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Draft Scoping Report

Transnet National Port Authority (TNPA) 22MW Dual Fuel Generator at the Port of Richards Bay, KwaZulu-Natal

Version – Draft for Public Review

7 March 2024

Applicant: Transnet National Ports Authority

GCS Project Number: 23-0807

Client Reference: TNPA/2023/06/0023/33545/RFP



GCS (Pty) Ltd. **Reg No:** 2004/000765/07 Est. 1987
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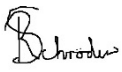
Author	Rona Schröder *EAPASA: Reg. 2020/1149* *Pri.Sci.Nat.: 120605*		07 March 2024
Environmental Manager	Gerda Bothma Pr. Sci. Nat: 117348		07 March 2024

EXECUTIVE SUMMARY

Background and Project Description

The Transnet National Ports Authority (TNPA) is a division of Transnet SOC Ltd and manages all eight of the Transnet commercial Ports on the South African coastline. The Port of Richards Bay (PoRB) is one of the country's largest ports in size, with total land and water surfaces of 2 174 hectares and 1 443 hectares, respectively. TNPA is responsible for ensuring that the ports are economic hubs for the country while ensuring that they also comply with the South African Laws and Regulations which is governed by the National Ports Act (Act No. 12 of 2005) (NPA) which directs the TNPA to facilitate the provision of water, lighting, power, sewerage, and telecommunications within the ports. The PoRB is still developing and constantly upgrading to ensure that the port provides the best possible service and attracts business activities for importing and exporting. Approximately half of the PoRB has been developed. Mining activities and commodities are currently the largest contributor to the imports and exports at the port, with coal being the largest exported commodity.

This project is needed to generate backup electricity which will ensure continuous operations at the port during power outages and prevent revenue and operational time loss due to power outages or loadshedding.

This Project entails the construction of the following infrastructure within the existing port areas:

- A dual fuel generator for the electricity generation of 22MW output which can be operated with diesel or liquid natural gas;
- The installation of diesel fuel tank(s) storage of the total capacity of 600m^3;
- The installation of a 200m^3 tank storage of demineralised water;
- Evacuation lines to the substations;
- Fencing for the site;
- An auxiliary pit;
- A drain facility for the used diesel and sludge;
- A transmission line from the generator to the Harbour West Substation, Sorting Yard substation, Liquid Pitch Substation, Arrivals Yard Substation, Eastern Intake Substation, Carina Substation and Admin Quay Substation will be installed in order to allow for power distribution from the generator to the rest of the port; and
- LNG pipeline from the Gas hub to the Generator site.

Scoping and Environmental Impact Report (S&EIR) Process

A S&EIR process has two distinct phases: The Scoping Phase and the Environmental Impact Reporting Phase. This report, the Draft Scoping Report (DSR) identifies potential biophysical, social and health aspects and impacts of the proposed development on the receiving environment and invites comments from stakeholders in the identification of key issues and areas of concern, to inform the S&EIR process. The main objectives of the Scoping Phase are as follows:

- Describe the proposed project, including the legislative context and project motivation;
- Identify and describe applicable alternatives for the proposed project;
- Identify and describe the anticipated environmental, social, economic and cultural impacts, including cumulative impacts, associated with the proposed development and outline key issues and specialist studies, included within the S&EIR process to assess these issues in further detail;
- Identify suitable measures to avoid, manage or mitigate identified impacts and determine the extent of the residual risks that need to be managed and monitored;
- Describe the methodology applied to conduct the scoping phase;
- Describe the process of engagement with identified stakeholders, including their views and concerns; and
- Describe the Plan of Study for the Environmental Impact Report (EIR) Process (second phase of the S&EIR process), which outlines the nature and extent of further investigations required in the EIR phase.

The Scoping phase concludes with the submission of a Scoping Report to the Competent Authority (CA) for acceptance. If accepted, the CA will instruct GCS to commence the EIR phase. This report represents the draft version of the Scoping Report that will be made available for public comment.

As per the requirements of the NEMA EIA Regulations (2014, as amended), this DSR has been issued for public participation in terms of GNR 326, Regulation 43.

All interested and affected parties (I&APs) are required to register as stakeholders to enable them to comment during this Public Participation Process (PPP). This PPP provides an opportunity to comment and raise any concerns or suggestions concerning the project.

All comments received during the PPP will be recorded and addressed within the Scoping Comments and Responses Report as well as the EIR phase of the project.

This DSR will be available for comment for 30 days from **08 March 2024 until 11 April 2024**, as stipulated by the NEMA EIA Regulations (2014, as amended).

In summary, the Draft Scoping Report includes the following:

- Details of the Environmental Assessment Practitioner (EAP);
- Location of the proposed development;
- Plan which locates the proposed activity or activities applied for at an appropriate scale;
- Description of the scope of the proposed activity;
- Description of the policy and legislative context applicable to the proposed development;
- Description of the need and desirability for the proposed development;
- Description of the potential environmental issues and impacts which have been identified to date;
- Full description of the process followed to reach the proposed preferred activity, site and location within the site;
- A Plan of Study (POS) detailing the tasks and specialist studies that will be undertaken during the Impact Assessment Phase; and
- Undertakings under oath or affirmation by the EAP.

Your comment on the Draft Scoping Report

This DSR will be made available to all registered I&APs for public review and comment from **8 March 2024** (comment period ending **11 April 2024**). I&APs will be notified of the availability and will be sent an electronic copy on request. Copies will also be available for download from the GCS website: https://www.gcs-sa.biz/public-documents/

Any comments on the DSR must be submitted in writing or email (including any additional supporting material) on or before **11 April 2024** directly to GCS Environment SA (Pty) Ltd (the Environmental Assessment Practitioner) using the following:

Attention: Anelle Lötter / Gerda Bothma	PO Box 2597
Tel: 011 803 5726	Rivonia
Fax: 011 803 5232	Johannesburg
E-mail: anellel@gcs-sa.biz / gerdab@gcs-sa.biz	2128

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ABBREVIATIONS

Applicant	Transnet National Ports Authority (TNPA)
AQIA	Air Quality Impact Assessment
BID	Background Information Document
BPEO	Best Practical Environmental Option
BSP	Biodiversity Sector Plan
CA	Competent Authority
CBA	Critical Biodiversity Area
CMP	Coastal Management Programme
CVI	Coastal Vulnerability Index
CRR	Comments and Responses Report
DEIR	Draft Environmental Impact Report
DFFE	Department of Fisheries, Forestry and Environment
DFO	Dust Fallout
DSR	Draft Scoping Report
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
EFZ	Estuarine Functional Zone
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EKZNW	Ezemvelo KZN Wildlife
EMF	Environmental Management Framework
EMPr	Environmental Management Programme
FEIR	Final Environmental Impact Report
GCS	GCS Environment South Africa (Pty) Ltd
GNR	Government Notice Regulation
GPS	Global Positioning System
ha	hectares
I&APs	Interested and Affected Parties
IDA	Infrastructure Development Act
km	kilometre
kV	Kilo volt
KZN	Kwa-Zulu Natal Province
LNG	Liquefied Natural Gas
m	meter
MAE	Mean Annual Evaporation
MAP	Mean Annual Precipitation
masl	Meters above sea level

mm/a	millimetres per annum
MW	Mega watt
NEM:BA	National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)
NEM: PAA	National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
NEM: WA	National Environmental Management: Waste Act (Act No. 59 of 2008)
NEMA	National Environmental Management Act, 1998 (Act No. 107 of 1998)
NFEPA	National Freshwater Ecosystem Priority Areas
NGO	Non-Governmental Organisation
NHRA	National Heritage Resources Act, (Act No. 25 of 1999)
NWA	National Water Act, 1998 (Act No. 36 of 1998)
PoRB	Port of Richards Bay
PPP	Public Participation Process
RBIDZ	Richards Bay Industrial Development Zone
S&EIR	Scoping and Environmental Impact
SIA	Social Impact Assessment
SIP	Strategic Integrate Projects
SOE	State Owned Enterprise
SoW	Scope of Work
TFR	Transnet Freight Rail
TNPA	Transnet National Ports Authority
TPT.	Transnet Port Terminal
WMA	Water Management Area
WUL	Water Use License

STRUCTURE AND CONTENT OF THIS REPORT

This Scoping Report has been prepared in compliance with Appendix 3 of the EIA Regulations (2014, as amended) and is divided into various chapters and appendices, the contents of which are outlined below.

CONTENTS OF THE SCOPING REPORT	RELEVANT SECTION IN THE REPORT
Details of – i. The EAP who prepared the report; and ii. The expertise of the EAP, including a curriculum vitae	Section 1.3 and Appendix B
The location of the activity, including – i. The 21-digit Surveyor General code for each cadastral land parcel; ii. Where available, the physical address and farm name; iii. Where the required information in terms of (i) and (ii) is not available, the coordinates of the boundary of the property or properties;	Section 1.2
A plan which locates the proposed activity or activities applied for at an appropriate scale, or, if it is – i. A linear activity, a description and coordinates of the corridor in which the proposed activity or activities is to be undertaken; or ii. On land where the property has not been defined, the coordinates within which the activity is to be undertaken	Section 1.2
A description of the scope of the proposed activity, including – i. All listed and specified activities triggered; ii. A description of the activities to be undertaken, including associated structures and infrastructure;	Section 1.7
A description of the policy and legislative context within which the development is proposed including an identification of all legislation, policies, plans, guidelines, spatial tools, municipal development planning frameworks and instruments that are applicable to this activity and are to be considered in the assessment process	Section 1.4
A motivation for the need and desirability for the proposed development including the need and desirability of the activity in the context of the preferred location	Section 1.8
A full description of the process followed to reach the proposed preferred activity, site and location within the site, including – i. Details of all alternatives to be considered; ii. Details of the public participation process undertaken in terms of regulation 41 of the Regulations, including copies of the supporting documents and inputs; iii. A summary of the issues raised by interested and affected parties, and an indication of the manner in which the issues were incorporated, or the reasons for not including them; iv. The environmental attributes associated with the alternatives focusing on geographical, physical, biological, social, economic, heritage and cultural aspects; v. The impacts and risks identified for each alternative, including the nature, significance, consequence, extent, duration and probability of the impacts, including the degree to which these impacts - aa. can be reversed; bb. may cause irreplaceable loss of resources; and cc. can be avoided, managed or mitigated; vi. The methodology used in determining and ranking the nature, significance, consequences, extent, duration and probability of potential environmental impacts and risks associated with the alternatives; vii. Positive and negative impacts that the proposed activity and alternatives will have on the environment and on the community	Section 3, Section 5 and Section 7

that may be affected focusing on the geographical, physical, biological, social, economic, heritage and cultural aspects; viii. The possible mitigation measures that could be applied and level of residual risk; ix. The outcome of the site selection matrix; x. If no alternatives, including alternative locations for the activity were investigated, the motivation for not considering such; and xi. A concluding statement indicating the preferred alternatives, including preferred location of the activity	
A plan of study for undertaking the environmental impact assessment process to be undertaken, including – i. A description of the alternatives to be considered and assessed with the preferred site, including the option of not proceeding with the activity; ii. A description of the aspects to be assessed as part of the environmental impact assessment process; iii. Aspects to be assessed by specialists; iv. A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists; v. A description of the proposed method of assessing duration and significance; vi. An indication of the stages at which the competent authority will be consulted; vii. Particulars of the public participation process that will be conducted during the environmental impact assessment process; and viii. A description of the tasks that will be undertaken as part of the environmental impact assessment process; ix. Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and to determine the extent of the residual risks that need to be managed and monitored	Section 6
An undertaking oath or affirmation by the EAP in relation to – i. The correctness of the information provided in the report; ii. The inclusion of comments and inputs from stakeholders and interested and affected parties; and iii. Any information provided by the EAP to interested and affected parties and any responses by the EAP to comments or inputs made by interested and affected parties;	Section 10
An undertaking under oath or affirmation by the EAP in relation to the level of agreement between the EAP and interested and affected parties on the plan of study for undertaking the environmental impact assessment;	Section 10
Where applicable, any specific information required by the competent authority; and	N/A
Any other matter required in terms of section 24(4)(a) and (b) of the Act.	N/A

1 INTRODUCTION

1.1 Introduction to the Proposed TNPA 22 MW Generator Project

The Transnet National Ports Authority (TNPA) is a division of Transnet SOC Ltd and manages all eight of the Transnet commercial Ports on the South African coastline. The Port of Richards Bay (PoRB) is one of the country's largest ports in size, with total land and water surfaces of 2 174 hectares and 1 443 hectares, respectively. TNPA is responsible for ensure that the the ports are economic hubs for the country while ensuring that it also complies with the South African Laws and Regulations which is governed by the National Ports Act (Act No. 12 of 2005) (NPA) which directs the TNPA to facilitate the provision of water, lighting, power, sewerage, and telecommunications within the ports. The PoRB is still developing and constantly upgrading to ensure that the port provides the best possible service and attracts business activities for importing and exporting. Approximately half of the PoRB has been developed. Mining activities and commodities are currently the largest contributor to the imports and exports at the port, with coal being the largest exported commodity.

This project is needed to generate backup electricity which will ensure continuous operations at the port during power outages and prevent revenue and operational time loss due to power outages or loadshedding.

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- The installation of a 200m^3 tank storage of demineralised water;
- Evacuation lines to the substations;
- Fencing for the site;
- An auxiliary pit;
- A drain facility for the used diesel and sludge;
- A transmission line from the generator to the Harbour West Substation, Sorting Yard substation, Liquid Pitch Substation, Arrivals Yard Substation, Eastern Intake Substation, Carina Substation and Admin Quay Substation will be installed in order to allow for power distribution from the generator to the rest of the port; and
- LNG pipeline from the Gas hub to the Generator site.

In terms of the National Environmental Management Act (Act 107 of 1998, as amended) (NEMA) and the NEMA Environmental Impact Assessment (EIA) Regulations (2014, as amended), a full Scoping and Environmental Impact Report (S&EIR) Process is required for the construction of the Genset 22MW Generation Plant, fuel storage areas, the connecting powerline and the connecting LNG pipeline Project. GCS Environment South Africa (Pty) Ltd (GCS SA) was appointed to undertake the environmental assessment process to determine the biophysical, social and economic impacts associated with undertaking the proposed activities.

1.2 Project Location

The proposed project is located in the Port of Richards Bay within the City of uMhlathuze (CoM) Local Municipality and King Cetshwayo District Municipality (KCDM)KwaZulu Natal some 160 km north-east of Durban and 465 km south of Maputo. The project site location falls within the main Port entrance and the Employee Care Centre in the Bayvue Precinct. The GPS coordinates for the site are 28°47'8.42"S and 32° 1'54.45"E. (refer to Figure 1-1 for the Locality Map)

Table 1-1: Property Details

PROPERTY	EXTENT	TITLE DEED	REGISTERED OWNER
Erf 397 of Township Richards Bay	800.0000DUM	T3484/972	Government of the Republic of South Africa

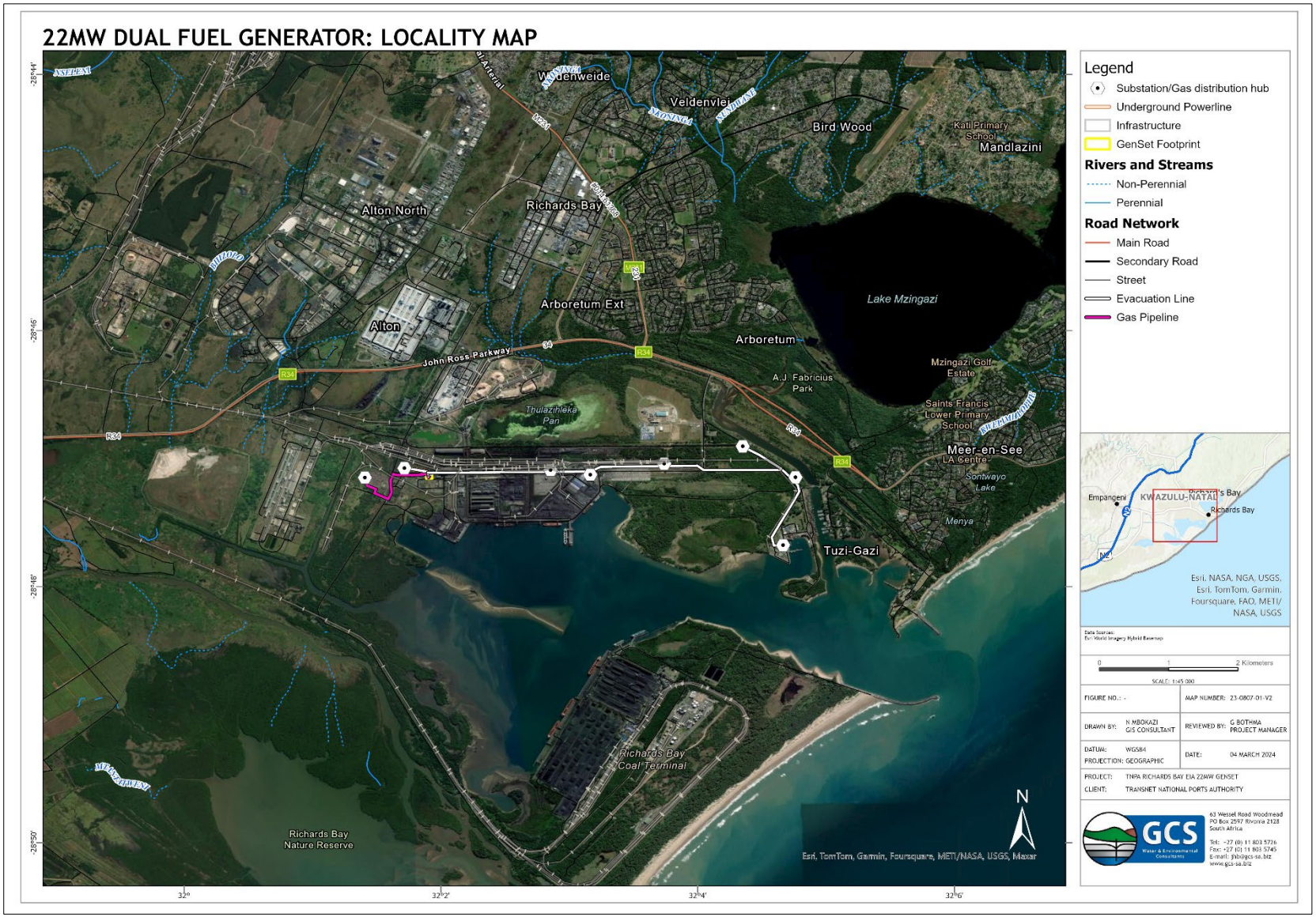

Figure 1-1: Locality of the Genset Property with the existing substations and new powerline.

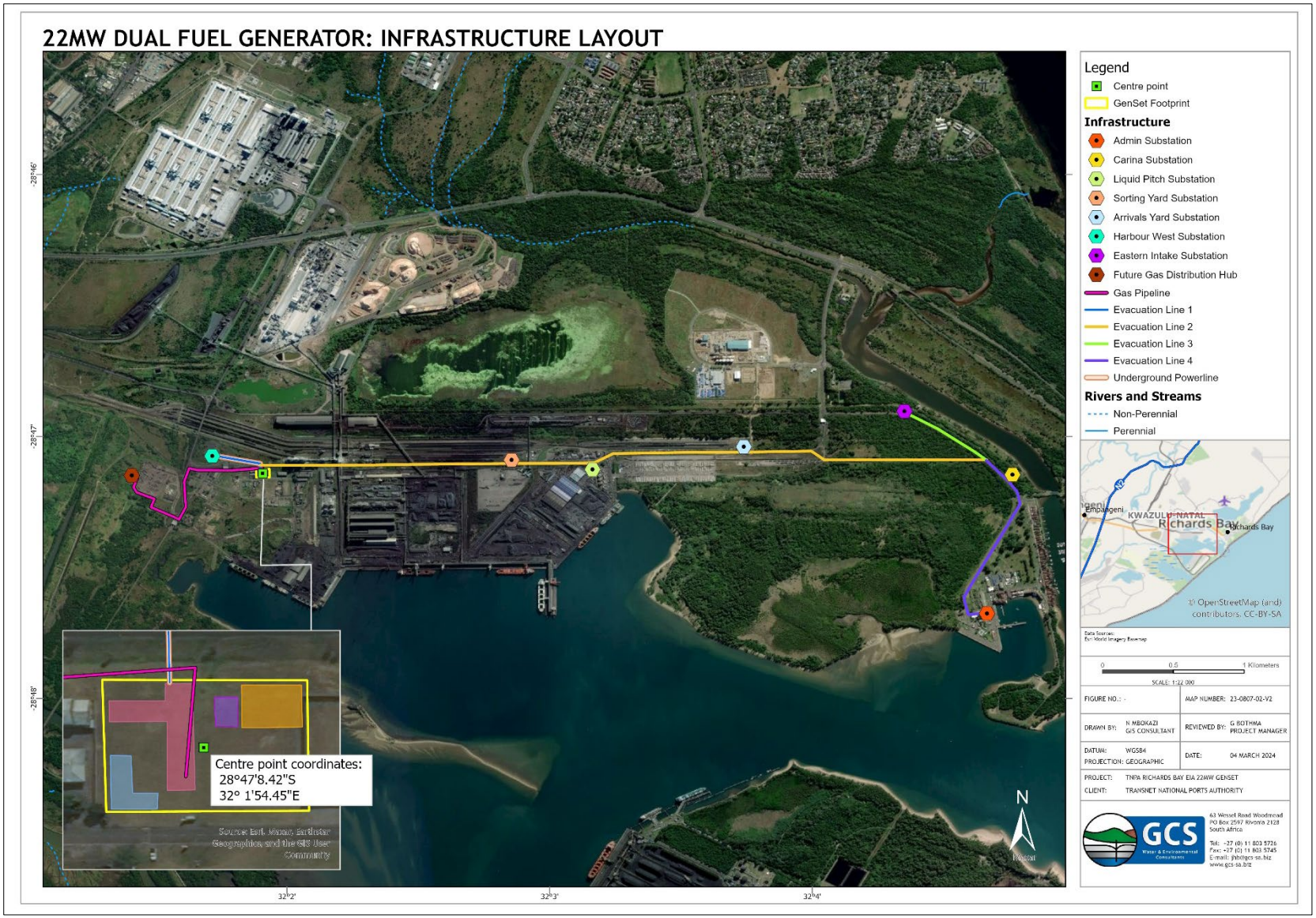

Figure 1-2: Infrastructure Layout

1.3 Details of the Applicant and EAP

1.3.1 Applicant

The applicant is Transnet National Ports Authority (hereafter referred to as "TNPA"). TNPA is a subsidiary of Transnet SOC Limited which is responsible for the operations of the eight National Ports located in South Africa. The details of the applicant are provided in Table 1-2.

