



TotalEnergies EP South Africa B.V.

**ENVIRONMENTAL AND SOCIAL IMPACT
ASSESSMENT (ESIA) FOR THE OFFSHORE
PRODUCTION RIGHT AND ENVIRONMENTAL
AUTHORISATION APPLICATIONS FOR BLOCK
11B/12B - REF NO: 12/4/13 PR**

Draft Environmental and Social Impact
Assessment Report



CHAPTER 1



TotalEnergies EP South Africa B.V.

**ENVIRONMENTAL AND SOCIAL IMPACT
ASSESSMENT (ESIA) FOR THE OFFSHORE
PRODUCTION RIGHT AND ENVIRONMENTAL
AUTHORISATION APPLICATIONS FOR
BLOCK 11B/12B – REF NO: 12/4/13 PR**

Draft Environmental and Social Impact Assessment Report

PUBLIC

PROJECT NO. 41105306

OUR REF. NO. REPORT NO: 41105306-358669-10

DATE: SEPTEMBER 2023

WSP





Building 1, Maxwell Office Park
Magwa Crescent West, Waterfall City
Midrand, 1685
South Africa

Phone: +27 11 254 4800

WSP.com



QUALITY CONTROL

Issue/revision	Final issue
Date	18 September 2023
Prepared by	Olivia Allen Rizqah Baker
Signature	 
Checked by	Helen Crosby
Signature	
Authorised by	Olivia Allen
Signature	
Project number	41105306
Report number	41105306-358669-10



CONTENTS

1 INTRODUCTION AND SCOPE OF REPORT	1
1.1 PROJECT BACKGROUND AND LOCATION	1
1.2 SUMMARY OF AUTHORISATION REQUIREMENTS	6
1.3 PURPOSE OF REPORT	6
1.4 OPPORTUNITY TO COMMENT	7
1.5 STRUCTURE OF REPORT	8

TABLES

Table 1-1 – Block 11B/12B Application Area Co-ordinates	5
Table 1-2 – Project Development Area Co-ordinates	5
Table 1-3 – Co-ordinates for Exploratory Priority Area	5
Table 1-4 – Locations of placements of printed copies of ESIA report, NTS and Comment Forms	7
Table 1-5 – ESIA Report Structure	8
Table 2-1 - Listing activities Applicable to the proposed Project	15

FIGURES

Figure 1-1 - Localities of Project Development Area, Exploratory Priority Area and Pipeline Corridors	3
Figure 1-2 – Co-ordinate map of the Production Right Application Area, Project Development Area, Exploratory Priority Area and Pipeline Corridors	4



1 INTRODUCTION AND SCOPE OF REPORT

1.1 PROJECT BACKGROUND AND LOCATION

TotalEnergies EP South Africa B.V. (TEEPSA), together with its joint venture partners, QatarEnergy International E&P LLC (previously Qatar Petroleum International Upstream LLC), Canadian Natural Resources International South Africa Limited, and a South African consortium, MainStreet 1549, held an Exploration Right (Exploration Right Ref. No.: 12/3/067) over Block 11B/12B that expired on 6 September 2022. TEEPSA submitted a Production Right (PR) application in terms of Section 83 of the Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002) (MPRDA), as amended, to the Competent Authority (CA) on 5 September 2022. The CA acknowledged receipt of the application on 19 September 2022.

Block 11B/12B is located offshore the southern cape coast, South Africa and the application area is approximately 12 000 km² (see Figure 1-1). The north-eastern point of the Block 11B/12B application area is approximately 75 km offshore Cape St Francis and the north-western point is approximately 120 km offshore Mossel Bay. Within Block 11B/12B, the two areas where most Project activities will be undertaken are indicated in Figure 1-1 as the Project Development Area and the Exploratory Priority Area. The corner co-ordinates of the Block, Project Development Area and the Exploratory Priority Area are provided in Table 1-1, Table 1-2, and Table 1-3 respectively and presented in

Figure 1-2.

