossel Bay, Western Cape.

In terms of Section 31 (n) of NEMA, the EAP is required to provide an opinion as to whether the activity should or should not be authorised. In this section, a qualified opinion is ventured, and in this regard SRK believes that sufficient information is available for DFFE to take a decision.

The project will result in unavoidable but limited adverse biophysical and heritage impacts, but will deliver significant socio-economic benefits. Working on the assumption that PetroSA is committed to ensuring that the EMPr is strictly implemented by PetroSA, contractors and vessel operators, none of these adverse impacts are considered unacceptably significant. On this basis, the No-Go alternative is not preferred.

In conclusion, SRK is of the opinion that on purely 'environmental' grounds (i.e. the project's potential socio-economic, heritage and biophysical implications) the application as it is currently articulated should **be approved**, provided the essential mitigation measures are implemented. Ultimately, however, the DFFE will need to consider whether the project benefits outweigh the potential impacts.

HOW CAN YOU PARTIICPATE IN THE BA PROCESS

This Draft BAR is not a final report and can be amended based on comments received from stakeholders. Stakeholders are therefore urged to participate:

Stakeholders are invited to comment, and/or to register on the project database database **by clicking on the MS Forms link provided below or alternatively contacting the SRK contact person listed below**. IAPs should refer to the SRK project number, and must provide their comments together

with their name, contact details (preferred method of notification, e.g. email), and an indication of any direct business, financial, personal or other interest which they have in the application, by **27 March 2023.**

REVIEW THE REPORT

The Basic Assessment Report is available for public review and comment electronically on the SRK website (via "Knowledge Centre" and "Public Documents") at the following link (click on hyperlink): https://www.srk.com/en/public-documents/petrosa-offshore-bypass-pipelines.

Stakeholders can register or provide comment on the Draft BAR by:

- Submitting their name, contact details (specifying the preferred method of notification, e.g. e-mail), and an indication of any direct personal business, financial or other interest which they have in the application to the SRK contact below; **or**
- Filling in their details in the link in the box below.

Comments must be submitted by **27 March 2022** to be incorporated into the Final BAR.

Once stakeholders have commented on the information presented in the Draft BAR, the Final BAR will be prepared and submitted to DFFE for approval. Registered Interested and Affected Parties (IAPs) will be informed of the submission of the Final BAR and provided with the Issues and Responses Summary.

SUBMIT WRITTEN COMMENTS AND / OR REGISTER ON THE PROJECT DATABASE

Submit written comments and / or register on the project database here (click on link): MS Forms

Alternatively, written comments and/or contact details can be sent to:
Lauren Elston at SRK Consulting
Email: lelston@srk.co.za
Tel: + 27 21 659 3060; Fax: +27 21 685 7105
Postnet Suite #206, Private Bag X18,
Rondebosch, 7701

By registering as a stakeholder, you voluntarily consent to SRK, the Project Proponent and the Competent Authority processing and selectively disclosing your personal data (including contact details), in fulfilment of the requirements of the EIA Regulations, 2014, and the National Appeal Regulations, 2014. Personal data will only be used for the purposes of providing relevant project information (pertinent to the EIA process and related activities e.g. notifications of decisions, subsequent appeals, audits) and obtaining feedback on these processes. SRK undertakes to process data in compliance with the Protection of Personal Information Act 14 of 2013 and in accordance with our Protection of Personal Information Policy.

Once a decision is taken by DFFE, this decision will be communicated to registered IAPs.