Table 1-2: Name and Address of Applicant

ITEM	COMPANY CONTACT DETAILS
Applicant Name:	Transnet SOC Ltd
Company/ Trading name (if any)	Transnet National Ports Authority (TNPA)
Company Registration Number	1990/000900/30
Company Representative:	Nosicelo Biyana
Telephone No.:	067 367 0110
Facsimile No.:	N/A
E-mail Address:	Nosicelo.Biyana@transnet.net
Postal Address:	TNPA Administration Building Port of Richards Bay, Alton, Richards Bay.

1.3.2 Environmental Assessment Practitioner

GCS Environment SA (Pty) Ltd (GCS) have been appointed as the independent Environmental Assessment Practitioners (EAP) to undertake the environmental processes required to obtain approval for the proposed listed activities. The contact details of the EAP are provided in Table 1-3.

Table 1-3: Name and address of environmental assessment practitioner.

ITEM	COMPANY CONTACT DETAILS
Company Name:	GCS Environment SA (Pty) Ltd
Company Representative	Gerda Bothma
EAP:	Rona Schröder EAPASA (Reg. 2020/1149) SACNASP (Pri.Sci.Nat. 120605)
Telephone No.:	+27 (0)11 803 5726
Facsimile No.:	+27 (0)11 803 5745
E-mail Address:	gerdab@gcs-sa.biz / ronas@gcs-sa.biz
Postal Address:	PO Box 2597, Rivonia, 2128

Mrs Bothma has been the Environmental Unit Manager at GCS since 2019 and has over 25 years of experience within the environmental and waste management field. Mrs Bothma has been involved in several engineering projects as the EAP as well as the Environmental Control Officer during construction, working closely with the Occupational Health and Safety Officer.

She also has been involved in projects where waste licensing and water use licensing processes formed an integral part of the services offered and has extensive experience in environmental auditing and compliance monitoring. Mrs Bothma is the Project Manager overseeing the quality control for the application processes.

Rona Schröder is an Environmental Scientist, registered as a Professional Natural Scientist (Pri. Sci. Nat. 120605) with the South African Council for Natural Scientific Professions (SACNASP). Rona is registered EAP (Reg. No. 2020/1149) with the Environmental Assessment Practitioners Association of South Africa (EAPSA).

Ms Schröder has over 10 years' experience as an EAP and environmental manager. Rona has been involved in a wide range of environmental-related projects, including environmental impact assessments; mining rights, mining permits, prospecting permit applications; water use licence applications; environmental performance auditing and working as an environmental manager in the mining sector.

GCS has no conflict of interest related to the contents of this Report. GCS has no personal financial interests in the property and/or activity being assessed in this report. GCS has no personal or financial connections to the relevant property owners, developers, planners, financiers or consultants of the property or activity, other than fair remuneration for professional services rendered for this Report to the CA. GCS declares that the opinions expressed in this Report are independent and a true reflection of their professional expertise. As such, GCS meets the requirements of an independent EAP as per the EIA Regulations 2014.

1.4 Legislative Context

The policy and legislative context applicable to the TNPA 22MW Generator project is summarised in Table 1-4 and penalties applicable to non-compliance to the legislation are detailed in Table 1-5.

Table 1-4: Legislation and guidelines applicable to the TNPA 22MW Generator project

LEGISLATION/ GUIDELINE	OBJECTIVE & RELEVANCE
LEGISLATION	
Constitution of the Republic of South Africa (Act 108 of 1996)	The Constitution is the supreme law governing all other legislation. Environmental legislation is shaped by the Bill of Rights set out in the Constitution. It sets out the rights for every citizen of South Africa and aims to address past social injustices. With respect to the environment, section 24 of the Constitution states that: "*Everyone has the right:* *a) To an environment that is not harmful to their health or well-being;* *b) To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that:*

LEGISLATION/ GUIDELINE	OBJECTIVE & RELEVANCE
	i. Prevent pollution and ecological degradation; *ii. Promote conservation; and* *iii. Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development".* In fulfilment of its constitutional mandate to take reasonable legislative measures that give effect to Section 24, the government has promulgated several environmental laws. These laws provide a legal framework that embodies internationally recognised legal principles. The principal act governing activities that affect the environment is NEMA. The Constitution itself has no permitting requirements. However, the way the environmental right is applied implies that environmental impacts associated with developments should be considered separately and cumulatively. Furthermore, Section 24 includes the notion that justifiable economic and social development should be promoted, through using natural resources and ecologically sustainable development. ***TNPA must ensure that significant environmental impacts are avoided; and where impacts cannot altogether avoided, they must be minimised and mitigated throughout the lifecycle of the TNPA 22MW Generator Project.***
Environmental Conservation Act (73 of 1989) (ECA), as amended	The ECA has now largely been replaced by the NEMA but certain provisions remain in force. The national Noise Control Regulations[1] (NCR) were promulgated in terms of Section 25 of the ECA, relating to noise, vibration and shock. The NCRs were revised[2] to make it obligatory for all authorities to apply the regulations. Under the ECA, the following SANS for assessing and controlling noise include: • 10328:2008 "Methods for environmental noise impact assessments"; and • 10103:2004 "The measurement and rating of environmental noise with respect to annoyance and speech communication". ***The TNPA 22MW Generator Project is likely to increase ambient noise levels during the construction (temporary) and operational phases. Noise impacts are closely related to construction activities and increase traffic volumes and the generator noise during operation. The SANS published under ECA will be considered during the assessment phase and the EMPr will include mitigation measures relating to the mitigation of potential noise impacts.***
National Environmental Management Act (Act 107 of 1998) (NEMA), as amended.	NEMA is the framework law giving effect to the constitutional environmental right and for regulatory tools in respect of environmental impacts. Section 28(1) includes a statutory duty of care, providing that *"Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment".* In terms of sections 24(2) and 24D of NEMA, the then Minister of Environmental Affairs promulgated certain listed activities that may not commence without an EA. Activities promulgated in terms of GN983 and GN9835 require a basic assessment process, while activities promulgated in terms of GN984 require that a full scoping and EIA process be conducted[3]. ***Please refer to Table 1-7 for identified listed activities applicable to the TNPA 22MW Generator Project.***

[1] GNR 154 in Government Gazette No. 13717 dated 10 January 1992
[2] Under GN155 of 10 January 1992
[3] GNs 983, 984 and 985 are promulgated under NEMA in GG 38282 of 4 December 2014 (as amended).

LEGISLATION/ GUIDELINE	OBJECTIVE & RELEVANCE
NEMA EIA Regulations, 2014 (GNR 326, as amended)	Chapter 6 of the 2014 EIA Regulations provides for the requirements for public participation, which must be carried out as part of the EA and WML application process. In terms of Regulations 21 and 23, the outcome of the PPP must be reported in the FSR and EIR submitted to the CA. The PPP, "*must give all potential or registered parties (I&APs), including the CA, a period of at least 30 days to submit comments on each of the EMPR, S&EIRs, and where applicable the closure plan, as well as the report contemplated in regulation 32, if such reports or plans are submitted at different times*" (Regulation 40 (1)). PPP will be undertaken in accordance with chapter 6 of the EIA Regulations, 2014. It must: • provide access to all information that reasonably has or may have the potential to influence any decision regarding an application; • involve consultation with the CA, every state department that administers a law relating to the environment relevant to the application, all relevant organs of state, and all I&APs; and • provide opportunity for I&APs to comment on reports and plans prior to submission of an application and once an application has been submitted to the CA. The process must include: • notification of the application to all I&APs, as stipulated in Regulation 41; • registration of all I&APs, as required in Regulations 42 and 43; and • a CRR and records of meetings of and with I&APs, as outlined in Regulation 44.
DFFE Web-Based Screening Tool	In terms of Regulation 16(1)(b)(v), read with Regulation 21 of the 2014 EIA Regulations, it is compulsory for an EIA application to include a sensitivity report generated by the national web based environmental screening tool[4] (DFFE Screening Tool). The content of specialist reports for certain of the themes is prescribed in the Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes[5] (Assessment Protocols); and Appendix 4 of the EIA Regulations will not be applicable to such themes. Two Assessment Protocols have been gazetted, in March and October 2020. ***Specialist studies are being undertaken to verify the sensitivity themes as identified in the DFFE Screening Tool. Specific requirements for the content of the EIA specialists reports for the agricultural; aquatic and terrestrial biodiversity; plant and animal species themes are included in the Assessment Protocols and these specialist reports will comply with the aforesaid for purposes of the EIA.***
National Environmental Management: Waste Act (Act	The NEMWA's purpose is to: assist in regulating waste management; ensure the protection of human health; and prevent pollution and environmental degradation through sound waste management principles and guidelines. The NEMWA defines waste broadly.[6]

[4] GN R960 of GG 42561, dated 5 July 2019

[5] In terms of in terms of sections 24(5)(a) and (h) and 44 of NEMA and GN R320 of GG 43110 on 20 March 2020 and GN R1150 of GG 43855 on 30 October 2020

[6] *(a) any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether or not such substance, material or object can be re-used, recycled or recovered and includes all wastes as defined in Schedule 3 to this Act; or*
(b) any other substance, material or object that is not included in Schedule 3 that may be defined as a waste by the Minister by notice in the Gazette but any waste or portion of waste, referred to in paragraphs (a) and (b), ceases to be a waste—
(i) once an application for its re-use, recycling or recovery has been approved or, after such approval, once it is, or has been re-used, recycled or recovered;
(ii) where approval is not required, once a waste is, or has been re-used, recycled or recovered;

LEGISLATION/ GUIDELINE	OBJECTIVE & RELEVANCE
59 of 2008) (NEMWA), as amended	It furthermore provides for: • national norms and standards for regulating waste management by all spheres of government; • licensing and control of waste management activities; • remediation of contaminated land; • a national waste information system; and • provision for compliance and enforcement. The NEMWA imposes a general duty upon waste holders to take reasonable measures to avoid waste generation and, where this is impossible, to: minimise the toxicity and quantities of waste generated; reuse, reduce, recycle and recover waste; and ensure that it is treated and disposed of in an environmentally sound way. Failure to do so is a criminal offence, with a maximum fine of R10 million or imprisonment of up to 10 years, or both. ***The TNPA 22MW Generator Project will not require a Waste Management Licence under Category C storage of waste at a facility that has the capacity to store in excess of 80 m³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste, but will have to comply with the norm and standards.***
Regulations published under NEMWA in GN 921 of Government Gazette 37083 on 29 November 2013 (2013 WML Regulations)	It is necessary to hold a WML for defined waste management activities. The 2013 WML Regulations, provides that a WML is required for undertaking certain waste management activities ("Waste Listed Activities"). The Waste Listed Activities are separated into three categories, namely Category A, B and C. Category A and B Waste Listed Activities require a WML, for which either a basic assessment or an EIA process needs to be undertaken that complies with the 2014 EIA Regulations. Category C activities do not require a WML but must comply with *inter alia* the Norms and Standards for Storage of Waste, 2013.[7] ***The TNPA 22MW Generator Project will not require a Waste Management Licence under Category C storage of waste at a facility that has the capacity to store in excess of 80 m³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste, but will have to comply with the norm and standards.***
National Waste Information Regulations[8]	These Regulations regulate the collection of data and information to fulfil the objectives of the national waste information system, as set out in section 61 of the NEMWA, and includes reporting obligations. A registered person must keep a record of the information submitted to the SAWIS or the DFFE. ***TNPA will comply with these regulations.***
National Environmental Management: Air Quality Act (Act 39 of 2004) (NEM:AQA)	NEMAQA was promulgated to ensure the protection and regulation of air quality and provide measures that will prevent pollution and sustainability. Under NEMAQA, the Minister of Environmental Affairs, Forestry and Fisheries must identify substances in ambient air which present a threat to health, wellbeing or the environment and establish national standards for ambient air quality, including the permissible quantity or concentration of each substance in ambient air. The "Listed Activities and Associated Minimum Emission Standards"[9], list activities that could result in atmospheric emissions requiring an atmospheric emissions licence (AEL) before being undertaken. The "National Dust Control Regulations"[10], provide that an acceptable dust fallout rate for a non-residential area is considered more than 600mg/m2/day but less than 1200mg/m2/day (30-day average), with maximum allowable two exceedances per

(iii) where the Minister has, in terms of section 74, exempted any waste or a portion of waste generated by a particular process from the definition of waste; or
(iv) where the Minister has, in the prescribed manner, excluded any waste stream or a portion of a waste stream from the definition of waste.

[7] Published in GN 926 of GG 37088 on 29 November 2013
[8] Published in GN 625 of GG 35583 on 13 August 2012
[9] Published in GN 893 of GG 37054 on 22 November 2013
[10] Published in GN 827 of GG 36974 on 1 November 2013

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	year, provided these exceedances do not take place in consecutive months. Where the dust fallout rate is exceeded, a prescribed dust fallout monitoring programme must be developed and include: • the establishment of a network of dust monitoring points, using method ASTM D1739:1970 (or an equivalent standard), sufficient in number to: establish the contribution to dust fallout in residential and non-residential areas near the premises; monitor identified or likely sensitive receptor locations; and establish the baseline dust fall for the district; and • a schedule for submitting to the air quality officer dust fallout monitoring reports annually or at more frequent intervals, if requested by the air quality officer. Greenhouse gases have been declared priority pollutants under the "Declaration of Greenhouse Gases as Priority Air Pollutants"[11]. ***An AEL may be required for the TNPA 22MW Generator Project. The air quality specialist will undertake the necessary investigations and submit an AEL application with the relevant competent authority, should it be required.***
National Environmental Management: Biodiversity Act (Act 10 of 2004) (NEM:BA)	In line with the Convention on Biological Diversity, NEMBA aims to legally provide for biodiversity conservation, sustainable use and equitable access and benefit sharing. NEMBA creates a basic legal framework for the formation of a national biodiversity strategy and action plan and identification of biodiversity hotspots and bioregions, which may then be given legal recognition. It imposes obligations on landowners (state or private) regarding alien invasive species (AIS). NEMBA requires that provision be made by a site developer to remove any aliens which have been introduced to the site or are present on the site. The NEMBA also provides for listing of threatened or protected ecosystems in one of four categories: critically endangered, endangered, vulnerable or protected. Threatened ecosystems are listed to reduce the rate of ecosystem and species extinction, by preventing further degradation and loss of structure, function and composition of threatened ecosystems. The purpose of listing protected ecosystems is primarily to conserve sites of exceptionally high conservation value. Section 53 of NEM:BA provides that: *"(1) The Minister may, by notice in the Gazette, identify any process or activity in a listed ecosystem as a threatening process.* *(2) A threatening process identified in terms of subsection (1) must be regarded as a specified activity contemplated in section 24(2)(b) of the NEMA and a listed ecosystem must be regarded as an area identified for the purpose of that section."* No notices have been published yet under this section. Picking parts of, or cutting, chopping off, uprooting, damaging or destroying, any specimen of a listed threatened or protected species is a restricted activity under NEMBA. A permit is required for a restricted activity involving a listed threatened or protected (TOPS) species without a permit. Chapter 7 of the NEMBA regulates the process for application of a permit under NEMBA. The following notices have been published in terms of section 56(1) of NEMBA: • National List of Ecosystems that are Threatened and in need of protection (TOPS List),[12] which contains the National List of Ecosystems that are threatened and in need of protection. This includes preventing further degradation and loss of structure, function and composition of threatened ecosystems and preserving witness sites of exceptionally high conservation value. The purpose of listing threatened ecosystems is primarily to reduce the rate of ecosystem and species extinction. • Lists of Critically Endangered, Endangered, Vulnerable and Protected Species;[13] and

[11] Published in GN 710 of GG 40996 on 21 July 2017
[12] Published under GN1002 in GG34809 of 9 December 2012
[13] Published under GNR151 in GG 29567 of 23 February 2007

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	• Threatened and Protected Species Regulations.[14] Chapter 5 of NEMBA pertains to AIS and provides that a person may not carry out a restricted activity involving a specimen of an AIS without a permit issued in terms of Chapter 7 of NEMBA. Such permit can only be issued after a prescribed assessment of risks and potential impacts on biodiversity is carried out. Applicable, and exempted AIS are contained within the Alien and Invasive Species List 2020.[15] The NEMBA Alien and Invasive Species Regulations[16] categorises the different types of alien and invasive plant and animal species and how they should be managed. The Revised National Biodiversity Framework 2019 – 2024 was recently published.[17] ***The TNPA 22MW Generator Project is located within a CBA. However, the generator infrastructure area is within an already disturbed area and care will be taken when vegetation is removed for the pipelines*** ***TNPA must control and eradicate AIS in line with the NEMBA Alien and Invasive Species Regulations.***
Conservation of Agricultural Resources Act (Act 43 of 1983) (CARA)	In terms of CARA, landowners are legally responsible for the control of weeds and alien vegetation. CARA makes provision for three categories of AIP: • Category 1a: must immediately be removed and destroyed; • Category 1b: need to be immediately removed and contained; • Category 2: requires a permit to retain the species on site and it must be ensured that they do not spread. All category 2 plants in riparian zones need to be removed; and • Category 3: require a permit to retain these species. All category 3 plants in the riparian zone need to be removed. CARA also regulates the conservation of soil and states that degradation of the agricultural potential is illegal. It furthermore requires the protection of land against soil erosion and the prevention of water logging and associated salinization. Permissions / permits are required under CARA for the 'cultivation' of 'virgin soil'; cultivation and/or draining vlei(s), marshes or water sponges; and cultivation of an area within a watercourse's flood area. ***TNPA will comply with CARA in relation to AIP control and soil conservation.*** ***No permit under CARA is required for the TNPA 22MW Generator Project.***
National Forests Act, No 84 of 1998 (NFA)	In terms of section 15(3) of the NFA, the Minister published a list of protected tree species.[18] The effect thereof is that no person may cut, disturb, damage or destroy any protected tree or possess, collect, remove, transport, export, purchase, sell, donate or in any other manner acquire or dispose of any protected tree or any product derived from a protected tree, except under a licence or exemption granted by the Minister to an applicant and subject to such period and conditions as may be stipulated. ***Should TNPA require any licence to disturb a protected tree, it will be duly applied for.***
National Heritage Resources Act (Act No. 25 of 1999) (NHRA)	The protection and management of South Africa's heritage resources are controlled by the NHRA. The national enforcing authority for the NHRA is the South African Heritage Resources Agency (SAHRA). In terms of the NHRA, historically important features, such as graves, archaeology and fossil beds, are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection. In terms of section 38 of the NHRA, a permit is required for certain categories of development as follows: *"(1) (a): The construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;*

[14] Published under GNR152 in GG 29657 of 23 February 2007
[15] Published under GNR 1003 in GG 43726 of 18 September 2020
[16] Published under GNR1020 dated 25 September 2020
[17] In terms of GN 2423 of 26 August 2022,
[18] GN 536 of GG 41887 on of 7 September 2018

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	(c): Any development or other activity which will change the character of a site - *i. exceeding 5 000 m² in extent;* *ii. involving three or more existing erven or subdivisions thereof;* *iii. involving three or more erven or divisions thereof which have been consolidated within the past 5 years; or* *iv. the costs of which will exceed a sum in terms of regulations by SAHRA or a provincial heritage resource authority."* In terms of Section 38(8) of the NHRA, section 38(1) approval from SAHRA is not required where an environmental impact assessment is undertaken under NEMA, including a HIA, and SAHRA's requirements are considered by the CA when granting the EA. Section 38(8) of the NHRA provides that: *"The provisions of this section do not apply to a development as described in subsection (1) if an evaluation of the impact of such development on heritage resources is required in terms of the ECA, or the integrated environmental management guidelines issued by the Department of Environment Affairs and Tourism, or the Minerals Act, 1991 (Act No. 50 of 1991), or any other legislation: Provided that the consenting authority must ensure that the evaluation fulfils the requirements of the relevant heritage resources authority in terms of subsection (3), and any comments and recommendations of the relevant heritage resources authority with regard to such development have been taken into account prior to the granting of the consent."* Accordingly, provision is made for the assessment of heritage impacts as part of an environmental assessment process and, if such an assessment complies with the NHRA and SAHRA's requirements and the CA considers heritage impacts when granting the EA, a separate application for consent under the NHRA is not required. ***A heritage investigation is being undertaken as part of the EIA process, which will be submitted to SAHRA for consideration and comment, which comments will be incorporated in the FEIR.***
Hazardous Substance Act (Act No. 15 of 1973) (HSA)	The HSA aims to control the production, import, use, handling and disposal of hazardous substances. Under the HSA, hazardous substances are defined as substances that are toxic, corrosive, irritant, strongly sensitising, flammable and pressure generating under certain circumstances and may injure, cause ill-health or even death in humans. Where hazardous substances from any of the 4 groups below are to be used, (see below) care must be taken that they are sourced, transported, handled and disposed of in compliance with HSA. • Group I: industrial chemicals (IA) and pesticides (IB); • Group II: 9 classes of wastes excluding Class 1: explosives and class 7: radioactive substances; • Group III: electronic products and group; and • Group IV: radioactive substances. The HSA provides for the: • Control of certain electronic products; • Division of such substances or products into the groups above in relation to the degree of danger, with licensing requirements for certain activities undertaken in respect of Groups I and III; • Prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal or dumping of such substances and products; and • Matters connected therewith. ***Hazardous substances may be stored, handled or transported as part of the proposed projects and include diesel and other liquid fuel, oil and hydraulic fluid, cement, etc. TNPA will comply with the HSA, as required.***
National Water Act 36 of 1998 (NWA)	The NWA is the primary legislation controlling and managing the use of water resources and pollution thereof. It provides for fundamental reformation of legislation relating to water resource use. The NWA's preamble recognises that the