Exploration activities in Block 11B/12B commenced in 2012 and ended in 2020. Drilling efforts focused on the south-west section of the Block, known as the Project Development Area, where the drilling of the Brulpadda – 1AX exploration well was completed in February 2019 and the drilling of the Luiperd – 1X exploration well was completed in October 2020. Extensive 3D seismic survey data was acquired between 2019 and 2020. This exploration programme led to an important gas discovery and, after further completion of technical and feasibility studies, the potential viability of the gas and associated condensate resources was confirmed; however commercial agreements for the sale of the gas into the domestic market must still be achieved. TEEPSA is now planning to develop Block 11B/12B, if a PR is granted and if commercial agreements for the sale of the gas onto the domestic market can be achieved.

The development of Block 11B/12B will involve the drilling of five production wells, with the option of drilling a sixth well, in the Project Development Area. The wells will be connected via subsea infrastructure to a pipeline carrying both gas and associated condensates to the existing F-A Platform, located approximately 40 km northwest of Block 11B/12B. Owned and operated by the Petroleum Oil and Gas Corporation of South Africa (PetroSA), the F-A Platform was constructed in the early 1990's and processed gas and condensate from the Block 9 gas fields to supply the PetroSA Gas-to-Liquid (GTL) plant located outside Mossel Bay. The Platform was placed in care and maintenance mode in November 2020 and it is intended that this facility will be used to process gas and condensate from Block 11B/12B. The processed products will be conveyed from the Platform to shore via existing subsea pipelines.



The outcome of the on-going commercial negotiations (including agreements for the sale of the gas) should determine the use of the gas. Some possible use scenarios include GTL or Gas -to-Power (GTP). Any construction, modification or upgrades at the F-A Platform, pipelines connecting the platform to the shore, or at any onshore facility, if required by PetroSA or the entity then in charge, will be subjected to a separate Environmental Authorisation (EA) application.

While the primary objective of the Project is to develop and produce the discovered gas and associated condensates, further drilling of exploration and appraisal wells is proposed in the Exploratory Priority Area, in the central and eastern section of Block 11B/12B, and hence is included in the scope of the EA application. The objective of the exploration drilling campaign is to further understand the extent and characteristics of hydrocarbon resources. In some areas of the Block, such as in the central and eastern areas of the Block, no exploratory drilling has been conducted to date. However, extensive 2D seismic surveys were acquired in 2020 and various potential additional prospects were identified. It is also understood from these assessments that gas and associated condensates are the potential hydrocarbon resource in these areas but could possibly include oil. TEEPSA intends to conduct an exploration drilling campaign of up to four exploration and appraisal wells in this area with the objective to further define the resource.

The Project's activities also include undertaking surveys in in specific areas in Block11B/12B, to refine the understanding of the offshore Block.

The Project offshore activities will require onshore support in terms of delivery of plant and equipment, materials and supplies from ports such as Mossel Bay, Gqeberha and/or Cape Town. Helicopters will operate from George Airport to support offshore activities, as required. Logistics, laydown areas and support will be undertaken from Mossel Bay port using existing infrastructure and facilities.