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	ultimate aim of water resource management is to achieve sustainable use of water for the benefit of all users and that water resources quality protection is necessary to ensure sustainability of the nation's water resources in the interests of all water users. The NWA's purpose is stated in section 2 and enforced by the DWS. The NWA presents strategies to facilitate sound management of water resources; provides for the protection of water resources; and regulates use of water by means of Catchment Management Agencies (CMA), Water User Associations, Advisory Committees and International Water Management. As the NWA is founded on the principle of trusteeship, the government has overall responsibility for and authority over water resource management, including the equitable allocation and beneficial use of water in the public interest. Industry (including mines) can therefore only be entitled to use water if the use is permissible under the NWA. Section 19 of the NWA provides for pollution prevention and requires that a person who owns, controls, occupies or uses the land in question, is responsible for taking reasonable measures to prevent pollution of water resources. A CMA may take action to prevent or remedy the pollution and recover all reasonable costs from the responsible party. Under Section 21 of the NWA, certain consumptive and non-consumptive water uses are identified and can only commence once authorised. Water use is broadly defined in the NWA and includes taking and storing water; activities which reduce stream flow; waste discharges and disposals; controlled activities; altering a watercourse; removing water found underground for certain purposes; and recreation. Consumptive water uses include taking water from a water resource (section 21(a) of NWA) and storing water (section 21(b)). Non-consumptive water uses include impeding or diverting a watercourse's flow (section 21(c)); altering a watercourse's bed, banks, course or characteristic or impeding the flow of a watercourse (sections 21 (c) and (i)); and disposal of waste in a matter that may detrimentally impact on a watercourse (section 21(g)). Where a water use constitutes a Scheduled 1 Use (permissible use without an authorisation requirement); permissible water uses in terms of section 22 of the NWA; or is authorised in terms of a General Authorisation (GA), a WUL is not required.[19] ***The TNPA 22MW Generator Project will include sections 21 (c), (i) and (j) water uses. A WULA will be submitted to the DWS to authorises these water uses.***
Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) (OHSA)	TNPA is committed to comply with the OHSA on their sites.
Compensation for Occupational Injuries and Diseases Act (Act No. 130 of 1993) (COIDA)	Under COIDA, employers are not held liable for compensation for injuries sustained by employees or compensation to dependants due to the death of an employee which occurred during the course and scope of their employment. Compensation is paid out of a statutory fund, administered by the Compensation Commissioner ("CC") (appointed under COIDA), which is set in accordance with a tariff prescribed in COIDA. The fund is a trust fund that is controlled by the CC, which the employer contributes to. The CC is appointed to administer the fund and approve claims lodged by employees or their dependants. The CC compensates the employee or their dependants directly. ***TNPA will take cognisance of the requirements of the COIDA as part of daily operations should incidents occur.***
Marine Living Resources Act	The Marine Living Resources Act 18 of 1998 intends to provide for the conservation of the marine ecosystem, the long-term sustainable utilisation of marine living

[19] Various GAs have been published under the NWA, including for Sections 21(c),(i),(g), and (a) water uses. In respect of sections 21(c) and (i) water uses, activities can be conducted within 100m of a watercourse and 500m of a wetland without a WUL if the impacts to the watercourse / wetland are low. Water uses that will be conducted under a GA need to be registered with the DWS.

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(Act No. 18 of 1989) (MLRA)	resources and the orderly access to exploitation, utilisation and protection of certain marine living resources; and for these purposes to provide for the exercise of control over marine living resources in a fair and equitable manner to the benefit of all the citizens of South Africa; and to provide for matters connected therewith.
National Estuarine Management Protocol (GN No. 341 of 10 May 2013)	This document presents guidelines for the development and implementation of individual Estuarine Management Plans as required by the National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008), as amended by the National Environmental Management: Integrated Coastal Management Amendment Act (Act No. 36 of 2014) (hereafter referred to as the ICMA) and in accordance with the National Estuarine Management Protocol (Protocol). An estuarine management framework is provided, based on the minimum requirements stipulated in the Protocol, structured in term of the three main phases, namely the Scoping phase, Objective setting phase and the Implementation phase.
KZN Heritage Act (Act No. 04 of 2008) (KZN HA)	To provide for the conservation, protection and administration of both the physical and the living or intangible heritage resources of the Province of KwaZulu-Natal;
KZN Nature Conservation Management Act (Act No. 9 of 1997) (KZN NCMA)	To provide institutional structures for nature conservation in KwaZulu Natal and to establish control and monitoring bodies and mechanisms, and to provide for matters incidental thereto.
Other National Legislation and Policy	Other policies, legislation and associated regulations (where applicable) considered as part of the application process include: • National Ports Act (Act No. 12 of 2005). • Disaster Management Act (Act No. 57 of 2002). • Integrated Resource Plan 2019. • Local Government: Municipal Systems Act, No 32 of 2000. • National Development Plan 2030. • Protection of Personal Information Act, No. 4 of 2013. • Water Services Act 108 of 1997. • Promotion of Access to Information Act 2 of 2000 • Promotion of Access to Justice Act 3 of 2000 • Basic Conditions of Employment Act 75 of 1997; • Labour Relations Act 66 of 1995
Provincial / Municipal Legislation and Policy	Provincial / Municipal policies, legislation and associated regulations (where applicable) considered as part of the application process include: • KZN Heritage Act (Act No. 04 of 2008) (KZN HA) • KZN Nature Conservation Management Act (Act No. 9 of 1997) (KZN NCMA) • King Cetshwayo District Municipality (KCDM) Environmental Management Framework (EMF) • CoM Integrated Development Plan (IDP) for 2022/2027 • CoM Spatial Development Framework (SDF) for 2022/2023 – 2026/2027 • Strategic Infrastructure Projects (SIPs)
OTHER STANDARDS AND GUIDELINES	
Standards and Guidelines	In addition to the abovementioned Acts and their associated Regulations, the following guidelines and reports have been taken cognisance of during the application process: • Guidelines for consultation with communities and interested and affected parties issued by the DMRE.

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	• NEMA Implementation Guidelines: Sector Guidelines for EIA Regulation[20]
	• Department of Environmental Affairs (DEA) (2011): A user friendly guide to the National Environmental Management: Waste Act, 2008. South Africa, Pretoria.
	• Department of Environmental Affairs and Tourism (2004): Criteria for determining Alternatives in EIA, Integrated Environmental Management, Information Series 11.
	• DFFE Integrated Environmental Management Guideline on Need and Desirability, 2017.
	• Guideline for Implementation: Public Participation in the EIA Process.[21]
	• Publication of Public Participation Guideline (GN 807 of 10 October 2012 GG No. 35769).
	• Mining and Biodiversity Guideline: mainstreaming biodiversity into the mining sector
	• Department of Water and Forestry ("DWAF"), 2006. Groundwater Assessment II
	• DWS, 2011 The Groundwater Dictionary – A comprehensive reference of groundwater related terminology, 2nd ed
	• DWS, 2016 New Water management Areas, South Africa: Government Gazette No 40279
	• South African Water Quality Guidelines (DWAF):
	  ○ South African Water Quality Guidelines (2nd Edition). Volume 4: Agricultural Use: Irrigation (1996a);
	  ○ Water Quality Guidelines - Volume 1: Domestic Use (1996b);
	  ○ South African Water Quality Guidelines (2nd Edition). Volume 5: Livestock Watering (1996c);
	  ○ Water Quality Guidelines Volume 7: Aquatic Ecosystems (1996d);
	  ○ Water Quality Guidelines Volume 2: Recreational Use (1996e); and
	  ○ Water Quality Guidelines Volume 3: Industrial Use (1996f).
	• Best Practice Guidelines (DWAF):
	  ○ G3: Water Monitoring Systems (2007);
	  ○ A5: Water Management for Surface Mines (2008b); and
	  ○ G4: Impact Prediction (2008)
	• SANS 10103 of 2008: The measurement and rating of environmental noise with respect to annoyance and to speech communication[22]
	• SANS 10210 of 2004: Calculating and predicting road traffic noise.
	• SANS 10357: 2004: The calculation of sound propagation by the Concave method.

1.5 The S&EIR Process

An S&EIR process has two distinct phases: The Scoping Phase and the Environmental Impact Reporting Phase. This report, the Draft Scoping Report (DSR) identifies potential biophysical, social and health aspects and impacts of the proposed development on the receiving environment and invites comments from stakeholders in the identification of key issues and areas of concern, to inform the S&EIR process. The main objectives of the Scoping Phase are as follows:

[20] Published under GN 654 in GG 3333 of 29 June 2010
[21] Published in under GN 807 in GG 35769 of 10 October 2012
[22] Published under GN 718 in Government Gazette No. 18022

- Identify the relevant policies and legislation relevant to the activity;
- Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location and layout;
- Identify and confirm the preferred activity and technology alternative through an impact and risk assessment and ranking processes;
- Identify and confirm the preferred site, through a detailed site selection process, which includes an identification of impacts and risks inclusive of identification of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographical, physical, biological, social, economic, and cultural aspects of the environment;
- Identify the key issues to be addressed in the EIR phase;
- Agree on the level of assessment to be undertaken; and
- Identify suitable measures to avoid, manage or mitigate identified impacts and determine the extent of the residual risks that need to be managed and monitored.

1.6 Department of Fisheries, Forestry and Environment Screening Tool

1.6.1 Purpose of the Screening Tool

The Department of Fisheries, Forestry, and Environment (DFFE) Screening Tool allows the applicant to identify potential environmental sensitivities of a proposed development site, identify specific zones or plans such as industrial development zones or Environmental Management Frameworks that may apply to the proposed development site, and it acts as a guideline as to which specialist assessments may need to be undertaken as part of the environmental assessment process.

The selection of the specialist investigations that were undertaken as part of this environmental assessment process was determined with the assistance of this tool as well as a desktop environmental assessment.

1.6.2 DFFE Screening Tool Results

1.6.2.1 Environmental Sensitivities

The DFFE Screening Tool has identified the following environmental sensitivities for the development site (refer to the Screening Assessment Report attached under Appendix C):

Table 1-5: DFFE Screening - Environmental Sensitivities

Development Area Themes	Environmental Sensitivity
Agricultural Theme	Very High
Animal Species Theme	High
Aquatic Biodiversity Theme	Very High
Archaeological and Cultural Sensitivity	Low
Civil Aviation Theme	High
Defense Theme	Low
Palaeontology Theme	Medium
Plant Species Theme	Low
Terrestrial Biodiversity Theme	Very High

1.6.2.2 Specialist Investigations

Based on the above, and following the project team's initial investigations, the following specialist investigations were identified to be undertaken for this project:

- Ecological- & Estuarine Investigation (including aquatic & wetlands).
- Soil, Surface- & Groundwater Baseline Investigation.
- Foundation Phase Geotechnical Assessment.
- Air Quality Assessment (air, climate change and acoustic).
- Plant Species Assessment; and
- Animal Species Assessment.

1.7 Listed Activities Triggered

The proposed TNPA 22MW Generator project triggers listed activities in terms of the NEMA, as contained in the amended 2014 EIA Regulations (as amended). The identified listed activities are presented in Table 1-7 and require that a S&EIR process is followed to obtain the necessary EA in terms of the NEMA.

Table 1-6: NEMA Listed Activities triggered by the TNPA 22 MW Generator Project

LISTING NOTICE	ACTIVITY NO	ACTIVITY DESCRIPTION	PROJECT ACTIVITY WHICH TRIGGERS THE LISTED ACTIVITY:
2	2	The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more.	For the installation of the 22MW energy output generator for electricity generation.
2	4	The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.	For the installation of fuel tanks with a storage capacity of 600m^3 which will be the fuel used for the generator.
3	10	The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres - (d) KwaZulu-Natal (vi) within 500m of an estuarine functional zone; (ix) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;	For the installation of fuel tanks with a storage capacity of 600m^3 used for the generator within a CBA area.
3	12	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. (d) KwaZulu-Natal (v) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;	For the construction of the LNG pipeline supply to the generator which will exceed 2km and the clearance for the linear activity will result in over 300m^2 of vegetation removal. .

1.8 Need and Desirability

Eskom has a nominal generation capacity of over 45 000 Megawatt (MW); however, the power utility is challenged to supply the country's contracted demand of 22 500 MW. The ever-growing electricity demand with the lower generation capabilities has resulted in rolling power cuts that have severely affected business and port operations. It becomes imperative for TNPA to provide reliable utility services such as electricity in a cost-effective and consistent manner.

The current electricity crisis could result in TNPA not fulfilling its responsibility of ensuring that the regulated services are provided and the shortage of electricity supply in the port can affect other basic services such as water supply and sewer. The Port of Richards Bay shows a significant future electricity demand requirement and in alignment with the Port Regulator's assertion that TNPA shall build capacity before demand, this would be necessary for guaranteed business continuity. Thus, it is appropriate that an interim solution be implemented to reduce the impact caused by load shedding and power shortages.

The current electricity demand for the Port of Richards Bay is 11 MW and in line with short term port planning it is anticipated that the future demand will be 17.9 MW. The Port of Richard's Bay has approximately 10% of current available back-up and/or standby supply for current electricity demand, which is mainly used for offices and not operations, leaving a shortage of 90% of unsecured power and exposure of operational stand still during load shedding. The South African power utility's strategy of increased levels of planned maintenance to improve reliability is putting additional strain on plants availability and this strategy has not yielded visible benefits to date. The loss over a period of load shedding when the port is on a stand still have ripple effects on the Chrome, Ferro alloys, Magnetite, Alumina, Export Coal, Woodchips, Sulphur, and import Coal lines. Thus, this will have an impact on both internal and external stakeholders such as leasing tenants, Transnet Freight Rail (TFR) and Transnet Port Terminal (TPT). TNPA needs to secure electricity supply to its operations and stakeholders in the face of escalating scheduled power outages due to declining supply availability as well as the increasing unreliability from both Eskom and the Municipal electricity supply networks.

TNPA is accelerating the introduction of renewable energy into the port systems, however there is a need for an immediate solution to be deployed within the 2023/24 Financial Year to avert the current Eskom risks and crisis that could cost TNPA billions of in income per annum. The crisis does not only affect the business revenue but has a negative reputational impact and poses a safety concern due to lack of visibility as the ports' operations are 24-hour. Due to the electricity challenges faced by the port, the strategic interim solution implemented by TNPA is to procure and install a 22MW output generator to necessitate port operations. The Installation of the generator in the Port of Richards Bay project is registered under the Strategic Integrate Projects (SIP) of the Infrastructure Development Act (IDA), Act 23 of 2014. The SIP's Oil & Gas National Program 20f is comprised of two mobile dual fuel diesel and Liquefied Natural Gas (LNG) generators with a capacity of 22 MW energy output for Port of Richards Bay.

2 DETAILED PROJECT DESCRIPTION

2.1 Key Components of the proposed development

The proposed development will entail the construction of the following infrastructure within the existing port areas. The project will comprise the following main components (which are discussed in more detail below):

- A dual fuel generator for the electricity generation of 22MW output which can be operated with diesel or liquid natural gas;
- The installation of diesel fuel tank(s) storage of the total capacity of 600m3;
- The installation of a 200m3 tank storage of demineralised water;
- Evacuation lines to the substations;
- Fencing for the site;
- An auxiliary pit;
- A drain facility for the used diesel and sludge;
- A transmission line from the generator to the Harbour West Substation, Sorting Yard substation, Liquid Pitch Substation, Arrivals Yard Substation, Eastern Intake Substation, Carina Substation and Admin Quay Substation will be installed in order to allow for power distribution from the generator to the rest of the port; and
- LNG pipeline from the Gas hub to the Generator site.

2.2 22 MW Generator

A generator is designed by General Electric (GE Gas Power) who are the Original Equipment Manufacturer (OEM). The generator is dual fuel and can operate on either Diesel fuel or Liquified Natural Gas (LNG). The generator model is TM2500+ GEN 4, the newest generation of one of the world's most experienced, reliable gas turbine solutions.

The gas turbine is a General Electric Model TM2500 that is ISO rated for continuous duty and configured for operation on either natural gas or liquid fuel (diesel 50 ppm). Altitude, humidity and inlet and exhaust losses will affect power output, heat rate and fuel efficiency. In addition to the inlet air filter, the engine is equipped with a stainless-steel mesh screen in the inlet air stream for "last chance" protection against foreign object damage.

An illustration of the generator can be seen below in Figure 2-1.

Figure 2-1: Generator model is TM2500+ GEN 4.

2.3 Diesel Storage Tanks

Diesel storage tanks(s) with a combined 600m^3 capacity will be installed to store the diesel used for the generator. The tanks will be in a bunded facility and drains will be in in place for possible spills.

2.4 Demineralised Water Storage

A water storage container for demineralised water will be installed to be able to store up to 200m^3 of water on site. The water is used for the generator and therefore requires demineralised water to prevent build-up of impurities and reduce the lifetime of the generator.

2.5 Substation Transmission Lines

A transmission line from the generator to the Harbour West Substation, Sorting Yard substation, Liquid Pitch Substation, Arrivals Yard Substation, Eastern Intake Substation, Carina Substation and Admin Quay Substation will be installed in order to allow for power distribution within the port.

2.6 Auxiliary Pit

An auxiliary pit will be constructed to manage the noise emanating from the generator to mitigate the noise impacts from the generator.

2.7 Fencing

The generator area will be fenced off. There is already access control to the PoBR and the generator fence will be solely for the protection of the generator infrastructure, diesel and is required when working with high voltage equipment for safety.

2.8 Installation of the Liquid Natural Gas (LNG) Pipeline

Pipelines for Liquid Natural Gas (LNG) will be installed as a supporting fuel source for the generator. The generator can be fuel with diesel or LNG. The LNG pipeline will be installed from the panned future distribution hub and would reduce the need for diesel which is a non-renewable fuel source. The pipelines would be buried where possible to prevent vandalism and theft. The installation of the pipeline will require vegetation removal which will be allow for revegetation of the disturbed areas.

3 PROJECT ALTERNATIVES

Under the principles stipulated in NEMA, it is required that various alternatives be investigated when considering a development which may impact significantly on the environment, to implement the best practicable environmental option. This means that the options will be assessed in such a manner that the alternative which has the most benefit or causes the least environmental damage to the natural environment is chosen. This option also needs to be of such a nature that the capital and social costs incurred will be acceptable to society. Biophysical and socio-economic aspects are considered when investigating alternatives.

An alternative can be defined as an option that will meet 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 to be used in the activity;

d) The technology to be used in the activity; and

e) The operational aspects of the activity.

The “No-Go” alternative must also be assessed.

For this project, a Scoping level assessment was undertaken by the Professional Team, and following on from the above, the alternatives identified as applicable to assess in this Project are as follows:

1. Property/Site Alternatives
2. Activity Alternative
3. Design and/or Layout Alternatives
4. Technology/Operational Alternatives
5. “No-Go” Alternative (this is a mandatory option)

Based on the contextual information presented above, and described in detail below, there is no evidence to suggest that other alternatives should be investigated for the proposed activity.

3.1 The “Property/Site” Alternative

Since the PoRB footprint area has already been determined and approved, and large portions of the surrounding areas are undisturbed areas, the placement of a generator complex would be required to fall within the existing PoRB. The locations of the existing substations is also taken into consideration as the generated power needs to feed into existing distribution line. The proposed location is therefore considered ideal as the generator complex will connect to the nearby substation, the area belongs to Transnet, in close proximity of the offices and already within the PoRB footprint.

3.2 The “Activity” Alternative

Where the “activity” is the generation of electricity, possible reasonable and feasible activity alternatives for the proposed site are extremely limited. Due to the small footprint area the possibility of renewable power generation is not feasible. The footprint area is too small to erect a sufficient amounts of solar panels to generate the amount electricity required for the PoRB. The size of the available area along with the fact that the airspace is often utilised, excludes the possibility of wind turbine energy generation. And the surrounding water bodies are considered as critical biodiversity areas and sensitive habitats which also rules out the possible of hydropower generation.

3.3 The “Design/Layout” Alternative

The design or layout is only due to be assessed during the EIA Phase of this Project. The Scoping Phase for this Project will be used to ensure that the site is well-suited to the activity.

The aim of the EIR Phase (in terms of the layout of the proposed facility), will be to determine the extent of the proposed properties which are most suitable for development, which will be assessed by the specialists and considered during the EIR Phase. No layout alternatives were therefore assessed during this phase of the application process.

3.4 The “Technology” Alternative

A generator is designed by General Electric (GE Gas Power) who are the Original Equipment Manufacturer (OEM). The generator is dual fuel and can operate on either Diesel fuel or Liquified Natural Gas (LNG). The generator model is TM2500+ GEN 4, the newest generation of one of the world’s most experienced, reliable gas turbine solutions.

The gas turbine is a General Electric Model TM2500 that is ISO rated for continuous duty and configured for operation on either natural gas or liquid fuel (diesel 50 ppm). Altitude, humidity and inlet and exhaust losses will affect power output, heat rate and fuel efficiency. In addition to the inlet air filter, the engine is equipped with a stainless-steel mesh screen in the inlet air stream for "last chance" protection against foreign object damage.

The possibility to use LNG as well as diesel ensures that there will be available resources to generate power even when there is a delay or problem sourcing one of the materials. There is an existing LNG distribution line situated in the Richards Bay Industrial Development Zone (RBIDZ) to which a pipeline will be connected.

Based on the above, and the requirements associated with this particular power generation project, the use of dual fuel generator is the preferred option for the project and, **no other technology alternatives will be investigated for this impact assessment.**

3.5 No-Go Option

The NEMA EIA Regulations (2014, as amended) require that all development alternatives be included in the investigation process. The no-go option will be comparatively assessed against the above-mentioned alternatives during the environmental impact assessment phase and will act as a baseline against which all the other development alternatives are measured.

The “no-go” option would result in the proposed activity not being implemented and the status quo on the property remaining. Due to the current strain of the National Energy Provider which has not been able to provide constant and reliable energy it is critical to have an alternative power supply to ensure that the power disruptions and loadshedding does not affect the functioning and operations of the PoRB. The PoRB is an economic hub for the country and loss of power prevents the PoRB from operating optimally. Power outages is also a security risk as security systems could go down and communication is also affected. Power is also required to ensure that the logistical aspects are managed sufficiently and that activities at the Port are not disrupted resulting in huge costing delays for ships and owners and the PoRB. This Project is also a Strategic Infrastructure Project (SIP) as identified by the Government of South Africa. Therefore, the “no-go” alternative is not currently the preferred alternative.

3.6 Concluding Statement of Preferred Alternatives

This chapter has been compiled in the above sections under Appendix 2 of GNR 326, of the NEMA Environmental Impact Assessment (EIA) Regulations, 2014 (as amended). The Scoping Phase of the project is to enable the specialists and the EAP to identify the Best Practical Environmental Option (BPEO) for the development footprint and to identify studies required during the EIA Phase of the project.

Appendix 2 of GNR 326, NEMA EIA Regulations, 2014 (as amended) states the following in respect of the assessment of alternatives:

1. The objective of the scoping process is to, through a consultative process –

b) Motivate, the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the preferred location;

c) Identify and confirm the preferred activity and technology alternative through an identification of impacts and risks and ranking process of such impacts and risks;

d) Identify and confirm the preferred site, through a detailed site selection process, which includes an identification of impacts and risks inclusive of identification of cumulative impacts and a ranking process of all the identified alternatives focusing on the geographic, physical, biological, social, economic and cultural aspects of the environment;

Considering the above, the following will be taken forward into the EIR Phase:

- No-go Alternative
  - The no-go alternative assumes that the proposed development will not go ahead. This alternative would result in no environmental impacts on the site or surrounding local area, as a result of the facility. It will provide a baseline against which other alternatives will be compared and considered during the EIR Phase.
- Property/Site Alternative
  - The location of the preferred alternative is located within close proximity of the existing substation, is within the port boundary and conveniently locates next to administration buildings.
- Activity Alternative
  - No other activity alternatives were deemed to be appropriate for the site and therefore they will not be further assessed during the EIR Phase. The development of a generator complex at the proposed project site is crucial for the functioning, managing and development of the PoRB.

- Design/Layout Alternative
    - Layout alternatives for the project will be determined following the input from the various specialists. The studies will aim to identify various environmental sensitivities within the development footprint of the site that should be avoided, which will be taken into account during the determination of the proposed layout of the Generation Complex.
- Technology Alternative
    - Making use of a dual fuel system optimised the functioning and availability of fuel for the generator and is therefore the preferred option at this stage. The final technology that will be used will however be determined during the detailed engineering phase after receipt of an EA.

4 BASELINE ENVIRONMENTAL DESCRIPTION

This chapter presents the environmental baseline conditions based on the available information. Detailed specialist investigations will be undertaken as set out in Chapter 6 of this report and more detailed information about the site will be provided in the EIR.

4.1 Geology

The underlying physical geological foundation of the area gives rise to specific landscape features. It also controls the occurrence, distribution and type of water resources in the area, including the groundwater. The Richards Bay area lies on-top of the unconsolidated Cenzonic Era sediments of the Maputaland Lithological Group that stretch along the Maputaland coastal plain into Mozambique.

4.2 Topography

The Richards Bay Port are characterised by three distinct topographical features namely the flood plain consisting mainly of water bodies (lakes, estuary, river channels), sand plains rising above the flood plain and coastal dunes. At least 75% of the port area is already transformed and the remaining surface area is outside of the operations area.

4.3 Climate

4.3.1 Regional Climate

Richards Bay is characterised by a subtropical climate with warm wet summers and mild moist to dry winters, which are frost-free. The town has an average annual rainfall of 1,228 millimetres. The average annual temperature is 21.5 °C, with daytime maxima peaking from January to March at 29 °C, and the minimum is 21 °C , dropping to daytime highs from June to August of 23 °C and a minimum of 12 °C.

4.3.2 Rainfall

The Mean Annual Precipitation (MAP) is 1 228 mm and most of the rainfall occurs in the summer months (from October to March)(Figure 4-3). Early summer rainfall is derived mainly from deep convective showers and thunderstorm with occasional hailstorms. Late summer rainfall is less severe with more widespread convective activity associated with sub-tropical easterly circulation patterns. The annual average rainfall for the region is 1228 mm per year. Rain peaks in late to mid-summer, in January and February, but is also likely to receive rain all year round.

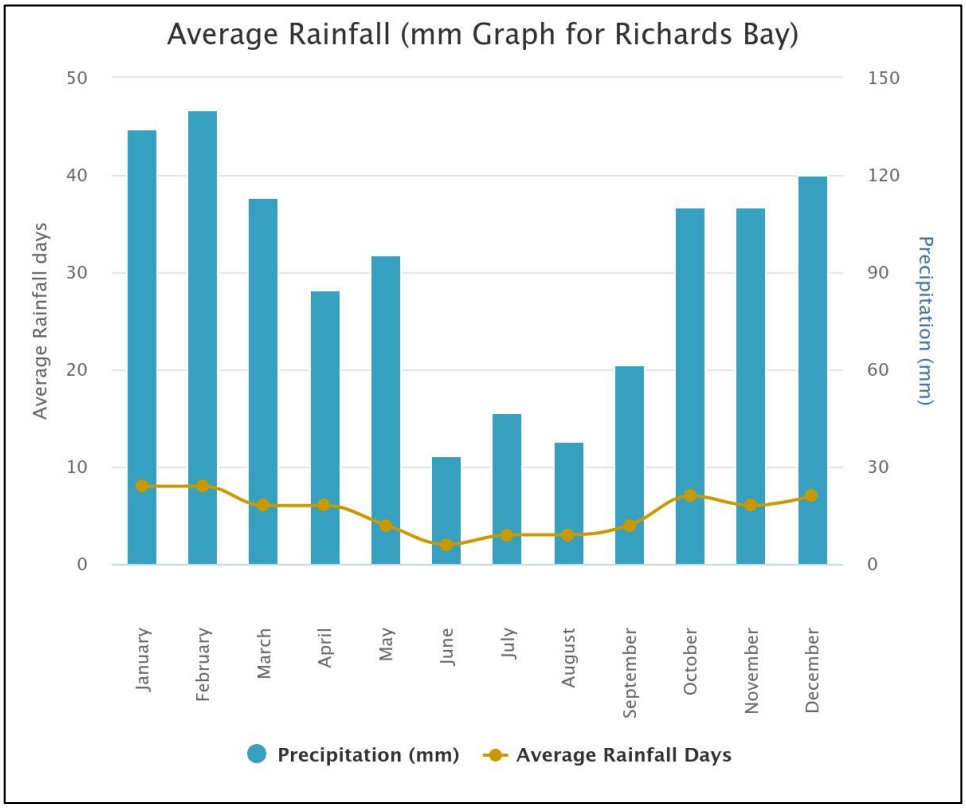


Figure 4-1: Richards Bay monthly rainfall (World Weather Online, 2024)

4.3.3 Evaporation

The Mean Annual Evaporation (MAE) for the Richards Bay area is 1 459mm/a. This is around 400mm/a more than the MAP of 1 228 mm, indicating that this is a subtropical region.

4.3.4 Wind

Winds are predominantly north easterly or south westerly during the day with a combined frequency of occurrence of 24%. The north easterly (thermal) wind is associated with high pressure systems and fine weather and the south westerly winds that are associated with westerly waves are cold, frontal weather. There is a decrease in the frequency of north easterly winds at night when the southerly winds increase in frequency and occurring 19% of the time as part of the land-sea. More calm conditions (winds less than 1 m/s) occur at night than during the day. The diurnal variation in airflow over the region is influenced by the land sea breeze circulation and topographically induced effects winds.

4.4 Soils, Land Use and Land Capability

The project area is situated within a Critical Biodiversity (CBA) as indicated in the national database, see Figure 4-6. Investigations into the sensitivity of the project area will be completed during the EIA Phase He site is within the existing PoRB footprint area.

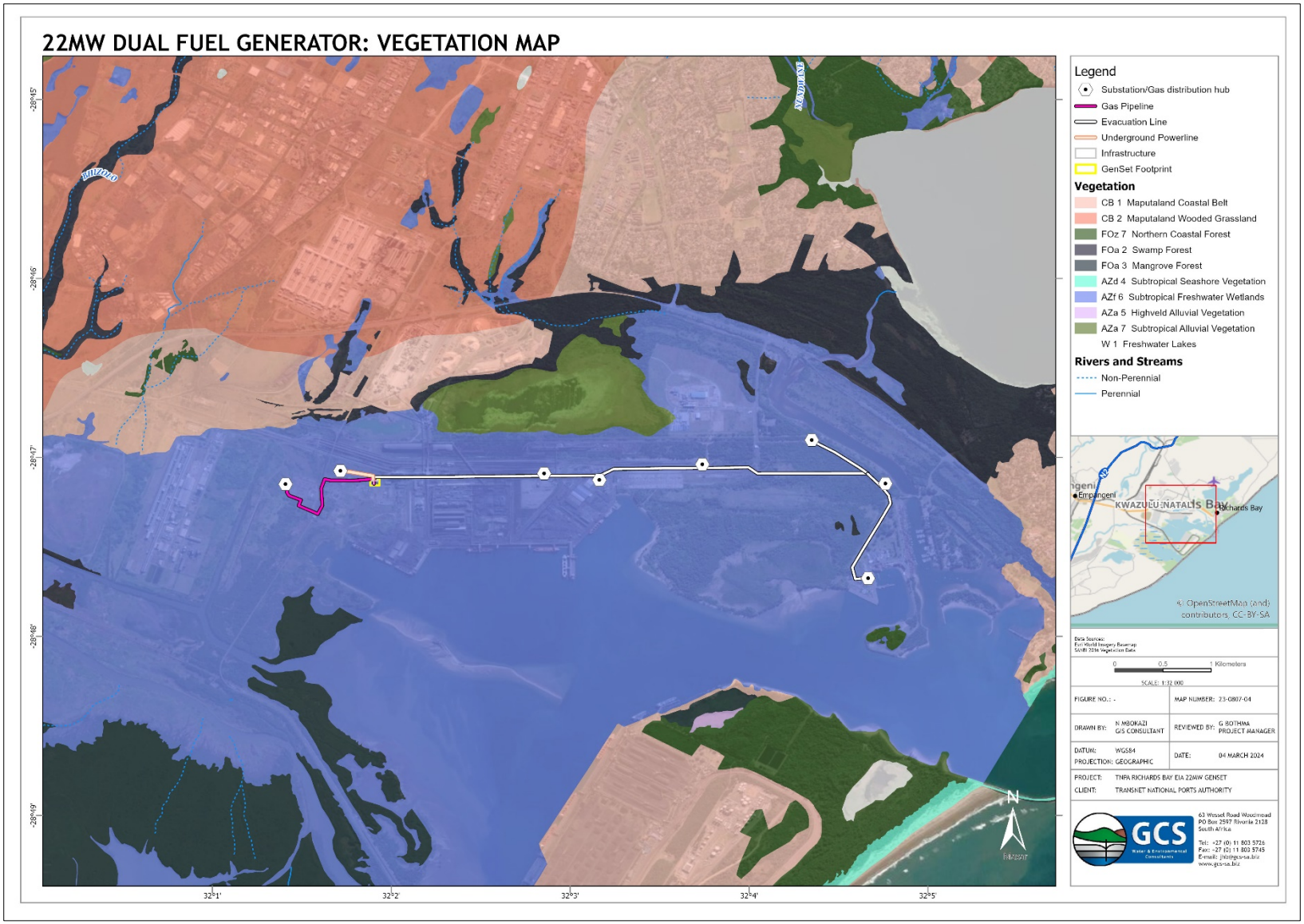


Figure 4-2: Vegetation Cover in the project area

4.5 Hydrology

4.5.1 Water Management Area

The site falls within quaternary catchment W12F in the Pongola-Mtamvuna Water Management Area (WMA) (South Africa. Dept. of Water and Sanitation, 2016).

4.5.2 Estuary, Streams and Wetlands

The uMhlathuze Estuary is situated within a flood plain and is consequently the recipient of rivers, streams, canals and diffuse seepage zones of freshwater that drain towards the estuary and harbour (Figure 4-7. Surrounding lakes, swamps and wetlands are hydrologically and ecologically linked to these streams.

Also, groundwater is tied in with the aforementioned water resources and also forms the primary flow component in many of these resources. This hydrological network forms a crucial component in these water resources, as it provides the hydraulic and ecological link between the different resources.

The uMhlathuze River is the largest river system within the uMhlathuze Estuary. It is characterised by a large flood plain that is exposed to intense exploitation and impacts upstream. The Nseleni stream feeds the uMhlathuze in the north-west through Lake Nsezi; the Nsezi stream is the freshwater link between Lake Nsezi and the uMhlathuze River.

The uMhlathuze River and its catchment have been extensively re-engineered over past decades. As a result of this re-engineering, it has reduced water inputs from the river to surrounding water features, which has consequently affected hydrological corridors and ecosystem maintenance.

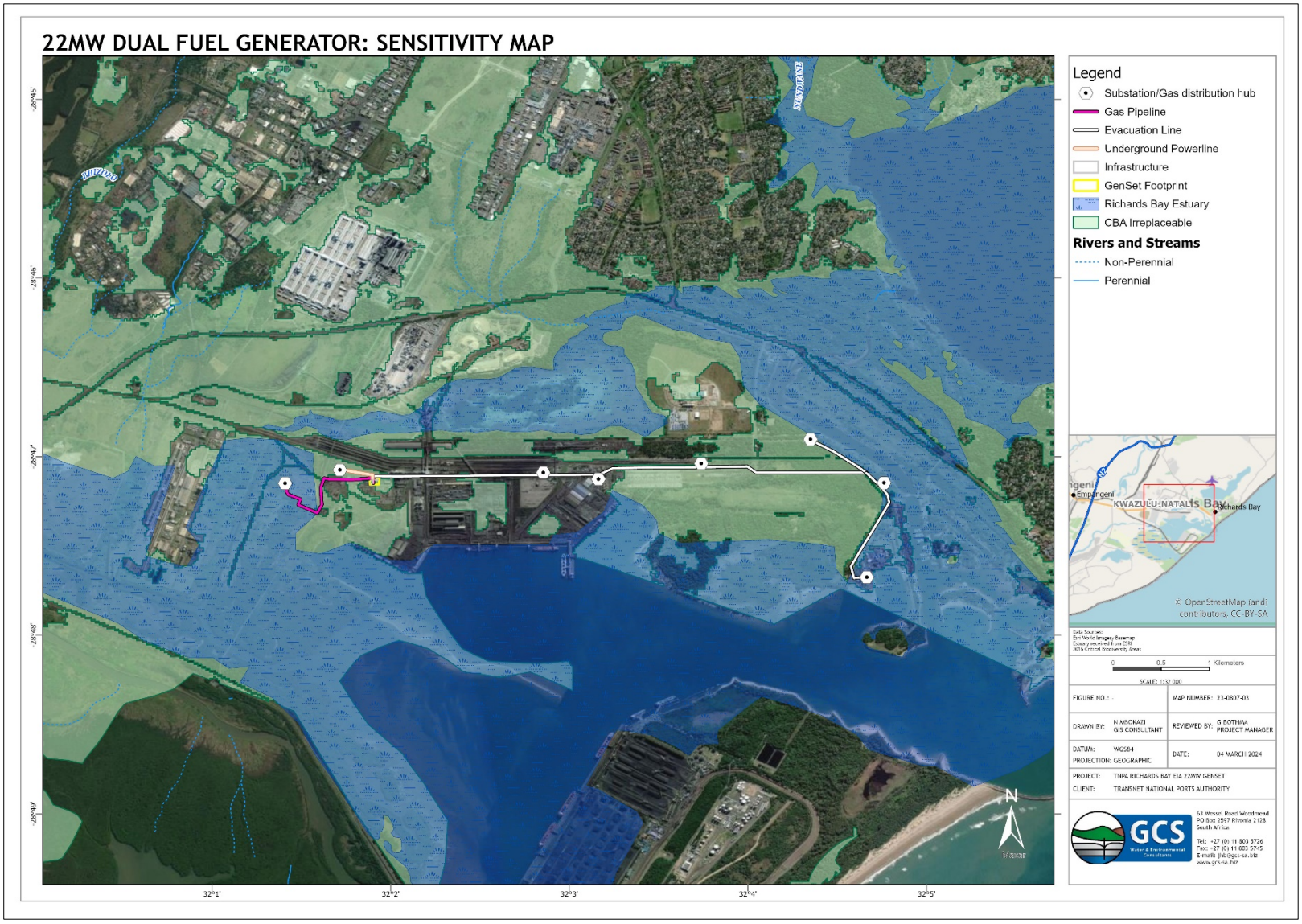


Figure 4-3: Sensitivity Map of the proposed site

4.6 Ecology

4.6.1 Eco Region

According to DWS (previously DWA), the proposed development falls into the Natal Coastal Plain (13) Level 1 Eco-region (Kleynhans et al., 2005). Level 1 eco-regions are derived primarily from terrain and vegetation, along with altitude, rainfall, runoff variability, air temperature, geology and soil. This region can predominantly be broken down into the following characteristics :

- Mean annual precipitation : Moderate to high.
- Coefficient of variation of annual precipitation: Low to moderate.
- Drainage density: Low.
- Stream frequency: Low to medium.
- Slopes <5%: >80%.
- Median annual simulated runoff: Moderate to high.
- Mean annual temperature: High to very high.

4.6.2 Flora

The Port of Richards Bay and surrounds are situated within the Maputaland Coastal Belt vegetation type as described by Mucina and Rutherford 2006. The majority of the port areas have been transformed and degraded by human activity. The areas around the port are being preserved as far as possible.

4.6.3 Fauna

Mammals

Extensive loss and fragmentation of wetlands and other habitat types in the study area has restricted population of species. Nineteen species of mammal occur in the municipal area in special habitats.

Avifauna

Richards Bay is an important habitat for birds along the Kwa-Zulu Natal Coastline. There are some 350 bird species identified around the area. The bird uses the tital flats, wetlands, grass panes and forests to nest.

Reptiles

Eleven species of reptiles are of significance have been identified in the area before, occurring in wetlands, forests and grasslands.

Amphibians

Previous surveys around Richards Bay has identified some 48 species fof frogs that may occur in the surrounding area. Hyperolius pickersgilli is a high priority frog species (Endangered) that occurs in wetlands.

4.7 Air Quality

The current air quality in the study area is mostly influenced by the industrial activities within the PoRB as well as farming activities, domestic fires, residential fuel burning, vehicle exhaust emissions and dust entrained by vehicles. These emission sources vary from activities that generate relatively course airborne particulates (such as farmland preparation dust from paved and unpaved roads) to fine particulate matter such as that emitted by vehicle exhausts, power generators (at industrial operations). Other sources of particulate matter include occasional fires in the residential areas of Brackenham, etc. and farm activities. Emissions from unpaved roads constitute another major source. Combustion gases (CO, SO2, NO2 and HC) are typically released from industrial areas, power generators, vehicle exhausts, and burning activities, and represent the main contributors to poor air quality. Air quality assessment will be done during the EIA phase.

4.8 Heritage Sites and Paleontological Importance

No national monuments, battlefields, or historical cemeteries are known to occur within the vicinity of the study area. The site will be assessed during the specialist study, as described under Section 6.6.1 of this report.

4.9 Socio-Economic Conditions

The City of uMhlathuze is the third most important primary manufacturing area in KwaZulu-Natal in terms of economic production. Several of the world's industrial giants are located in uMhlathuze. The significant industrial concentrations are supported by the output and activities of several important development nodes. Most of the industrial and commercial activities are vested in Richards Bay, Empangeni and Felixton (specifically the industrial development nodes of the City of uMhlathuze).

The area is the third most important in KwaZulu-Natal in terms of economic production, contributing 7.6% of the total gross geographic product and 5.5% of total formal employment. Development of the port facilities through the years has initiated and promoted the development of manufacturing activity. The area's port and RBIDZ are important assets that can successfully exploit opportunities to export produce to the vast markets of the world. Policies have been designed to promote industrial growth and encourage investment, with projects prioritised on the basis on the contribution made to job creation.

4.10 Traffic

The proposed facility is located in between the existing port access roads. Additional traffic will only be applicable during the construction phase of the project.

4.11 Visual Aspects

The surrounding area has been developed with large silos, large administration building, cranes and other infrastructure surrounding the site. The visual impact from the generator complex will be investigated during the EIA phase.

5 PUBLIC PARTICIPATION PROCESS

This section of the report describes the process that was and will be followed for consultation of Interested and Affected Parties (I&APs)/stakeholders and government authorities.

5.1 Purpose of Public Participation

The main objective of public participation is to provide sufficient and accessible information to potential Interested and Affected Parties (I&APs) in an objective manner and to provide a platform for constructive participation in the application process, thereby assisting I&APs to:

- Gain an understanding of the project, the various components and the potential impacts (positive and negative);
- Raise issues of concern and suggestions for enhanced benefits;
- Comment on reasonable alternatives;
- Verify that their issues have been recorded in the Comments and Responses Report (CRR) and considered in investigations; and
- Contribute relevant local information and traditional knowledge to the process.