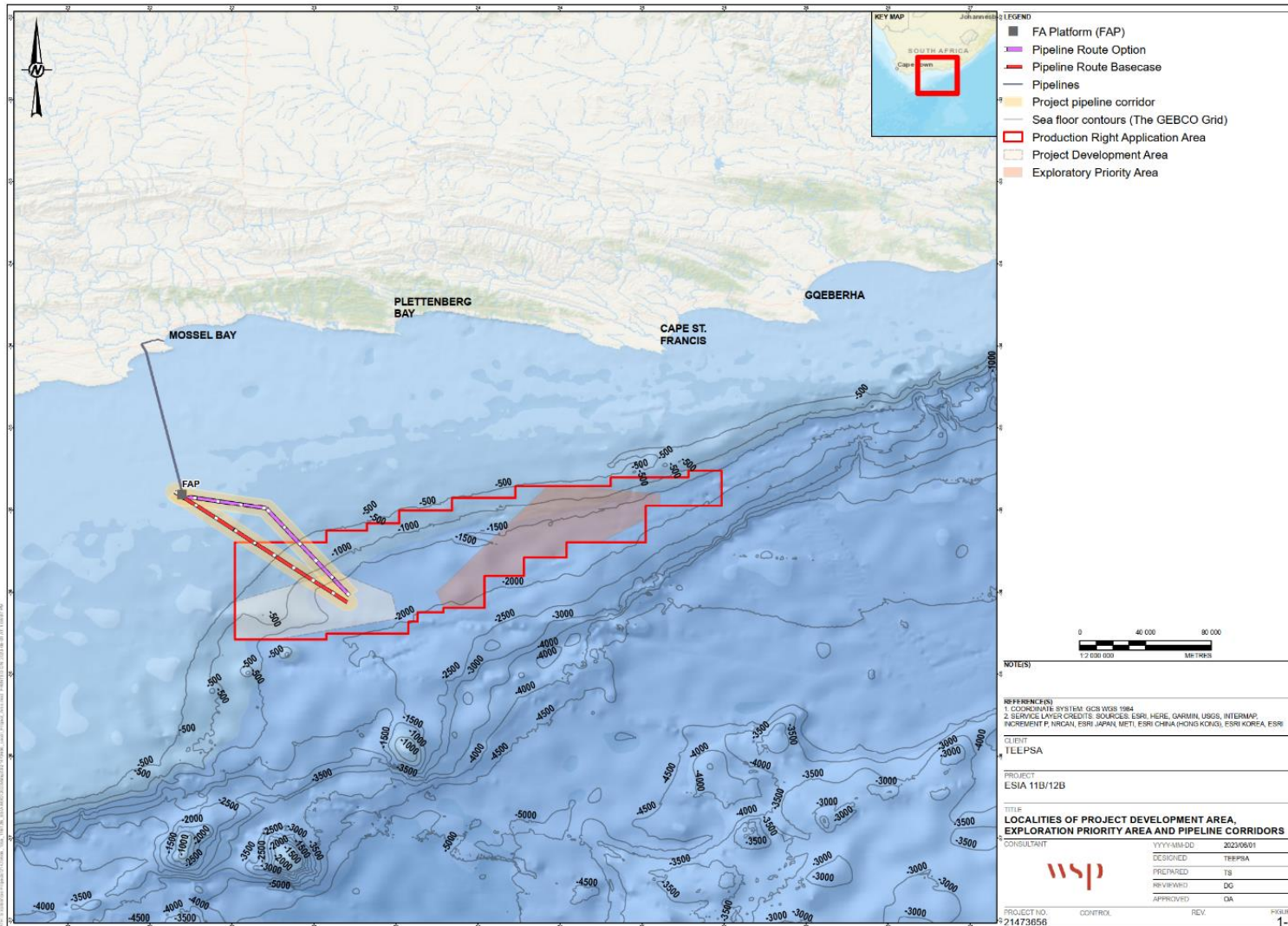


Figure 1-1 - Localities of Project Development Area, Exploratory Priority Area and Pipeline Corridors