5.2 Public Consultation Process

This section provides a summary of the various activities of the public consultation process to be undertaken in support of the application process.

5.2.1 Stakeholder database

A stakeholder database or list of I&APs was compiled and will be updated as the process unfolds and as more I&APs register. The database was compiled using lists of contact details of previous applications in the area, the Development Zone contacts, commenting authorities and other possible stakeholders identified. .

The current I&AP database is attached as Appendix C-4 to this Report (this excludes contact details). The I&AP database is the means through which information will be conveyed to stakeholders as part of the announcement of the applications and the availability of the consultation and final reports as these become available for public review. For this project, I&APs typically include the following:

- Owners or persons in control of the land where the proposed project activities are to be undertaken (Project Area);
- Occupiers of the property where the activities are to be undertaken;
- Owners and occupiers of land adjacent to the project area;

- Provincial (Kwa-Zulu Natal) and local government (City of uMhlathuze (CoM) Local Municipality and King Cetshwayo District Municipality (KCDM));
- Organs of state, other than the competent authorities having jurisdiction over any aspect of the proposed activities, including the Kwa-Zulu Natal Department of Economic Development, Tourism, and Environmental Affairs (EDTEA), the Department of Water and Sanitation, etc.;
- Relevant residents' associations, agricultural unions, community-based organisations, water user associations, and any catchment management authority and Non-Governmental Organisations (NGOs);
- Environmental organisations, forums, groups and associations; and
- Private sector organisations (businesses, industries) in the vicinity.

5.2.2 Announcement of the application process

The application process will be announced to I&APs through the following:

- An advertisement has been placed in the Zululand Observer on the 8th of March and in Isolezwe on the 6th / 7th of March 2024;
- A Background Information Document (BID) was compiled and distributed to all I&APs on the stakeholder database;
- Site Notices will be placed all around the project area;
- Placement of all notices and the BIDs on the GCS website (https://www.gcs-sa.biz/public-documents/). The GCS website is used to make documents electronically available to stakeholders. The website address was published in the advertisement, BIDs, site notices and all other communication; and
- A Registration and Comment Sheet is included with every BID, inviting stakeholders to register as I&APs and to provide their comments on the proposed application.

5.2.3 Comments and Responses Report

All comments received during the application process will be captured in a Comments and Responses (CRR) table in the Public Participation Process Report. The CRR will be updated continuously and will be presented to the authorities and other I&APs together with the consultation and final reports as a full record of issues raised, including responses on how the issues were considered during the application process.

5.2.4 Review of the Draft Scoping Report

The DSR is available for public review from **8 March 2024 until 11 April 2024** (30 days) at the following public venues:

- Richard's Bay Public Library (Physical Address: Kruger Road CBD, Richard's Bay).

The report is also available electronically via the GCS Website (link provided above) or a CD/USB can be made available upon request.

6 PLAN OF STUDY FOR EIA

The Plan of Study (POS) for the Impact Assessment Phase describes the approach to the Assessment, as required in terms of Section 2(1)(h) of Appendix 2 to Regulation GNR 326 promulgated in terms of the NEMA. In accordance with Section 2(1)(h) of Appendix 2, this POS includes:

- A description of the aspects to be assessed as part of the environmental impact assessment process as well as aspects to be assessed by specialists.
- A description of the proposed method of assessing the environmental aspects, including aspects to be assessed by specialists.
- A description of the proposed method of assessing duration and significance.
- An indication of the stages at which the competent authority will be consulted.
- Particulars of the public participation process will be conducted during the environmental impact assessment process.
- A description of the tasks that will be undertaken as part of the environmental impact assessment process.
- Identify suitable measures to avoid, reverse, mitigate or manage identified impacts and determine the extent of the residual risks that need to be managed and monitored.

6.1 Impact Assessment Phase Tasks

The objectives of the EIA Phase are to:

- Address the issues and concerns expressed by the environmental authorities and I&APs in the response to the Scoping Study.
- Assess the potential significant impacts imposed by the project and assess alternatives and mitigation measures to minimise potential impacts.
- Assess layout and design alternatives to minimise potential impacts.
- Document findings into an Environmental Impact Report (EIR) for the authorities and the I&APs to issue an environmental authorisation.

The following tasks are required to be undertaken during the EIA process:

- Appoint specialists to undertake further specialist investigations, if required.
- Review of the specialist reports and amendments where necessary.
- Discuss the specialist report results and conclusions with I&APs and authorities.
- Incorporate the assessments in the Draft EIR (DEIR).

- Distribute the DEIR to I&APs and authorities for review.
- Convene Public Open Day(s) or public meetings, as appropriate.
- Collate and address any comments/concerns documented by I&APs.
- Incorporate issues and responses into the Final EIR (FEIR).
- Submit the FEIR to the CA for consideration.
- Inform I&APs of the submission of the FEIR to the CA and make copies available for review.

The EIA process involves the compilation of an EIR that provides a formal assessment of the significance of all of the potential impacts identified for assessment in the Scoping Phase. The impact assessment will be based on the findings and assessments of the various specialist reports listed and described below.

Once the EIR has been drafted according to the findings of the specialist reports and their recommended mitigation measures, the DEIR will be made available to all registered I&APs for public comment. The aim of this public comment period is to allow the public to review the findings of the specialist reports and the findings of the significance assessment, the revised development proposal, and the mitigation measures proposed to minimise the impacts of the proposed development. All registered I&APs will be requested to comment on these aspects and confirm and/or reject the findings or assessments based on reasonable and substantiated arguments. Thereafter, reasonable and substantiated comments will be incorporated into the assessment and a final draft of the development proposal and the EIR produced.

6.2 Competent Authority Consultation

The CA will be consulted at the following key stages:

- Continuous consultation with the CA will be undertaken as part of the application process.
- The DSR and Application Form will be submitted to the CA for their consideration, after which the Final Scoping Report (FSR) will be submitted to the CA within the legislated timeframe;
- The FEIR will be submitted to the CA once all outstanding issues have been resolved; and
- The CA may convene a meeting post-submission of the FEIR should it be deemed necessary.

6.3 Impact Assessment Methodology

Potential impacts will be identified through comments from I&APs, specialist reports, and from the EAP's experience. To ensure uniformity, the assessment of potential impacts derived from each activity associated with the proposed development is addressed in a standard manner so that a wide range of impacts are comparable. For this reason, a clearly defined rating methodology will be used to assess the impacts identified in each specialist study.

The assessment of potential impacts will be addressed in a standard manner, to ensure that a wide range of impacts are comparable. The ranking criteria and rating scales will be applied to all specialist studies for the TNPA Generator Project. To enable a scientific approach to the determination of the environmental significance (importance), a numerical value is linked to each rating scale.

Clearly defined rating and rankings scales (**Table 6-1 - Table 6-7**) will be used to assess the impacts associated with the TNPA Genset Generator Project. The impacts identified by each specialist study and through PPP will be combined into a single impact rating table for ease of assessment.

Table 6-1: Severity or magnitude of impact

Not applicable/none/negligible	0
Minor/insignificant/non-harmful (no loss of species/habitat)	2
Low/small/potentially harmful (replaceable loss with minimal effort)	4
Moderate/significant/slightly harmful (replaceable loss of species/habitat with great effort and investment)	6
High/highly Significant/harmful (impact to human health or welfare/loss of species/habitat)	8
Very High/extremely significant/extremely harmful/within a regulated sensitive area (loss of human life/irreplaceable loss of Red Data species/conservation habitat)	10

Table 6-2: Spatial Scale of activity

Not applicable/none/negligible	0
Site only	1
Local (within 5km)	2
Regional/neighbouring areas (5 km to 50 km)	3
National	4
International	5

Table 6-3: Duration of activity

Not applicable/none/negligible	0
Immediate (immediately reversible with minimal effort)	1
Short-term (0-5 years - reversible)	2
Medium-term (5 to 15 years – difficult to reverse with effort)	3
Long-term/life of the activity (very difficult to reverse with extensive effort)	4
Permanent/beyond life of the activity (not reversible)	5

Table 6-4: Frequency of activity (how often activity is undertaken)

Not applicable/none/negligible	0
Improbable /almost never/annually or less	1
Low probability/very seldom/6 monthly	2
Medium probability/infrequent/temporary/monthly	3
Highly probable/often/semi-permanent/weekly	4
Definite/always/permanent/daily	5

Table 6-5: Frequency of incident/impact (how often activity impacts environment)

Almost never/almost impossible/>20%	1
Very seldom/highly unlikely/>40%	2
Infrequent/unlikely/seldom/>60%	3
Often/regularly/likely/possible/>80%	4
Daily/highly likely/definitely/>100%	5

Table 6-6: Legal Issues – governance of activity by legislation.

No legislation	1
Fully covered by legislation	5

Table 6-7: Detection (how quickly/easily impacts/risks of activity on environment, people and property are detected)

Immediately (easier to mitigate)	1
Without much effort	2
Need some effort	3
Remote and difficult to observe	4
Covered (more difficult to mitigate)	5

Each impact identified must be assessed in terms of probability (likelihood of occurring); the consequence of the impact (spatial scale, severity and duration); and the associated risk (impact significance).

Consequence was then determined as follows:

CONSEQUENCE = Severity + Spatial Scale + Duration

The probability or likelihood of occurrence of the activity was then calculated based on frequencies of the activity and impact, whether the activity is governed by legislation and how easily it can be detected:

LIKELIHOOD = Frequency of Activity + Frequency of Impact + Legal issues + Detection

The significance or risk of each identified impact was then based on the product of consequence and likelihood:

Environmental Significance/Risk = Consequence x Likelihood

Impacts will be rated as either of high, medium or low significance on the basis provided in Table 6-8. Each impact will also be assessed in terms of the level to which there is an irreplaceable loss of resources (Table 6-9) and its degree of reversibility (Table 6-10).

Table 6-8: Impact significance ratings.

SIGNIFICANCE	ENVIRONMENTAL RISK RATING	COLOUR CODE
High (positive)	>240	H
Medium (positive)	120 to 240	M
Low (positive)	<120	L
Neutral	0	N
Low (negative)	>-120	L
Medium (negative)	-120 to -240	M
High (negative)	<-240 (max = 400)	H

Table 6-9: Irreplaceability of resource caused by impacts

No irreplaceable resources will be impacted (the affected resource is easy to replace/rehabilitate)	**Low**
Resources that will be impacted can be replaced, with effort	**Medium**
Project will destroy unique resources that cannot be replaced	**High**

Table 6-10: Reversibility of impacts

Low reversibility to non-reversible	**Low**
Moderate reversibility of impacts	**Medium**
High reversibility of impacts	**High**

The significance of an impact gives one indication of the level of mitigation measures required to minimise negative impacts and reduce environmental damage during the construction, operational and decommissioning phases. Suitable and appropriate mitigation measures, to ensure avoidance, management and mitigation of impacts, will be identified for each of the potential impacts based on specialist recommendations and GCS expertise.

6.4 Impact Management

Each specialist identifies means of avoiding, mitigating and/or managing the negative impacts in their particular aspect of the investigation. The recommended management strategies will be synthesized by GCS to formulate the EMP for the proposed project.

6.5 Environmental Management Programme (EMPr)

GCS will prepare a Draft EMPr, which is required as part of the EIR submission. The purpose of the EMPr is to control the impacts of construction and operational activities. The effective implementation of an EMPr will ensure that the required works are conducted in an environmentally sound manner and that the potential negative impacts of construction and operational activities are minimised and/or prevented.

The Draft EMPr details the responsibilities and authority of the various parties involved in the project and contains environmental specifications to which the contractor and operator are required to adhere throughout the duration of the construction and operational phases. The Draft EMPr will cover impacts that have been identified in the EIA Process and which could potentially arise during the construction and/or operation of the road. The EMPr will cover the following aspects:

- Project background information.
- Identification/listing of project and operational activities.
- Instruction and mitigation during the planning and design, construction, operational and decommissioning and closure phases.
- Roles and responsibilities of parties concerning environmental management.
- Environmental training and awareness material for construction staff.
- Environmental specifications e.g. protection of biodiversity and sensitive environments, rehabilitation, public safety and perceptions, traffic control, material and waste management, litter, containment, and disposal of hazardous substances (e.g. paints, waste oils) etc.
- Measurement of compliance with the EMPr.

6.6 Terms of reference for the specialist studies

The following terms of reference (ToR) were utilised in appointing specialist consultants to undertake detailed investigations to assess the significance of potential impacts on the receiving environment.

6.6.1 Cultural Heritage & Paleontological Assessment

The Cultural Heritage & Paleontological Assessment will entail the following tasks, culminating in the compilation of a specialist report:

- A desktop and field assessment to gather information on heritage resources, including archaeological and paleontological deposits/sites, within the proposed development area;
- Identify possible archaeological, cultural and historic sites within the proposed development area;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance; and
- Identifying key uncertainties and risks.

6.6.2 Air Quality

The Air Quality Impact Assessment (AQIA) will comprise the following:

Baseline Assessment

- Review of applicable air quality legislation;
- Review of the potential pollutants and associated human health effects;
- Review of available meteorological data for the area;
- Identification of neighbouring sensitive receptors, including adjacent communities and farmers;
- Residential areas within the proposed development area; and
- Identification of any neighbouring sources.

Emissions Inventory and Dispersion Modelling

- Compilation of an emissions inventory for activities undertaken during construction;
- Undertake dispersion modelling simulations (AERMOD, Level Two) to determine the air quality impacts associated with the construction of the generator facility; and
- Comparison of predicted model concentrations to air quality standards.

Air Quality Impact Assessment

- Compilation of an Air Quality Impact Assessment.

6.6.3 Wetland Assessment

The Wetland and Aquatic Assessment will involve the following tasks and outcomes:

- A methodology of the site visit and techniques used to assess the specific aspects of the site;
- An indication of any areas that are to be avoided, including provision of buffers;
- A description of any assumptions made and any uncertainties or gaps in knowledge;

- A description of the findings and potential implications of such findings on the impact of the proposed activities;
- Any mitigation measures for inclusion in the Environmental Management Programme Report (EMPr);
- Any conditions for inclusion in the Environmental Authorisation and the Water Use License;
- Any monitoring requirements for inclusion into the EMPr or Water Use License; and
- A reasoned opinion on whether the activity should be authorised based on the findings of the assessment.

6.6.4 Soil, Land Use and Agricultural Impact Assessment

Firstly, a review of historic and current land uses and their impacts within the study site will be undertaken utilising aerial imagery from the site, as well as the property description. Furthermore, climatic data, vegetation type, and water resources within and adjacent to the site will be identified and utilised together with the land type data and Bioresources data for the area to determine the sensitivity of the site with regards to agricultural production.

A field assessment of the study site will be undertaken. Soils will be mapped using a hand-held soil auger to 1.5 m depth or refusal. The soil form and family level will be recorded according to the South African Soil Classification System (Soil Classification Working Group, 2018). Soil properties of survey points will be recorded on a Global Positioning System (GPS).

- Field assessment data will include a description of the physical soil characteristics at each auger sampling point. These characteristics will include:
- Diagnostic soil horizons and their respective sequence.
- Depth of the identified soil horizons.
- Soil field texture.
- Colour.
- Effective rooting depth.
- Surface crusting.
- Depth to saturation (water table), if encountered.
- Terrain morphological units/Landscape position (slope %); and
- Rockiness.
- Where applicable, the vegetation composition, available water sources as well as agroclimatic information.

The field data will be utilised to determine the agricultural land capability of the study site which considers the terrain, soil properties, climatic, water, vegetation data, and existing impacts on the site, (e.g., erosion, alien vegetation, non-agricultural infrastructure, waste, etc.).

An impact assessment will be undertaken to determine the significance of impacts to the agricultural potential and land capability of the site from the proposed development. Significance scoring both assesses and predicts the significance of environmental impacts through evaluation of the following factors: probability of the impact; duration of the impact; extent of the impact; and magnitude of the impact. The significance of environmental impacts is then assessed considering any proposed mitigations. The significance of the impact "without mitigation" is the prime determinant of the nature and degree of the mitigation measures and remediation that will be required. Each of the above impact factors will be used to assess each potential impact using ranking scales. The impact assessment will highlight any sensitive areas to be avoided, and/or buffer recommendations.

- The assessment will furthermore include:
- The change in productivity for any/all agricultural activities, that the project will cause.
- The change in any/all employment figures (both permanent and casual) that the project will cause.
- Any alternative development footprints within the preferred site which would be of "medium" or "low" sensitivity for agricultural resources as identified by the screening tool and verified through the site sensitivity verification.

6.6.5 Hydrogeology Assessment

The Hydrogeological Assessment will involve the following:

- A detailed desktop study of the project area.
- Drilling supervision and hydrogeological logging of the hard rock conditions;
- Aquifer testing of the newly drilled boreholes;
- Groundwater quality sampling of the newly installed boreholes;
- Pump specification recommendations and recommended abstraction schedule; and
- Compilation of a hydrogeological report with the findings of the study as well as detailed recommendations for resource development, management and monitoring with relevant information required for the Water Use License Application (WULA).

6.6.6 Hydrology Assessment

The Scope of Work (SoW) is comprised of the following tasks:

- Desktop study and project initiation: review previous studies done on the site, review client information and identify applicable legislation.
- Catchment characterisation and baseline hydrology assessment.
- Conceptual stormwater management plan for the site.
- Water balance for proposed infrastructure.
- Surface water monitoring program is to be specified if deemed necessary.
- Surface water impact assessment of all infrastructure including run-off impacts. The Department of Human Settlements, Water and Sanitation (DHSW&S) risk assessment matrix as per Department of Water and Sanitation (DWS) 2015 publication: Section 21 c) and i) water use Risk Assessment Protocol was adapted to be used for hydrological impacts.

6.6.7 Ecology Assessment

The Scope of Work (SoW) is comprised of the following tasks:

- A methodology of the site visit and techniques used to assess the specific aspects of the site;
- An indication of any areas that are to be avoided, including provision of buffers;
- A description of any assumptions made and any uncertainties or gaps in knowledge;
- A description of the findings and potential implications of such findings on the impact of the proposed activities;
- Any mitigation measures for inclusion in the Environmental Management Programme Report (EMPr);
- Any conditions for inclusion in the Environmental Authorisation and the Water Use Licence;
- Any monitoring requirements for inclusion into the EMPr or Water Use Licence; and
- A reasoned opinion on whether the activity should be authorised based on the findings of the assessment.

6.7 EIA Phase Public Participation

The PPP for the remainder of the Project will involve the following tasks:

6.7.1 Announcement of the Availability of the Draft EIR and Draft EMPr

At this point, the specialist studies would have been completed and the Draft EIR and Draft EMPr would be ready for public review. A letter will be circulated to all registered I&APs, informing them of progress made with the study and the availability of the Draft EIR and Draft EMP for a 30-day comment period. The Draft EIR will be made available similarly to the DSR during the Scoping Phase.

6.7.2 Public Review of the DEIR and DEMPr

The EIA Guidelines specify that stakeholders must have the opportunity to verify that their issues have been captured and assessed before the EIR will be approved by the competent authority. The Draft EIR provides this opportunity and will be written in a way that makes it accessible to stakeholders in terms of language level and general coherence.

As part of the process of reviewing the Draft EIR and Draft EMPr, various contact sessions will be scheduled to allow the public to obtain first-hand information from the project team members and also to discuss their issues and concerns. These contact sessions will be determined during the scoping phase and will potentially include either a public meeting, a public open day or various focus group meetings. Contributions at this meeting will be considered in the Final EIR.

6.7.3 Announcement of the Availability of the Final EIR and Draft EMPr

After comments from I&APs have been incorporated into the CRR and the Draft EIR revised accordingly, all stakeholders on the database will receive a letter informing them that the Final EIR and Draft EMP have been submitted to the CA for consideration. Electronic copies of the Final EIR will be available should the I&APs wish to review the documents submitted to the CA. The I&APs will be informed that should they wish to submit comments on the Final EIR; these must be submitted directly to the CA and copied to the EAP.

6.7.4 Announcement of Authorities' Decision

Based on the contributions of the stakeholders, the decision of the authorities may be advertised through the following methods:

- Letters to individuals and organisations on the database.
- Advert in local or regional newspapers.

7 POTENTIAL IMPACTS

Based on the investigation of the receiving environment, as well as the understanding of activities to be carried out for the construction and operation phases of the project, the potential impacts during the various phases of the operation will be identified and addressed in detail during the EIA phase. Potential impacts that have been identified at this stage are presented in Table 7-1.

Table 7-1: Preliminary impacts identified

POTENTIAL ENVIRONMENTAL IMPACT	SPECIALIST STUDY TO INVESTIGATE POTENTIAL IMPACT
Impacts of air emissions on surrounding users	Air Quality Impact Assessment
Affecting the groundwater and impacts during construction and operation	Geohydrological Assessment
Surface water contamination and sedimentation	Surface Water/Hydrological Assessment
Increased runoff altering flow regimes of receiving watercourses	
Erosion	Ecological Assessment (fauna and flora)
Loss of indigenous vegetation	
Loss of faunal and floral species of conservation importance	
Contamination of the area	
Noise generated from the power generation	Noise Impact Study

8 CONCLUSION AND WAY FORWARD

8.1 Conclusion

Available information and previous project knowledge of similar projects have all been used to identify the potential environmental issues associated with this development and the resultant potential environmental impacts. There is no guarantee that all the potential impacts arising from the proposed development have been identified within the Scoping Phase, however, the report provides an outline of the established measures that were taken to best identify all the potential impacts. The purpose of the Scoping Phase is NOT to assess and mitigate the potential environmental impacts and issues identified but rather to scope them and determine which needs further investigation before an assessment can be undertaken.

The circulation of this Draft Scoping Report for public comment aims to give the public a chance to review the outcomes of the Scoping process and identify additional possible issues that have not been identified. This will further enhance the rigour of the scoping process. The Plan of Study for EIA outlines the strategy to identify and assess all these potential impacts and concerns in the EIR Phase.

8.2 Way Forward

The Draft Scoping Report will be submitted to all I&APs for a 30-day comment period. All comments received from I&APs will be included in the CRR and included as an appendix to the FSR.

Thereafter the FSR, including the Plan of Study for EIA, will be submitted to the CA for review. Upon receipt of comment from the CA regarding the FSR, the Terms of Reference for any further studies will be amended should it be required, and the studies initiated.

Following completion of the specialist studies and assessment of the impacts, a Draft EIR will be compiled and will follow a similar public participation procedure to that undertaken for the Scoping Phase, whereby opportunities for engagement will be provided through stakeholder meetings and dissemination of project information. I&APs will be allowed to review the Draft EIR before submission to the CA for decision-making.

9 UNDERTAKING BY EAP

9.1 UNDERTAKING REGARDING CORRECTNESS OF INFORMATION

I, Rona Schröder, herewith undertake that the information provided in the foregoing report is correct and that the comments and inputs from stakeholders and Interested and Affected Parties received since the project announcement have been correctly recorded in the report.

Signature of the EAP

Date: 7 March 2024

9.2 UNDERTAKING REGARDING LEVEL OF AGREEMENT

I, Rona Schröder, herewith undertake that the information provided in the foregoing report is correct and that the level of agreement with Interested and Affected Parties and stakeholders since the announcement of the project, has been correctly recorded and reported herein.

Signature of the EAP

Date: 7 March 2024

APPENDIX A: EAP CVS

Rona Schröder

Senior Environmental Assessment Practitioner

CORE SKILLS

- Project Management
- Environmental Impact Assessment
- Water Use Licencing
- Mining Environmental Compliance
- Environmental Compliance Auditing
- Environmental Strategic Action Plans

DETAILS

Qualifications

- B.Sc. (Hons) Environmental Analysis and Management - University of Pretoria (2011)
- B.Sc. Geology and Management - University of the Free State (2012)
- SHEilds (NEBOSH) International General Certificate in Occupational Health and Safety (2018)
- Certificate in Project Management for Strategic Advantage, University of Stellenbosch Business School (2017)

Professional Registrations

- Environmental Assessment Practitioners Association of South Africa (EAPASA) (2020/1149)
- Pr.Sci.Nat (120605), South African Council for Natural Scientific Professionals)
- International Association for Impact Assessors of South Africa (IAIASA)

Languages

- English
- Afrikaans

Countries Worked In

- South Africa
-

PROFILE

Rona has over 10 years's experience within the environmental management, water and mining field and is aimed at delivering the required environmental services for each client.

Rona has experience in the environmental fields as an Environmental Assessment Practitioner as well as having worked in the mining field on-site ensuring environmental compliance for several mining and processing sites.

She has dealt with projects in the mining, municipal, farming, electricity generation, telecommunications and water industries. She has been involved with environmental projects from site screening and feasibility, environmental application, writing of Environmental Management Programes (EMPr), writing of technical reports all the through to Stakeholder Engagement Processes and completing of projects up to issuing authorization permits and licenses.

- Proposal Writing and project management
- Stakeholder Management and Engagement
- Government institution and authority liaison
- Water Use Licence Applications
- Environmental Impact Assessment / Basic Assessments
- Environmental Compliance Officer
- Public Participation Processes
- Environmental Compliance Auditing
- Mining Environmental Projects and Licensing
- Environmental Screening and Site Evaluations
- Environmental Training

Previous Experience

Period	Employer	Position	Role/ Responsibility
2021 - 2023	Ikwezi Mining & Zinoju Coal & Zarbon Coal	Group Environment Manager	**I started as Group Environment Officer for Ikwezi Mining and Zarbon Coal and was promoted to Group Environment Manager for Ikwezi Mining, Zarbon Coal and Zinoju Coal. Here is a brief description of my responsibilities at Ikwezi Mining and Buffalo Coal.** • **Responsible for obtaining all relevant environmental authorizations and licenses for the current mining and plant operations as well as new projects;** • **Managing environmental compliance for opencast and underground mining operations as well as washing plants;** • **Departmental and community liaising on all environmental aspects;** • **Project planning, project management and process management for applications and specialist studies;** • **Developing and reviewing SOPs and COPs for environmental aspects;** • **Environmental Auditing, compliance tracking and reporting;** • **Environmental awareness program development and implementation;** • **Environmental monitoring and reporting;** • **Action plans development and implementation;** • **Guidance and implementation of Environmental Legislation;**
2019 - 2021	ACE Environmental Solutions	Head of Department: Environmental	• **Project Management; Proposal Writing for new projects; Company Marketing; Document Quality Assurance;** • **Environmental Authorizations, Water Use License Applications and Waste Management License Applications;** • **Client and Government Department Liaisons;** • **Environmental Compliance Auditing;** • **Managing of Environmental Impacts Assessments and developing implementable mitigation measures to reduce possible impacts;** • **Managing Stakeholder Engagement Processes for authorizations and licensing**

			applications; • Development and implementation of Environmental Management Plans (EMP); • Developing Protocols for environmental processes
2013 - 2019	Alta van Dyk Environmental Consultants	Environmental Consultant	• Project Management of multi-disciplinary teams; • Please note that our standard 2023 terms and conditions were sent out in December of 2022. • Environmental Compliance Auditing of Authorizations (ECO), Authorizations and Environmental Management Programmes (EMP); • Project Management for Environmental Processes under the National Environmental Management Act (NEMA), Mineral and Petroleum Resources Development Act (MPRDA) and National Water Act (NWA); • Environmental Authorization, Water Use License and Waste Management License Applications; • Proposal Writing for new projects; • Identification and assessments of Environmental Impacts Assessments and developing implementable mitigation measures to reduce possible impacts; • Report Writing and reviewing; Client and Government Department Liaisons; • Stakeholder Engagement Processes for authorizations and licensing applications; • Development and implementation of Environmental Management Plans (EMP); • Developing License Auditing Protocols for conducting environmental legal compliance audits, • Experience as a Data Controller for a large international company with several operations as part of their due diligence process and management system actions;
2013	**Prime Africa Consultants**	**Risk Assessment Matrix Developer**	• Developing a Multi Criteria Risk Assessment Matrix for site selection during Environmental Impact Assessments.

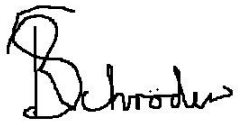
Project Experience

Year	Client	Project Description	Role/Responsibility
2013-2015	Pandora Platinum Mine	Environmental Impact Assessment and Water Use Licence Application	Environmental Practitioner
2014	Lonmin Plc	Baobab, Dwaalkop and Doornvlei External Water Use Licence Audits	Environmental Practitioner
2014-2019	Lonmin Plc	Marikana Operations Water Use Licence Audit	Environmental Practitioner
2015	Lonmin Plc	Precious Metal Refinery Water Use Licence Application	Environmental Practitioner
2015-2016	Lonmin Plc	Marikana Operations Water Use Licence Application	Environmental Practitioner
2016	Keaton Energy	Vanggatfontein Colliery Wash Plant Extension Authorisation	Environmental Practitioner
2016-2018	Keaton Energy	Vanggatfontein Colliery External Water Use Licence Audits	Environmental Practitioner
2016	Nqutu Local Municipality	Rural Electrification Project Ndodekhling-Shayiwe Small Scall Hydropower Plant	Environmental Practitioner
2016	Mhlontlo Local Municipality	Rural Electrification Project Kwa-Madiba Small Scale Hydropower Plant	Environmental Practitioner
2016	Anglo Thermal Coal	Licence and Permitting Database Development – For all Coal Operations	Data Controller
2016	Anglo Platinum	Licence and Permitting Database Development – For all Platinum Operations	Data Controller
2019	Ekurhuleni Metropolitan Municipality	Mooifontein Cemetery Extension Water Use Licence Application	Environmental Practitioner
2019	Blue Valley Golf Estate	Environmental Management Programme	Environmental Practitioner
2017	Nkomati Anthracite	Water Use Licence Audit Report	Environmental Practitioner
2017	Nkomati Anthracite	Basic Assessment Report	Environmental Practitioner
2017-2019	Lonmin Plc	Baobab, Dwaalkop and Doornvlei External Water Use Licence Audits	Environmental Practitioner
2018	Glencore	Chrome Plant Environmental Impact Assessment and Water Use Licence Application	Environmental Practitioner

2018-2019	Lonmin Plc	Precious Metal Refinery Water Use Licence Audit	Environmental Practitioner
2018-2019	Lonmin Plc	Marikana Operations Water Use Licence Application Amendment	Environmental Practitioner
2020-2021	Atlas Towers	Telecommunications Mast Basic Assessments	Project Manager and Environmental Practitioner
2021-2023	Ikwezi Mining	Opencast Mining and Coal Washing Plant Compliance	Group Environmental Manager
2022-2023	Buffalo Coal	Underground Mining and Coal Washing Plant Compliance	Group Environmental Manager

DECLARATION

I, Rona Schröder, hereby declare that the details furnished above are true and correct to the best of my knowledge and belief and I undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, I am aware that I may be held liable for it.

Signature:  Date: 15/01/2024

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Baccalaureus Scientiae

HAS BEEN CONFERRED UPON
TOEGEKEN IS AAN

SCHRÖDER, Rona Wilma

IN ACCORDANCE WITH THE STATUTES AND REGULATIONS OF THE UNIVERSITY. AS WITNESS OUR RESPECTIVE SIGNATURES AND THE SEAL OF THE UNIVERSITY BELOW.

NADAT AAN DIE STATUTE EN REGULASIES VAN DIE UNIVERSITEIT VOLDOEN IS. AS BEWYS DAARVAN PLAAS ONS ONS ONDERSKEIE HANDTEKENINGE EN DIE SEëL VAN DIE UNIVERSITEIT HIERONDER.

ENDORSEMENT: GEOLOGY AND MANAGEMENT
ENDOSSEMENT: GEOLOGIE EN BESTUUR

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DEAN / DEKAAN

REGISTRAR / REGISTRATEUR

BLOEMFONTEIN
2012-03-28
2007009976

28055749

Universiteit van Pretoria

Die Raad en die Senaat verklaar hiermee dat die graad

Baccalaureus Scientiae Honores

in

Omgewingsanalise en -bestuur

met al die regte en voorregte daaraan verbonde by geleentheid van 'n kongregasie van die Universiteit toegeken is aan

Rona Wilma Schroder

kragtens die Wet op Hoër Onderwys, 1997 en die Statuut van die Universiteit

Namens die Raad en die Senaat

C. de la Rey

Visekanselier en Rektor

Namens die Fakulteit
Natuur- en Landbouwetenskappe

Dekaan

Registrateur

2013-04-17

nebosh

Management of international health and safety

A unit of the:
NEBOSH International General Certificate in Occupational Health and Safety
NEBOSH International Certificate in Construction Health and Safety
NEBOSH International Certificate in Fire Safety and Risk Management

Rona Wilma Schroder

achieved this unit on

12 November 2018

William Nixon
Chair

Ian Taylor
Chief Executive

Master log certificate No: IGC1/00447107/1026644
SQA Ref: UE48 04

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Hiermee word gesertifiseer dat
It is hereby certified that

Rona Wilma Schroder

die volgende kursus suksesvol voltooi het
successfully completed the following course

PROJECT MANAGEMENT FOR STRATEGIC ADVANTAGE (ONLINE)

Number of Short Course Credits : 8

Vir die periode
Over the period

24/01/2017 - 10/03/2017

Prof Piet Naude
Director/Direkteur USB

Frik Landman
Chief Executive Officer
Hoof-Uitvoerende Beampte

USB Executive Development
University of Stellenbosch Business School

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Environmental Assessment Practitioners Association of South Africa
Advancing environmental assessment practice in South Africa

Miss Rona Schroder
384 Fountains Avenue
Lyttelton
Pretoria
0157

Sent by email to: blommetjie@ymail.com

Dear Miss Schroder

Registered Environmental Assessment Practitioner: Number 2020/1149
Rona Wilma Schroder : South African ID 8901300067080

The Environmental Assessment Practitioners Association of South Africa (EAPASA) herewith certifies that Rona Wilma Schroder is a Registered Environmental Assessment Practitioner (EAP) in accordance with the prescribed criteria of Regulation 15.(1) of the Section 24H Registration Authority Regulations (Regulation No. 849, Gazette No. 40154 of 22 July 2016, of the National Environmental Management Act (NEMA), Act No. 107 of 1998, as amended).

Your registration is duly authorised by EAPASA as the single Registration Authority for EAPs in South Africa (appointed as per Regulation No. 104, Gazette No. 41434 of 8 February 2018, in terms of section 24H(3)(a) of the NEMA). Your status as a Registered EAP is displayed in the 'EAP Register' - please find your name and contact email address at

https://registration.eapasa.org/registered-practitioners

Your registration is effective for a period of five years from 31 August 2020, and expires on 31 August 2025. The renewal of your registration in 2025 will be contingent on you having met the requirements of EAPASA's Continuing Professional Development (CPD) policy during each year of registration.

As a Registered EAP you are required to uphold the EAPASA Code of Ethical Conduct and Practice in your professional endeavours, towards the goal of quality assurance in environmental assessment practice.

Please accept my congratulations on your registration.

Best regards

RC Hill

Dr Richard Hill
Registrar
Date: 31 August 2020

Gerda Bothma

GCS Group Environmental Manager

CORE SKILLS

- Project Management
- Technical & Impact Assessment Guidance
- Environmental Assessment
- Water Use Licencing
- Waste Management Licencing
- Environmental & Waste Auditing and Compliance Monitoring

DETAILS

Qualifications

- B.Sc. Microbiology (Honours) University of Pretoria 1996
- B.Sc. Biological Sciences University of Pretoria 1994

Memberships/ Professional Affiliations

- International Association for Impact Assessors of South Africa (IAIA)
- Institute of Waste Management of South Africa (IWMSA)
- SACNASP (No.117348) (South African Council for Natural Scientific Professionals)

Languages

- Afrikaans
- English

Countries worked in:

South Africa, Zambia, Namibia

PROFILE

Gerda has over 25 years' experience within the environmental and waste management field and strives to deliver custom environmental services to clients.

Gerda began her career in the environmental field within the government sector, managing environmental aspects and impacts as well as reviewing environmental assessments with the view of authorizing or declining authorization of the developments.

After six years within the government sector she joined a consulting engineering firm where she was ultimately responsible for the Management of the Environmental Sub-Division. Gerda has experience in project and client management, financial management and the compilation and costing of project proposals and tenders. She has been involved in several engineering projects as the Environmental Assessment Practitioner as well as the Environmental Control Officer during construction working closely with the Occupational Health and Safety Officer. Gerda has also been involved in projects where waste licensing as well as water use licensing processes formed an integral part of the services offered. Environmental auditing and compliance monitoring of waste disposal sites also forms part of her experience gained. She also has experience in dealing with projects which involve NEC3 Contracts, the Equator Principles and World Bank IFC Principles.

Gerda has specialist skills in the following areas:

- Project proposals, planning, costing and timing
- Project and Client Management
- Authority Liaison
- Basic Assessments & Scoping/EIA Processes
- Amendment of EA's & EMP's
- S24G Applications
- Facilitation of Public Participation Processes & Stakeholder Engagement
- IWULA & IWWMP Applications
- Environmental Control Officer (ECO) duties
- Environmental Compliance Auditing (IFC Performance Standards & Equator Principles)
- Mentorship & Guidance

Work Experience

Period	Employer	Position	Role/ Responsibility
2019 to Current	GCS Water and Environment (Pty) Ltd	Environmental Manager	Management of the environmental unit since 2019 up to January 2024 and then the GCS Group Environmental Division since February 2024. Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Management of Integrated Water Use License Applications in terms of the NWA. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2018 to 2019	Terramanzi Group (Pty) Ltd	Senior Environmental Consultant	Management of the environmental unit within the Terramanzi Group. Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2014 to 2017	GIBB (Pty) Ltd	Senior Environmental Scientist	Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking of basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Management of Integrated Water Use License Applications in terms of the NWA. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2011 to 2013	WorleyParsons RSA	Senior Environmental Scientist & Durban Department Head Environment	Management of the environmental unit in the Durban Office. Management of applications for rectification in terms of Section 24G of the EIA Regulations, undertaking of basic environmental assessment and full Scoping & EIR applications in terms of the Regulations. Management of Integrated Water Use License Applications in terms of the NWA. Undertaking of environmental compliance audits for various construction projects as well as environmental legal audit reviews and environmental due diligence investigations.
2003 to 2011	KV3 Engineers	Senior Environmental Scientist	Management of applications for exemption from compliance with the EIA Regulations, undertaking of basic environmental assessment applications, as well as full environmental impact assessment applications.
2000 to 2003	Gauteng Department of Agriculture, Conservation & Environment	Assistant Director: Waste Management Division	Project management and environmental management pertaining to all developments within a designated area in Gauteng Province. Review of EIAs, formulation of comments and or authorisations within designated area in Gauteng Province. Liaison with waste contractors, industries and others. Management of legal interventions required in terms of environmental legislation within a designated area. Supporting environmental officers at all levels in terms of technical and environmental guidance, input into strategic decisions, resolving complex and potentially challenging issues.
1999 to 2000	Gauteng Department of Agriculture, Conservation & Environment	Senior Environmental Officer: Waste Management Division	
1997 to 1999	Gauteng Department of Agriculture, Conservation & Environment	Environmental Officer: Waste Management Division	
1996	Spartan Private School	Teacher: Natural Science & Biology	Teacher in Biology and Natural Science for Grades 7 to 12.