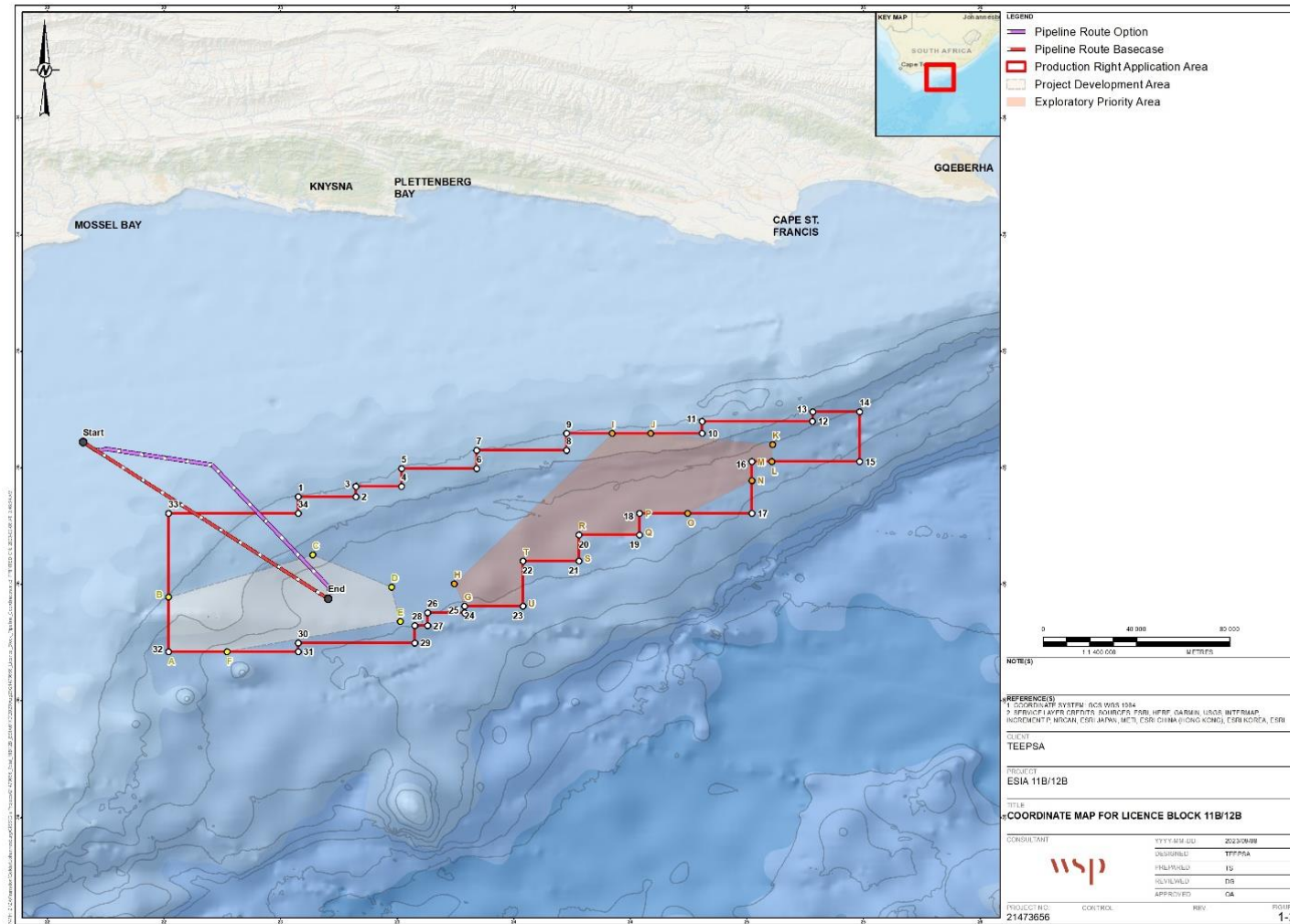


Figure 1-2 – Co-ordinate map of the Production Right Application Area, Project Development Area, Exploratory Priority Area and Pipeline Corridors

Table 1-1 – Block 11B/12B Application Area Co-ordinates

No.	Longitude (°) (E)	Latitude (°) (S)	No.	Longitude (°) (E)	Latitude (°) (S)
1	22° 59' 58.345" E	35° 11' 7.153" S	18	24° 18' 58.377" E	35° 15' 0.234" S
2	23° 13' 19.258" E	35° 11' 7.153" S	19	24° 18' 58.366" E	35° 20' 0.231" S
3	23° 13' 19.258" E	35° 8' 43.165" S	20	24° 4' 58.308" E	35° 20' 0.261" S
4	23° 23' 56.914" E	35° 8' 43.165" S	21	24° 4' 58.300" E	35° 26' 0.227" S
5	23° 23' 56.914" E	35° 4' 35.136" S	22	23° 51' 58.246" E	35° 26' 0.211" S
6	23° 41' 18.761" E	35° 4' 35.136" S	23	23° 51' 58.270" E	35° 36' 30.158" S
7	23° 41' 18.761" E	35° 0' 23.268" S	24	23° 38' 28.284" E	35° 36' 30.139" S
8	24° 2' 7.072" E	35° 0' 23.268" S	25	23° 38' 28.292" E	35° 38' 0.136" S
9	24° 2' 7.072" E	34° 56' 30.663" S	26	23° 29' 58.307" E	35° 38' 0.143" S
10	24° 33' 29.791" E	34° 56' 30.663" S	27	23° 29' 58.314" E	35° 41' 0.145" S
11	24° 33' 29.791" E	34° 53' 39.513" S	28	23° 26' 58.313" E	35° 41' 0.148" S
12	24° 59' 2.233" E	34° 53' 39.513" S	29	23° 26' 58.313" E	35° 45' 0.147" S
13	24° 59' 3.896" E	34° 51' 28.391" S	30	22° 59' 58.293" E	35° 45' 0.199" S
14	25° 9' 58.403" E	34° 51' 28.391" S	31	22° 59' 58.290" E	35° 47' 0.192" S
15	25° 9' 58.403" E	35° 3' 0.239" S	32	22° 29' 58.216" E	35° 47' 0.292" S
16	24° 44' 58.378" E	35° 3' 0.260" S	33	22° 29' 58.109" E	35° 15' 0.334" S
17	24° 44' 58.381" E	35° 15' 0.209" S	34	22° 59' 58.359" E	35° 15' 0.324" S

Table 1-2 – Project Development Area Co-ordinates

No.	Longitude (°) (E)	Latitude (°) (S)	No.	Longitude (°) (E)	Latitude (°) (S)
A	22°29' 58."16" E	35°47' 0."92" S	D	23°21' 33."26" E	35°32' 2."29" S
B	22°30' 0."00" E	35°34' 21."49" S	E	23°23' 39."64" E	35°40' 1."30" S
C	23' 3' 24."09" E	35°24' 34."61" S	F	22°43' 28."37" E	35°47' 0."81" S

Table 1-3 – Co-ordinates for Exploratory Priority Area

No.	Longitude (°) (E)	Latitude (°) (S)	No.	Longitude (°) (E)	Latitude (°) (S)
G	23° 38' 28.284" E	35° 36' 30.139" S	N	24° 44' 58.379" E	35° 7' 23.901" S
H	23° 36' 7.584" E	35° 31' 19.450" S	O	24° 30' 8.557" E	35° 15' 0.223" S
I	24° 12' 36.808" E	34° 56' 30.663" S	P	24° 18' 58.377" E	35° 15' 0.234" S
J	24° 21' 36.295" E	34° 56' 30.663" S	Q	24° 18' 58.355" E	35° 20' 0.174" S
K	24° 49' 46.305" E	34° 59' 3.539" S	R	24° 4' 58.327" E	35° 20' 0.174" S
L	24° 49' 38.148" E	35° 3' 0.256" S	S	24° 4' 58.300" E	35° 26' 0.227" S
M	24° 44' 58.378" E	35° 3' 0.260" S	T	23° 51' 58.246" E	35° 26' 0.211" S
			U	23° 51' 58.298" E	35° 36' 30.125" S



1.2 SUMMARY OF AUTHORISATION REQUIREMENTS

The Project triggers listed activities in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (Government Notice Regulation [GNR] 982 of 2014) (EIA Regulations, 2014), as amended, which require EA in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA), as amended. In accordance with the regulatory requirements, TEEPSEA must undertake a Scoping and Environmental Impact Assessment (S&EIA) process in support of its EA application for undertaking the proposed exploration, development and production related activities in Block 11B/12B offshore of the Southern Cape Coast of South Africa (hereafter referred to as the “Project”).

WSP Group Africa (Pty) Ltd (WSP) has been appointed as the independent Environmental Assessment Practitioner (EAP) by TEEPSEA to undertake the S&EIA process in support of the EA application.

1.3 PURPOSE OF REPORT

The S&EIA process is an interdisciplinary procedure to ensure that environmental considerations are included in decisions regarding projects that may impact the environment. The process identifies potential environmental impacts associated with a project and management actions required to either mitigate or avoid the negative impacts or to enhance the positive impacts associated with a project.

The purpose of the S&EIA process is to inform decision-makers and the public of the environmental consequences of the Project. The Scoping Phase commenced on 1 December 2022, when the draft scoping report was placed into the public domain for comment. The draft scoping report contained key information pertaining to the Project, preliminary baseline environment description and the plan of study for the impact assessment (IA) Phase. The draft scoping report was updated and finalised, to address comments received from Interested and Affected Parties (I&APs). The final scoping report was submitted to the CA on 31 March 2023. The CA accepted the final scoping report on 18 May 2023.