Year	Client	Project Description	Role/ Responsibility
Strategic and Environmental Guidance Projects			
1999 to 2003	Gauteng Department of Agriculture, Conservation & Environment	Development of a Health Care Risk Waste Management Strategy for Gauteng.	Part of Development Team
2001 to 2003	Gauteng Department of Agriculture, Conservation & Environment	Development of Minimum Domestic Waste Collection Standards for Gauteng Province.	Part of Development Team
2002	Gauteng Department of Agriculture, Conservation & Environment	Development of new EIA guidelines and regulations for the Gauteng Province.	Part of Development Team
2005	Gauteng Department of Agriculture, Conservation & Environment	GDACE Green Procurement Project: Development of the GDACE Green Procurement Policy, Gauteng	Project Manager & Reviewer
2008	GAUTRAIN Project Engineers (i.e. KV3 Engineers)	Environmental Assistance for the Gautrain Project: Environmental Evaluation of various documentation and engineering designs in terms of their environmental compliance.	Project Manager & Reviewer
2009	Department of Environmental Affairs	Alignment of MIG Project Process with EIA Process: Evaluation of the EIA process as well as the MIG process in order to produce a process alignment guideline to the municipalities to streamline the two processes.	Part of Development Team
2021	CoalTech	Development of "A Manual for the Authorisation of Pitlakes as a Closure Option for South African Coal Mines"	Part of Development Team
Environmental Feasibility and Screening			
2008	Nu Way-property Developments	Management of Environmental Screening and Due Diligence Assessment for several proposed Nu Way-property Developments, Gauteng.	Project Manager
2008	Department of Water Affairs	Mokolo Croc WAP Environmental Feasibility and Screening, Limpopo.	Project Manager & Senior Environmental Assessment Practitioner (EAP)
2016	Kwadukuza Municipality	Environmental Feasibility for Civil Engineering Project Foxhill Road Alignment and Construction, Tongaat, Kwa-Zulu-Natal.	Environmental Project Leader
2016	King Sabata Dalindyebo Local Municipality (C/O OR Tambo District Municipality)	Environmental Screening Investigation of six proposed development corridors for the Mthatha Bulk Water Infrastructure Presidential Intervention – Phase 2: Secondary Bulk Infrastructure project.	Environmental Project Leader
2019 to 2020	Phumaf Holdings (Pty) Ltd	Environmental Screening for various sites within Ekhurhuleni Municipality as part of the Gauteng Rapid Land Release Programme (GRLRP) project for the Provincial Department of Human Settlements	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
Environmental Opinions & Appeals			
2019 to 2020	Tendele Coal	Environmental Review Report for the Somkhele Anthracite Mine (MR 10041) High Court Case Number 82865.	Project Manager & Senior EAP
2022	CNG Holdings	Environmental Opinion regarding the Environmental Legislative Requirements for the proposed Compressed Natural Gas Motherstation in Avoca, KwaZulu-Natal.	Project Manager & Senior EAP
2021 to 2022	Tendele Coal	Environmental support to the Somkhele Anthracite Mine for the IWULA Appeals Process.	Project Manager & Senior EAP
Development Environmental Assessments			
2003 to 2005	ABSA DevCO	Environmental Impact Assessment for a change of land-use from agricultural to Residential and Town Development of the farm Brakfontein 399 JR, Centurion, Gauteng.	Project Manager & Senior EAP
2005 to 2010	Air Traffic Navigation Services (ATNS)	The project entails the upgrading of existing, and the provision of new air navigation sites (27 in total) throughout South Africa. Civil and electrical infrastructure to the sites needed to be upgraded to accommodate the equipment. Various Environmental Impact Assessments for various individual projects in various provinces within South Africa.	Project Manager & Senior EAP
2006 to 2009	Amathole District Municipality	Elliotdale Rural Sustainable Human Settlement Pilot Project Environmental Impact Assessment. Responsible for the environmental assessment process which was based on a strategic approach for the Elliotdale Rural Housing Project, Elliotdale, Eastern Cape.	Project Manager & Senior EAP
2007	Elkem Ferroveld	Environmental Basic Assessment for the upgrading and expansion of the Ferroveld Plant in Ferrometals, Emahlaheni, Mpumalanga.	Project Manager & Senior EAP
2008	ABSA DevCO	Environmental Impact Assessment for a change in land use from agricultural to Residential and Town development of Montana X40, Pretoria, Gauteng.	Project Manager & Senior EAP
2012	Transnet Capital Projects	Environmental Basic Assessment and technical environmental investigations for the proposed expansion of the existing tug jetty and construction of a new tug jetty for Transnet Capital Projects in the Port of Durban, KwaZulu-Natal.	Project Manager & Senior EAP
2014 to 2016	Dube TradePort	Environmental Impact Assessment for the proposed construction of the Dube TradePort TradeZone 2 in La Mercy, KwaZulu-Natal.	Project Manager & Senior EAP
2014 to 2017	Dube TradePort	Environmental Impact Assessment for the proposed Support Precinct 2 Development in La Mercy, KwaZulu-Natal.	Project Manager & Senior EAP
2016 to 2017	Areena Resort	Application for rectification in terms of S24G and associated Environmental Basic Assessment for the alleged unlawful construction activities at the Areena Resort, Great Kei Municipality, Eastern Cape.	Project Manager & Senior EAP
2016 to 2017	Areena Resort	Application for rectification in terms of S24G and associated Environmental Basic Assessment for the alleged unlawful construction activities on Hillsdrift Farm, Great Kei Municipality, Eastern Cape.	Project Manager & Senior EAP
2018 to 2019	Watchman Properties (Pty) Ltd	Environmental Basic Assessment for the proposed Vendome Residential Development on Portion 1 of Farm 1766 and Portion 2 of Farm 1766, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
2018 to 2019	Keysha Investments 213 (Pty) Ltd	Environmental Basic Assessment for the proposed River Farm Estate Development and associated infrastructure on remainder of farm Rivierplaas No. 1486, Erf 111 and Erf 197, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP
2018 to 2019	Paarl Vallei Developments (Pty) Ltd	Environmental Basic Assessment for the proposed Paarl Valleij Retirement Village Development, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP
2018 to 2019	Val de Vie Investments (Pty) Ltd	Parallel Substantive Amendment Application process for the authorised Pearl Valley II & Levendal Residential Developments, Paarl, Western Cape, South Africa.	Project Manager & Senior EAP
2019 to 2021	Phumaf Holdings (Pty) Ltd	Environmental Services for: • Full Environmental Impact Assessment for the proposed Unitas Park Ext 16 Mixed Use Development; • Basic Environmental Impact Assessment for the proposed Evaton West F Mixed Use Development; and • Basic Environmental Impact Assessment for the proposed Evaton West I Mixed Use Development.	Project Manager & Senior EAP
Renewable Energy Environmental Assessments			
2011	Farmsecure Carbon	Environmental Basic Assessment and Water Use License Application process for a proposed Biogas Waste to Energy project for a pig farm, Mooiriver, KwaZulu-Natal.	Project Manager & Senior EAP
2018 to 2019	GPIPD – Doornfontein Solar Farm (Pty) Ltd	Environmental Impact Assessment for the proposed 230 MW Doornfontein Photovoltaic Solar Energy Facility (PVSEF) located on Remainder of Farm 118, Doornfontein, Piketberg, Bergrivier Local Municipality, Western Cape.	Project Manager & Senior EAP
2018 to 2019	GPIPD – Kruispad Solar Farm (Pty) Ltd	Environmental Impact Assessment for the proposed 150 MW Kruispad Photovoltaic Solar Energy Facility (PVSEF) located on Remainder of Farm 120, Kruispad, Piketberg, Bergrivier Local Municipality, Western Cape.	Project Manager & Senior EAP
2018 to 2019	Brandvalley Wind Farm (Pty) Ltd	Part 2 Amendment Application for the authorised 140 MW Brandvalley Wind Energy Facility (WEF) located within the Karoo Hoogland, Witzenberg and Laingsburg Local Municipalities in the Northern and Western Cape Provinces.	Project Manager & Senior EAP
2018 to 2019	Copperton Wind Farm (Pty) Ltd	Non-Substantive Amendment Application to update the information of the Holder of the Environmental Authorisation & an EMPr Amendment Process to update the Airstrip Alignment and to provide an updated "outcomes based" EMPr for the Copperton Wind Energy Facility near Copperton in the Northern Cape.	Project Manager & Senior EAP
2018 to 2019	WKN Windcurrent SA (Pty) Ltd	Environmental Impact Assessment for the proposed 150 MW Haga Haga Wind Energy Facility (WEF) & Environmental Basic Assessment for the associated Haga Haga Overhead Powerline (OHPL) in Haga Haga, Great Kei Local Municipality, Eastern Cape.	Project Manager & Senior EAP
2021 to 2022	Cennergi Holdings	Environmental Impact Assessment and Water Use License Application (GA) process for the proposed 100MW Lephalale Solar Plant located mainly on the Farm Appelvlakte 448 within the Lephalale Local Municipality, Limpopo.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
Mining Environmental Assessments			
2007	Chris Hani Municipality	Environmental Assessment and DME Licence Application on behalf of Chris Hani Municipality. Responsible for exemption application from Mining Permit and Environmental Management Programmes for 17 borrow pits in Middelburg, Eastern Cape.	Project Manager & Senior EAP
2010	Samancor Chrome Limited	The Lwala Greenfields Mine and Smelter EIA and EMP. Responsible for the Environmental impact assessment and technical investigations for the waste management issues for the proposed development of a new chrome smelter project in the Steelpoort area, Limpopo.	Project Manager & Senior EAP
2011	Xtrata Alloys	Xtrata Alloys Western Mines PSV application for authorization in terms of the MPRDA. Responsible for the undertaking of the EIA and compilation of the amended EMPr and technical environmental investigations for the proposed development of an open cast mine in Rustenburg, North West.	Project Manager & Senior EAP
2019 to 2021	Harmony Gold	Environmental Assessment process to obtain environmental authorisation for the proposed expansion of the existing Kareerand Tailings Storage Facility, Dr Kenneth Kaunda District Municipality, North-West Province.	Project Manager & Senior EAP
2019 to 2021	Zululand Anthracite Colliery	Environmental Basic Assessment for the proposed New Mngeni Adit & Associated Infrastructure, Mandlakazi Traditional Authority, KwaZulu-Natal.	Project Manager & Senior EAP
2021 to 2022	Sibanye-Stillwater	Part 2 Amendment Application for the approved Burnstone Gold Mine EA/EMPr located near Balfour within the Dipalaseng Local Municipality, Mpumalanga.	Project Manager & Senior EAP
2021 to 2022	Exxaro Resources	Section 34 EMPr Amendment Application for the approved Grootegeluk Mine EMPr located near Lephalale within the Lephalale Local Municipality, Limpopo.	Project Manager & Senior EAP
2021 to 2022	Booysendal Northam Platinum	Part 2 Amendment Applications for the Booysendal Mine located near Lydenburg, across both Mpumalanga and Limpopo provices: • Booysendal North Mine: New Emergency Escape Portal and two new Ventilation Shafts and associated Infrastructure; and • Booysendal South Mine: New Ventilation Shafts and associated infrastructure.	Project Manager & Senior EAP
2022 to 2023	Booysendal Northam Platinum	Integrated Environmental Authorisation Application for the Booysendal South Phase III Expansion, Lydenburg, Mpumalanga: • Booysendal South Tailings Storage Facility Expansion; • Booysendal South Run of Mine Stockyard Stockpile Expansion; and • Booysendal South New Merensky Plant.	Project Manager & Senior EAP
2022 to 2023	Kangra Coal	Integrated Environmental Authorisation Application for the establishment of a Co-Disposal Discard Facility and Wastewater Treatment Plant at the Maquasa East Operations, Piet Retief, Mpumalanga.	Project Manager & Senior EAP
2023	Kangra Coal	Integrated Environmental Authorisation Application for the Umgala/Knights Hill Mining Application, Utrecht, KwaZulu-Natal.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
Waste Management Environmental Assessments			
2003	Assmang Chrome Machadodorp	Environmental Impact Assessment for the permitting of the H:H Hazardous Waste Disposal Facility at Assmang Chrome, Machadodorp.	Senior EAP
2004	Emfuleni Local Municipality	Environmental Impact Assessment for the closure of the Zuurfontein Landfill site for the Emfuleni Local Municipality, Sedibeng, Gauteng	Senior EAP
2004	Ekurhuleni Municipality	Environmental Impact Assessment for the closure of the Sebenza Landfill Site for the Ekurhuleni Municipality, Gauteng.	Senior EAP
2004	Tzaneen Local Municipality	Application for authorisation and EIA for the permitting of an existing solid waste disposal site for the Tzaneen Local Municipality, Mpumalanga.	Senior EAP
2006	Samancor Chrome Middelburg	Environmental Basic Assessment for the permitting of the existing Slag Waste Disposal facility for Samancor Chrome Middelburg, Mpumalanga.	Senior EAP
2006	Samancor Chrome Ferrometals	Environmental Basic Assessment for the permitting of the existing Slag Waste Disposal facility for Samancor Chrome Ferrometals Witbank, Mpumalanga.	Senior EAP
2007	Steve Tshwete Municipality	Environmental Impact Assessments for four Solid waste Transfer Stations for the Steve Tshwete Municipality, Mpumalanga.	Senior EAP
2008	Assmang Chrome Machadodorp	Environmental Impact Assessment for the expansion of the existing Slag Waste Disposal Facility at Assmang Chrome. Responsible for the EIA application for authorization for the proposed expansion project in Machadodorp, Mpumalanga.	Project Manager & Senior EAP:
2010	ArcelorMittal	ArcelorMittal BOF Slag Disposal site licensing of new site and closure of old site, Newcastle, KwaZulu-Natal.	Project Manager & Senior EAP:
2010	Lekwa Municipality	Waste Management License Application for authorization and the conducting of an EIA and technical environmental investigation for the proposed development of two landfill sites for the Lekwa Municipality, Mpumalanga.	Project Manager & Senior EAP:
2015 to 2017	Umgungundlovu Municipality	Advanced Solid Waste Management Project for Umgundgundlovu Municipality for proposed Materials Recovery Facilities located in various Local Municipalities, Umgungundlovu Municipality, KwaZulu-Natal.	Project Manager & Senior EAP:
2019 to 2022	Buffalo Coal	Magdalena Colliery Waste Management License Application, Dundee, KwaZulu-Natal.	Project Manager & Senior EAP:
Water and Wastewater Environmental Assessments			
2004	Msukaligwa Municipality	Environmental Impact Assessment for the installation of a water reticulation system at Nganga for the Msukaligwa Municipality, Mpumalanga.	Senior EAP
2006 to 2010	eThekwini Municipality: Water and Sanitation	Proposed upgrading of the WWTW capacity in the Northern Areas of the eThekwini Municipality. Responsible for EIA application for authorization, technical environmental investigations, and waste management license application for the proposed expansion of the WWT capacity in Northern eThekwini, KwaZulu-Natal.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
2008	Johannesburg Water	Environmental Management Services for Johannesburg Water: Environmental Impact Assessment (Exemption) for various individual projects related to the upgrading of the Bryanston Water Mains, Gauteng.	Project Manager & Senior EAP
2014 to 2017	eThekwini Municipality: Water and Sanitation	Environmental Basic Assessment and Water Use License Application for the Northern Aqueduct Water Augmentation Project (Phase 5), Durban, KwaZulu-Natal.	Project Manager & Senior EAP
Electrical and Linear Environmental Assessments			
2005	Magallies Water	Application for (exemption) authorisation on behalf of Magallies Water for the installation of the Rising Main from the Roodeplaat Waterworks to the Wallmannsthal Reservoir, in Wallmannsthall, Gauteng.	Senior EAP
2010	Moloto Rail Corridor Development	EIA for the Moloto Rail Corridor Development. Responsible for the EIA application for authorization and technical environmental investigations for the proposed Moloto Rail Corridor Development, Moloto, Gauteng.	Project Manager & Senior EAP
2010	ESKOM	Environmental Basic Assessment of for the ESKOM Honingklip 88kV & ESKOM Randjiesfontein 88kV overhead line and Sub-Stations, Johannesburg, Gauteng.	Project Manager & Senior EAP
2010	ESKOM	Environmental Basic Assessment of for the ESKOM Ubertas Strategic Servitude Sub-Station, Johannesburg, Gauteng	Project Manager & Senior EAP
2014 to 2017	Msunduzi Municipality	Environmental Impact Assessment for the proposed Msunduzi IRPTN project, Pietermaritzburg, KwaZulu-Natal	Project Manager & Senior EAP
Environmental and Waste Management Compliance Monitoring and Auditing			
2005 to 2009	Sedibeng District Municipality	Auditing of Zuurfontein and Boitshepi Landfill sites for the Sedibeng District Municipality, Gauteng.	Part of Audit Team
2006 to 2009	ABSA DevCO	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the Amberfield Development on the farm Brakfontein 399 JR, Centurion, Gauteng.	Project Manager & Environmental Control Officer (ECO)
2007 to 2009	ABSA DevCO	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the Zambezi Estate Development, Montana, Gauteng.	Project Manager & ECO
2008 to 2009	Steve Tshwete Municipality	Auditing of Middelburg Landfill Site for the Steve Tshwete Municipality, Mpumalanga.	Part of Audit Team
2008 to 2009	ABSA DevCO	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the Cedar Creek Development, Fourways, Gauteng.	Project Manager & ECO
2017 to 2018	Dube TradePort	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the construction of TradeZone 2, Dube TradePort, La Mercy, KwaZulu-Natal.	Project Manager & ECO
2017	Richards Bay Minerals	Environmental Legal Compliance Audit to determine the level of compliance of Richards Bay	Project Manager &

Year	Client	Project Description	Role/ Responsibility
		Minerals' to their various mining, water and waste licenses and environmental authorisations and permits, Richards Bay, KwaZulu-Natal.	Environmental Auditor
2017 to 2018	eThekwini Municipality	Environmental Compliance monitoring in accordance with relevant authorisation conditions and environmental management plans for the construction of the Northern Aqueduct Phase 5, Durban, KwaZulu-Natal.	Project Manager & ECO
2019	Buffalo Coal	Annual EMPr and WUL audits for Coalfields, Aviemore and Magdalena Operations, Dundee, KwaZulu-Natal.	Project Manager & Lead Auditor
2020	Buffalo Coal	Annual EMPr and WUL audits for Coalfields, Aviemore and Magdalena Operations, Dundee, KwaZulu-Natal.	Project Manager & Lead Auditor
2020	Samancor Eastern Chrome Mines	Annual Performance Assessment Audits for the following mines in Limpopo: • Doornbosch, Steelpoort and Montrose Mines; • Quartz Mine; • Lwala Mine; • Lannex Mine; • Spitskop Mine; and • Tweefontein Mine.	Project Manager & Technical Review
2020	ESKOM	ESKOM Biennial PCB Phase-out Compliance Audit, various sites within South Africa.	Project Manager & Lead Auditor
2020	ESKOM	Majuba Power Station Legal Compliance Audit, Volksrust, Mpumalanga.	Project Manager & Lead Auditor
2021	Zululand Anthracite Colliery	Annual IWUL Audit for 2020, Mandlakazi Traditional Authority, KwaZulu-Natal	Project Manager & Technical Review
2021	ESKOM	Kendal Power Station Legal Compliance Audit, eMalahleni Local Municipality, Mpumalanga.	Project Manager & Lead Auditor
2021	Coalition Trading	External Compliance Audit for the Humberdale Landfill Site, in terms of the Waste Management Permit, KwaZulu-Natal	Project Manager & Auditor
2021	Tronox KZN Sands (Pty) Ltd	NEM: WA Norms and Standards External Waste Compliance Audit for the Tronox Central Processing Complex located in Empangeni, KwaZulu-Natal	Project Manager & Lead Auditor
Integrated Water Use License Applications			
2010	FOSKOR	Integrated Water Use License Application for a new storage dam for FOSKOR, Richards Bay, KwaZulu-Natal.	Part of Project Team
2014 to 2015	SANRAL	Integrated Water Use License Applications as required for the proposed SANRAL N2 Road upgrade from Mthunzini to Empangeni, KwaZulu-Natal.	Project Manager & Senior EAP
2014	eThekwini Municipality: Roads	Integrated Water Use License Application for the proposed Realignment of Inanda Arterial Road, Durban, KwaZulu-Natal.	Project Manager & Senior EAP

Year	Client	Project Description	Role/ Responsibility
2015 to 2017	SMEC (Umzimkulu Municipality)	Integrated Water Use License Application for the proposed Licensing of the existing Umzimkhulu Waste Water Treatment Works, Umzimkhulu, KwaZulu-Natal.	Project Manager & Senior EAP
2014 to 2016	eThekwini Municipality: Roads	Water Use License Application for the proposed eThekwini BRT Route C1A, Durban, KwaZulu-Natal.	Project Manager & Senior EAP
2019 to 2020	Zululand Anthracite Colliery	Integrated Water Use License Application for the new Mngeni Adit and associated infrastructure, Mandlakazi Traditional Authority, KwaZulu-Natal.	Project Manager & Senior EAP
2019 to 2021	South32 SA Coal Holdings	Integrated Water Use License Application for the Roy Point Mine, Newcastle, KwaZulu-Natal.	Project Manager & Senior EAP
2020 to 2022	Buffalo Coal	Integrated Water Use License Amendment Application for the Magdalena Colliery, Dundee, KwaZulu-Natal.	Project Manager & Senior EAP
2020 to 2022	Buffalo Coal	Integrated Water Use License Application for the Coalfields Processing Plant, Dundee, KwaZulu-Natal.	Project Manager & Senior EAP
Management and Master Plans			
2005	Livingstone Municipality	Development of the Livingstone Integrated Development Plan, Zambia.	Part of the Project Team
2008	Steve Tshwete Municipality	Development of an Integrated Waste Management Plan for the Steve Tshwete Municipality, Mpumalanga.	Part of the Project Team
2008	Kungwini Local Municipality	Development of an EMP (Framework) for Kungwini Local Municipality, Mpumalanga.	Part of the Project Team
2010	KZN Department of Public Works – Southern Region	Compilation of an Environmental Management Plan for the Fort Napier sewage upgrading project, Pietermaritzburg, Kwa-Zulu Natal.	Project Manager & Senior EAP

DECLARATION

I, ___Gerda Bothma_____ hereby declare that the details furnished above are true and correct to the best of my knowledge and belief and I undertake to inform you of any changes therein, immediately. In case any of the above information is found to be false or untrue or misleading or misrepresenting, I am aware that I may be held liable for it.

Signature:  Date: 21/02/2024

9222065

University of Pretoria

The Council and Senate hereby declare that
at a congregation of the University the degree

Baccalaureus Scientiae

with specialization in
Biological Sciences

with all the associated rights and privileges
was conferred on

GERDA DE LANGE

in terms of the Act and Statute of the University

On behalf of the Council and Senate
(Sgd) P Smit
Vice-Chancellor and Principal

On behalf of the Faculty of
Science
(Sgd) N Sauer
Dean

(Sgd) CR de Beer
Registrar

Date of Conferment
8 December 1994

Certified a true translation of the original Certificate

Registrar
Signed at Pretoria on the third day of September, 2008

9222065

University of Pretoria

The Council and Senate hereby declare that
at a congregation of the University the degree

Baccalaureus Scientiae Honores

with specialization in
Microbiology

with all the associated rights and privileges
was conferred on

GERDA DE LANGE

in terms of the Act and Statute of the University

On behalf of the Council and Senate
(Sgd) P Smit
Vice-Chancellor and Principal

On behalf of the Faculty of Biological
and Agriculrural Sciences
(Sgd) J van Zyl
Dean

(Sgd) JA Boon
Registrar

Date of Conferment
27 March 1996

Certified a true translation of the original Certificate

Registrar
Signed at Pretoria on the third day of September, 2008

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Gerda Bothma

Registration Number: 117348

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following field(s) of practice (Schedule 1 of the Act)

Environmental Science (Professional Natural Scientist)

Effective **15 November 2017** Expires **31 March 2024**

Chairperson

Chief Executive Officer

To verify this certificate scan this code

APPENDIX B: DFFE SCREENING REPORT

SCREENING REPORT FOR AN ENVIRONMENTAL AUTHORIZATION AS REQUIRED BY THE 2014 EIA REGULATIONS – PROPOSED SITE ENVIRONMENTAL SENSITIVITY

EIA Reference number: TBC

Project name: TNPA 22MW GENSET Richards Bay

Project title: Application for EA

Date screening report generated: 14/12/2023 16:06:26

Applicant: TNPA

Compiler: GCS Environment SA

Compiler signature: .....