This Environmental and Social Impact Assessment (ESIA) report has been compiled in accordance with Appendix 3 of the EIA Regulations, 2014, as amended, and provides the outcomes of the IA, including specialist study findings, as well as the recommended Environmental Management Plan (EMP).

The purpose of this ESIA report is to present the afore-mentioned information in a clear and accessible format so that I&APs may review, understand and provide comment on the document and findings of the IA Phase. The opportunity for comment is detailed in Section 1.4.

This ESIA report is distributed for review and comment as part of the S&EIA Process undertaken for the Project. This ESIA report provides a description of the Project and affected environment, documents the S&EIA Process undertaken to date, provides the findings of the IA, and presents mitigation and monitoring measures that are recommended to enhance benefits and limit negative impacts. The structure of the report is presented in Section 1.5.

1.4 OPPORTUNITY TO COMMENT

This ESIA report will be distributed for public review and comment from 22 September to 25 October 2023, in order to provide I&APs with an opportunity to comment on any aspect of the S&EIA Process and the Project. Paper copies of the full ESIA report, EMP, Non-Technical Summary (NTS) and comment forms will be placed at public places indicated in Table 1-4. The full ESIA report, NTS and comment forms will also be placed on the WSP website at <https://www.wsp.com/en-za/services/public-documents#esia> and the WSP data-free website at <https://wsp-engage.com/Total-11B12B>. See Section 4 for more details on the Public Participation Process (PPP) that will be followed for the IA Phase.

Table 1-4 – Locations of placements of printed copies of ESIA report, NTS and Comment Forms

Town	Location/s
EASTERN CAPE	
East London	<ul style="list-style-type: none"> ■ Buffalo City Municipal Library ■ Harbour - Transnet National Ports Authority
Gqeberha	<ul style="list-style-type: none"> ■ Newton Park Library ■ North End Library
Port Alfred	<ul style="list-style-type: none"> ■ Port Alfred Library
Jeffrey's Bay	<ul style="list-style-type: none"> ■ Jeffrey's Bay Tourism Office
Humansdorp	<ul style="list-style-type: none"> ■ Kouga Local Municipality Humansdorp Office
St. Francis Bay	<ul style="list-style-type: none"> ■ St Francis Tourism and Municipal Offices ■ St Francis Bay Library
Cape St. Francis	<ul style="list-style-type: none"> ■ The Coastal Collective
Tsitsikamma	<ul style="list-style-type: none"> ■ Koukamma Local Municipality Kareedouw Office
WESTERN CAPE	
Plettenberg Bay / Keurbooms River	<ul style="list-style-type: none"> ■ Plettenberg Public Library ■ Plettenberg Ski Boat Club ■ CapeNature Office
Knysna	<ul style="list-style-type: none"> ■ Knysna Angling and Diving Club Knysna Tourism Office
Sedgefield	<ul style="list-style-type: none"> ■ Sedgefield Tourism Information Centre
Wilderness	<ul style="list-style-type: none"> ■ Wilderness Tourism Office
George	<ul style="list-style-type: none"> ■ CapeNature Office ■ Thembaletu Library WCG eCentre
Mossel Bay	<ul style="list-style-type: none"> ■ Kwanonqaba Library ■ D'Almeida Library ■ Mossel Bay Harbour ■ Mossel Bay Tourism Office ■ Mossel Bay Municipality Office
Gouritz River Mouth	<ul style="list-style-type: none"> ■ Gouritz River Municipal Office
Stilbaai	<ul style="list-style-type: none"> ■ Hessequa Municipality Library



Any comments on the ESIA report should be submitted to WSP using any of the following platforms:

- Email: gld.teepsaesia@wsp.com
- Post: PO Box 6001, Halfway House, 1685
- Telephone: +27 11 254 4800
- WhatsApp: +27 76 694 3842

I&APs are also invited to attend information sharing meetings where comments, queries and concerns will also be recorded. Details of the information sharing meetings are provided in Section 4.4.4. For comments to be considered during the remainder of the S&EIA process, they should reach WSP by no later than 25 October 2023.

1.5 STRUCTURE OF REPORT

This ESIA report consists of 14 Sections and 16 Appendices, the contents of which are outlined in Table 1-5.

Table 1-5 – ESIA Report Structure

Section	Contents
Executive Summary	Provides an overview of the main findings of the S&EIA Process.
Section 1 - Introduction	Describes the project background; summarises the authorisation requirements; describes the purpose of the report and opportunity for comment; and outlines the report structure.
Section 2 – Administrative and Legal Framework	Details the key South African administrative authorities applicable to the Project; describes the legislative requirements of the S&EIA Process; and describes the international regulations and key TEEPSEA standards and policies applicable to the Project.
Section 3 – ESIA Process and Approach	Provides details of the EAP and the specialist teams; describes the S&EIA Process and approach undertaken to date; presents the key assumptions and limitations applicable to the S&EIA Process; and presents the way forward for the remainder of the IA Phase.
Section 4 – Public Participation	Details the objectives of the PPP undertaken as part of the S&EIA Process and describes the public participation tasks undertaken to date, as well as the tasks envisaged for the remainder of the IA Phase.
Section 5 – Policy, Need and Desirability	Provides a summary of the international, national and local policies that informed the need and desirability of the Project.
Section 6 – Project Description	Provides background to the Project area and presents a description of the Project.
Section 7 – Receiving Environment	Provides a description of the physical, biophysical and socio-economic environment likely to be affected by the Project.
Section 8 – Environmental and Social Screening of Potential Impacts	Provides a high-level screening of the interaction between the Project activities and the receiving environment that was undertaken during the Scoping Phase.
Section 9 – IA – Normal Operations	Describes and assesses the potential impacts arising during normal operations.

Section	Contents
Section 10 – IA – Unplanned Events	Describes and assesses the potential impacts in the event of unplanned events.
Section 11 – Cumulative Impacts	Provides a description of how the Project activities could contribute to cumulative impacts.
Section 12 – EMPr	Details the EMPr prepared for the Project, including a summary of environmental and social sensitivities, management actions to mitigate potential impacts, as well as monitoring and auditing procedures applicable to the Project.
Section 13 – Conclusion and Recommendations	Provides a conclusion to the ESIA report and summarises the recommendations for the Project.
Section 14 - References	Provides a list of the references used in compiling this ESIA report.
Appendices	<p>Appendix 1: EAP Undertaking</p> <p>Appendix 2: Curricula Vitae of the Project Team</p> <p>Appendix 3: Acceptance of Final Scoping Report and Correspondence</p> <p>Appendix 4: Method for Assessing Impact Significance</p> <p>Appendix 5: PPP Documentation</p> <p>Appendix 5.1: Scoping Phase PPP Documentation</p> <p>Appendix 5.2: I&AP Database</p> <p>Appendix 5.3: Notice to I&APs</p> <p>Appendix 6: Oil Spill Modelling</p> <p>a. Oil Spill Modelling in the western Project Development Area, including Peer Review</p> <p>b. Oil Spill modelling in the eastern Exploratory Priority Area, including Peer Review</p> <p>Appendix 7: Drill Discharge Modelling, including Peer Review</p> <p>a. Drill discharge Modelling in the western Project Development Area, including Peer Review</p> <p>b. Drill discharge Modelling in the eastern Exploratory Priority Area, including Peer Review</p> <p>Appendix 8: Underwater Noise Modelling</p> <p>Appendix 9: Climate Change Impact Assessment</p> <p>Appendix 10: Air Quality Impact Assessment (AQIA)</p> <p>Appendix 11: Marine Ecology and Fisheries Impact Assessment</p> <p>Appendix 12: Cultural Heritage Impact Assessment (CHIA)</p> <p>Appendix 13: Social Impact Assessment (SIA)</p> <p>Appendix 14: Maritime Heritage Impact Assessment</p> <p>Appendix 15: Economic Impact Assessment</p> <p>Appendix 16: Closure Plan</p>



Building 1, Maxwell Office Park
Magwa Crescent West, Waterfall City
Midrand, 1685
South Africa

wsp.com

PUBLIC