Application Category: Infrastructure|Transport Services|Ports

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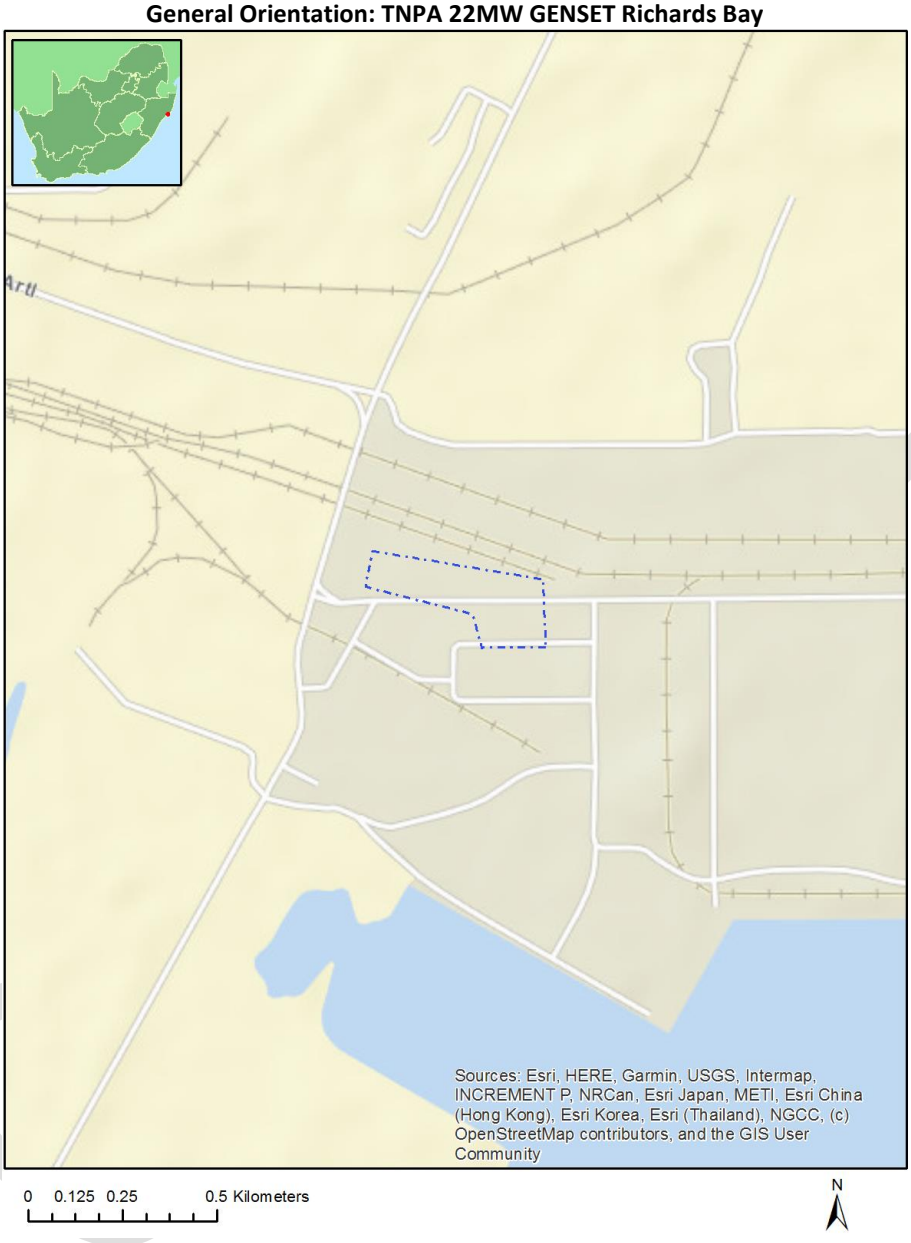
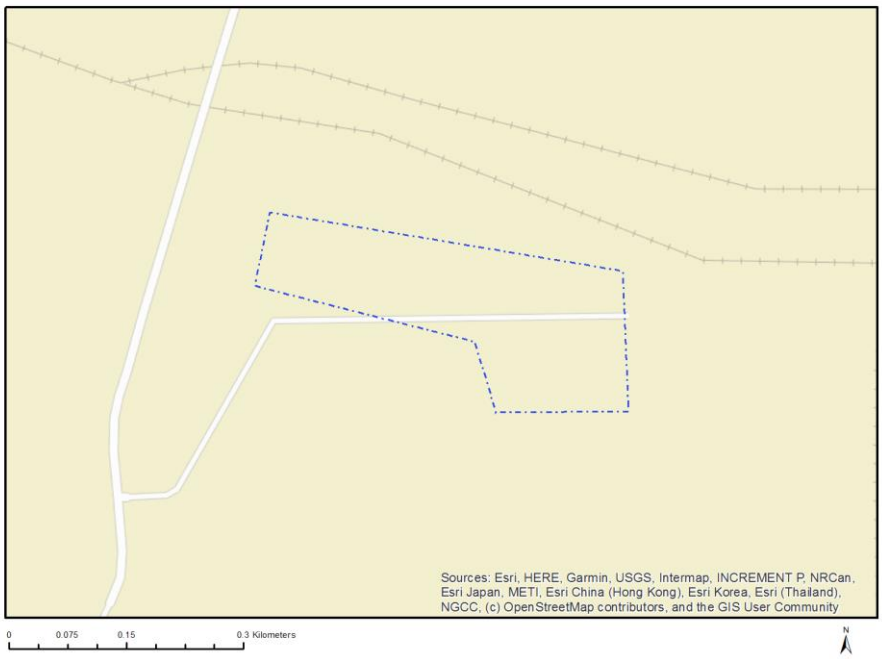
Proposed Project Location

Orientation map 1: General location



Map of proposed site and relevant area(s)



Cadastral details of the proposed site

Property details:

No	Farm Name	Farm/ Erf No	Portion	Latitude	Longitude	Property Type
1	RICHARDS BAY	5333	21	28°47'0.89S	32°2'43.9E	Erven
2	RICHARDS BAY	5333	21	28°47'0.89S	32°2'43.9E	Erven
3	RICHARDS BAY	397	0	28°46'45.84S	32°3'53.35E	Erven

Development footprint[1] vertices:
No development footprint(s) specified.

Wind and Solar developments with an approved Environmental Authorisation or applications under consideration within 30 km of the proposed area

No	EIA Reference No	Classification	Status of application	Distance from proposed area (km)
1	12/12/20/2387/AM1	Wind	Approved	13.7
2	14/12/16/3/3/2/867	Solar PV	Approved	5.3
3	14/12/16/3/3/2/2041	Solar PV	Approved	4.4

[1] "development footprint", means the area within the site on which the development will take place and incudes all ancillary developments for example roads, power lines, boundary walls, paving etc. which require vegetation clearance or which will be disturbed and for which the application has been submitted.

Environmental Management Frameworks relevant to the application

No intersections with EMF areas found.

Environmental screening results and assessment outcomes

The following sections contain a summary of any development incentives, restrictions, exclusions or prohibitions that apply to the proposed development site as well as the most environmental sensitive features on the site based on the site sensitivity screening results for the application classification that was selected. The application classification selected for this report is: **Infrastructure|Transport Services|Ports**.

Relevant development incentives, restrictions, exclusions or prohibitions

The following development incentives, restrictions, exclusions or prohibitions and their implications that apply to this site are indicated below.

Incentive, restriction or prohibition	Implication
Strategic Transmission Corridor-Expanded Eastern Corridor	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_EGI.pdf
Strategic Gas Pipeline Corridors-Phase 7: Coega to Richards Bay	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Combined_GAS.pdf
Main Electricity Transmission Substation	https://screening.environment.gov.za/ScreeningDownloads/DevelopmentZones/Distribution_Transmission.pdf

Proposed Development Area Environmental Sensitivity

The following summary of the development site environmental sensitivities is identified. Only the highest environmental sensitivity is indicated. The footprint environmental sensitivities for the proposed development footprint as identified, are indicative only and must be verified on site by a suitably qualified person before the specialist assessments identified below can be confirmed.

Theme	Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture Theme	X			
Animal Species Theme		X		
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme				X
Civil Aviation Theme		X		
Defence Theme				X
Paleontology Theme			X	
Plant Species Theme				X
Terrestrial Biodiversity Theme	X			

Specialist assessments identified

Based on the selected classification, and the known impacts associated with the proposed development, the following list of specialist assessments have been identified for inclusion in the assessment report. It is the responsibility of the EAP to confirm this list and to motivate in the assessment report, the reason for not including any of the identified specialist study including the provision of photographic evidence of the site situation.

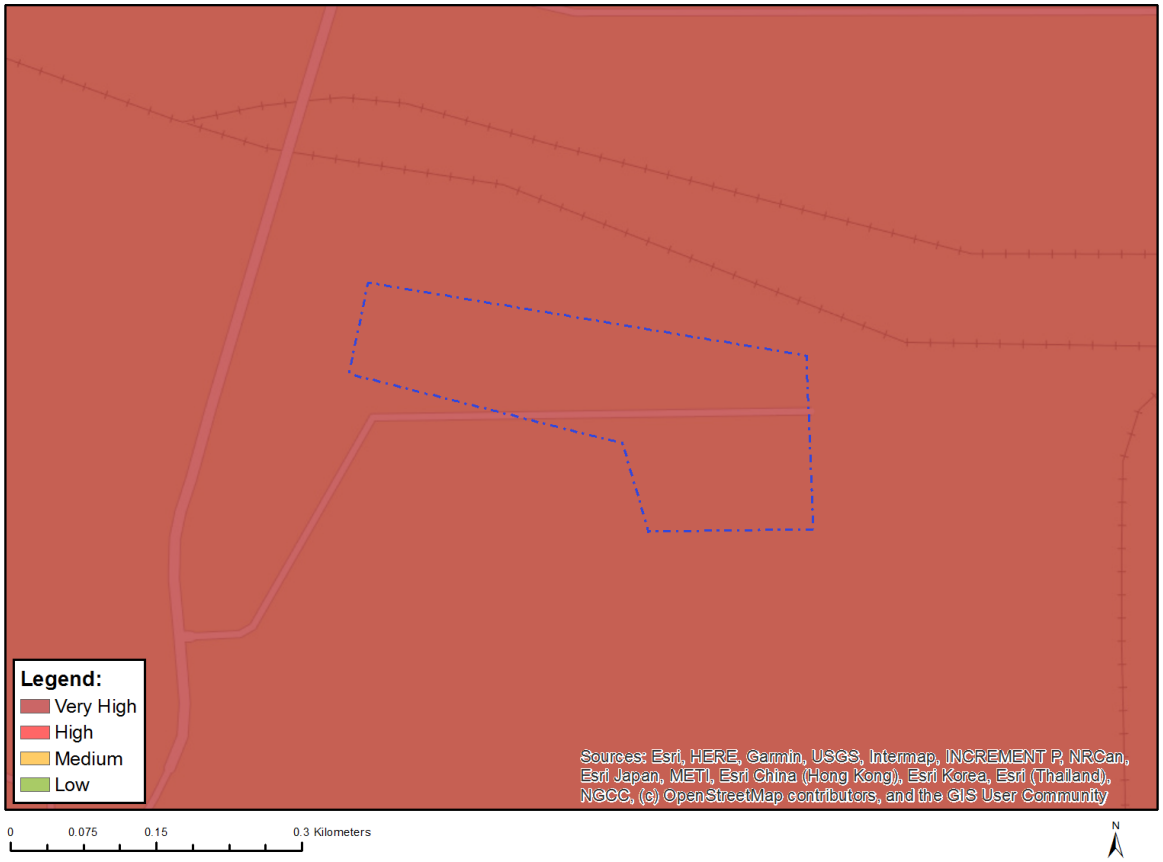
No	Specialist assessment	Assessment Protocol
1	Agricultural Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Agriculture_Assessment_Protocols.pdf
2	Landscape/Visual Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
3	Archaeological and Cultural Heritage Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
4	Palaeontology Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
5	Terrestrial Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Terrestrial_Biodiversity_Assessment_Protocols.pdf
6	Aquatic Biodiversity Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Aquatic_Biodiversity_Assessment_Protocols.pdf
7	Marine Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
8	Avian Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Avifauna_Assessment_Protocols.pdf
9	Defense Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Defence_Installations_Assessment_Protocols.pdf
10	Noise Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Noise_Impacts_Assessment_Protocol.pdf
11	Traffic Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
12	Geotechnical Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
13	Socio-Economic Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_Protocols.pdf
14	Ambient Air Quality Impact Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_General_Requirement_Assessment_P

		rotocols.pdf
15	Plant Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Plant_Species_Assessment_Protocols.pdf
16	Animal Species Assessment	https://screening.environment.gov.za/ScreeningDownloads/AssessmentProtocols/Gazetted_Animal_Species_Assessment_Protocols.pdf

Results of the environmental sensitivity of the proposed area.

The following section represents the results of the screening for environmental sensitivity of the proposed site for relevant environmental themes associated with the project classification. It is the duty of the EAP to ensure that the environmental themes provided by the screening tool are comprehensive and complete for the project. Refer to the disclaimer.

MAP OF RELATIVE AGRICULTURE THEME SENSITIVITY

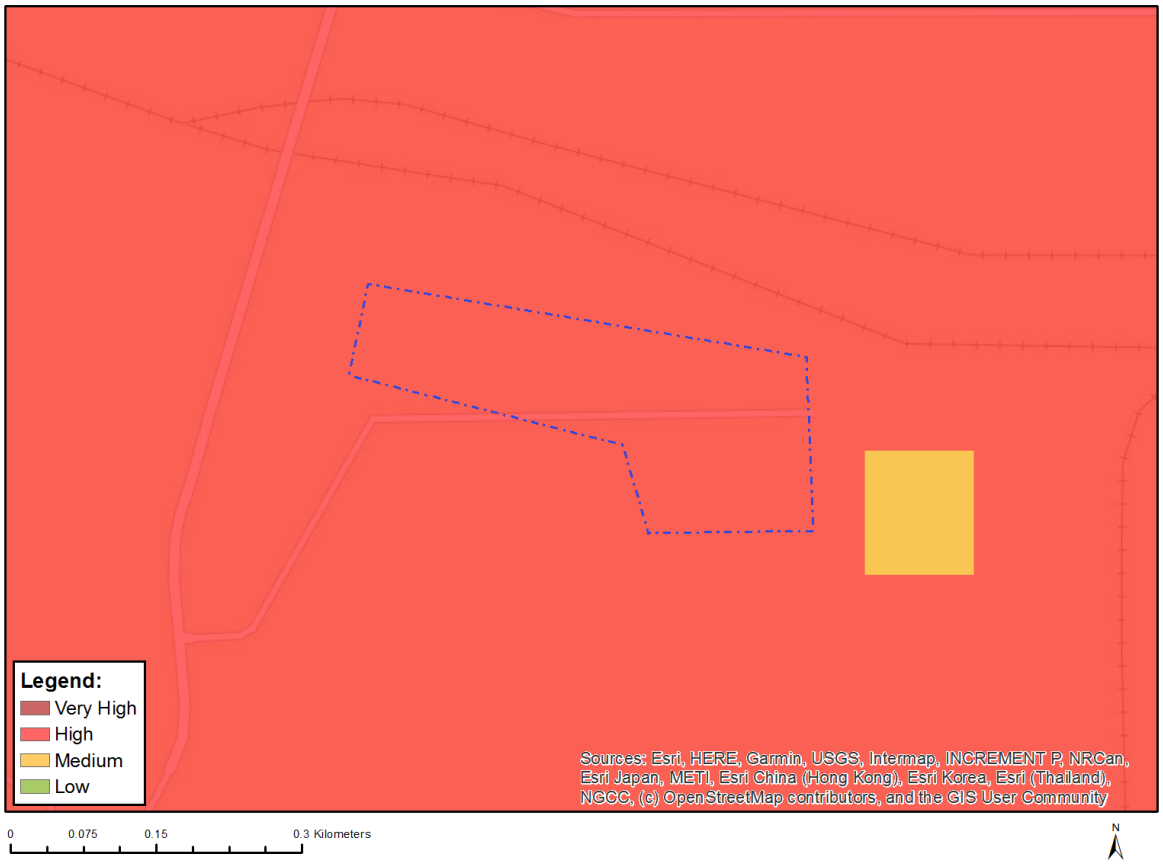


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Land capability;11. High/12. High-Very high/13. High-Very high/14. Very high/15. Very high

MAP OF RELATIVE ANIMAL SPECIES THEME SENSITIVITY



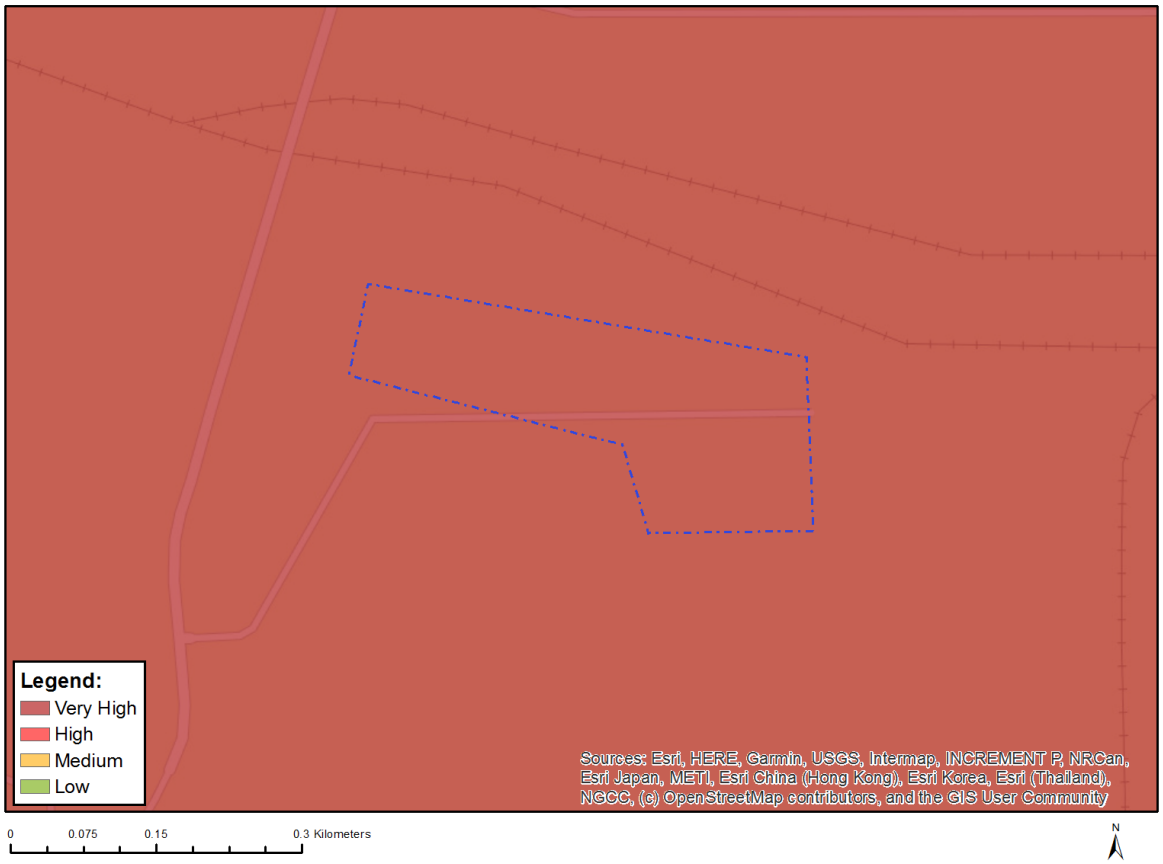
Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Aves-Circus ranivorus
High	Aves-Stephanoaetus coronatus
High	Aves-Balearica regulorum
High	Aves-Halcyon senegaloides
High	Aves-Circaetus fasciolatus
Medium	Amphibia-Hyperolius pickersgilli
Medium	Sensitive species 8
Medium	Reptilia-Crocodylus niloticus
Medium	Reptilia-Pelusios rhodesianus
Medium	Invertebrate-Arytropteris basalis
Medium	Invertebrate-Pomatonota dregii

MAP OF RELATIVE AQUATIC BIODIVERSITY THEME SENSITIVITY

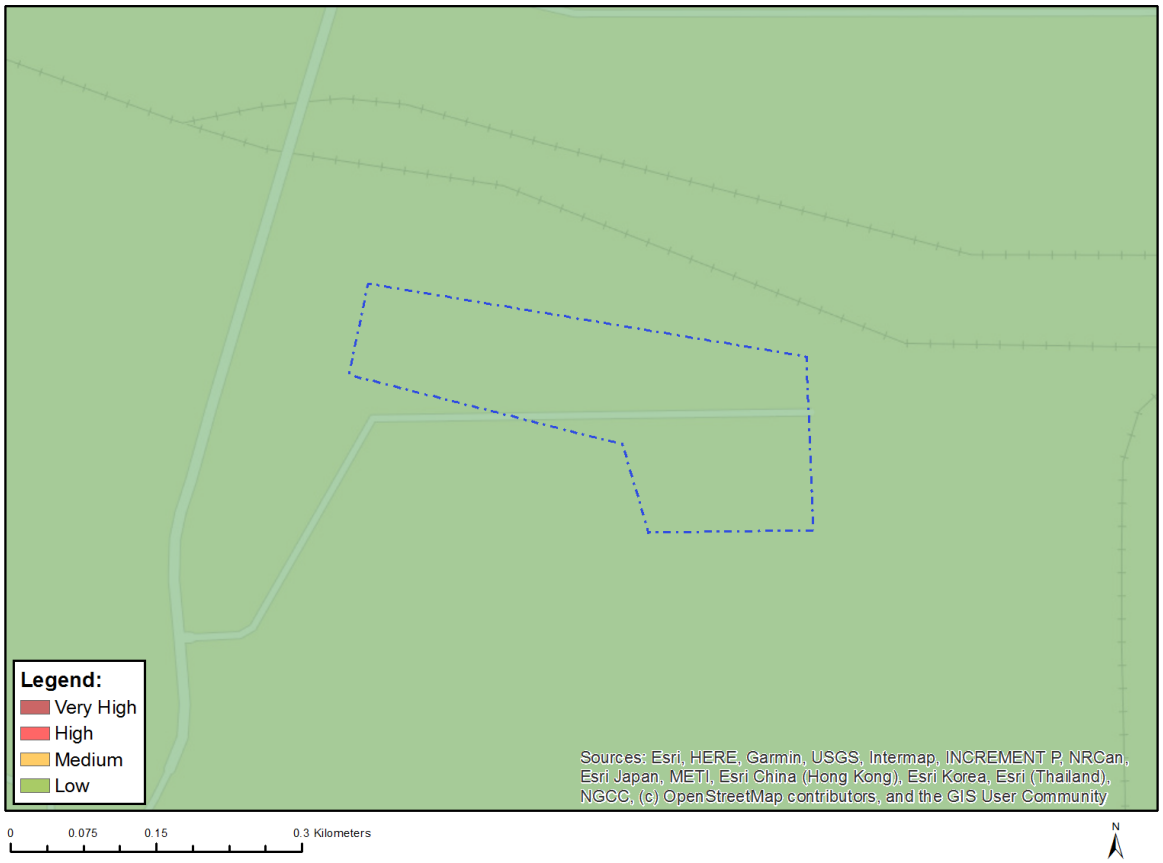


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	Estuary_Richards Bay
Very High	Wetlands_(Estuary)

MAP OF RELATIVE ARCHAEOLOGICAL AND CULTURAL HERITAGE THEME SENSITIVITY

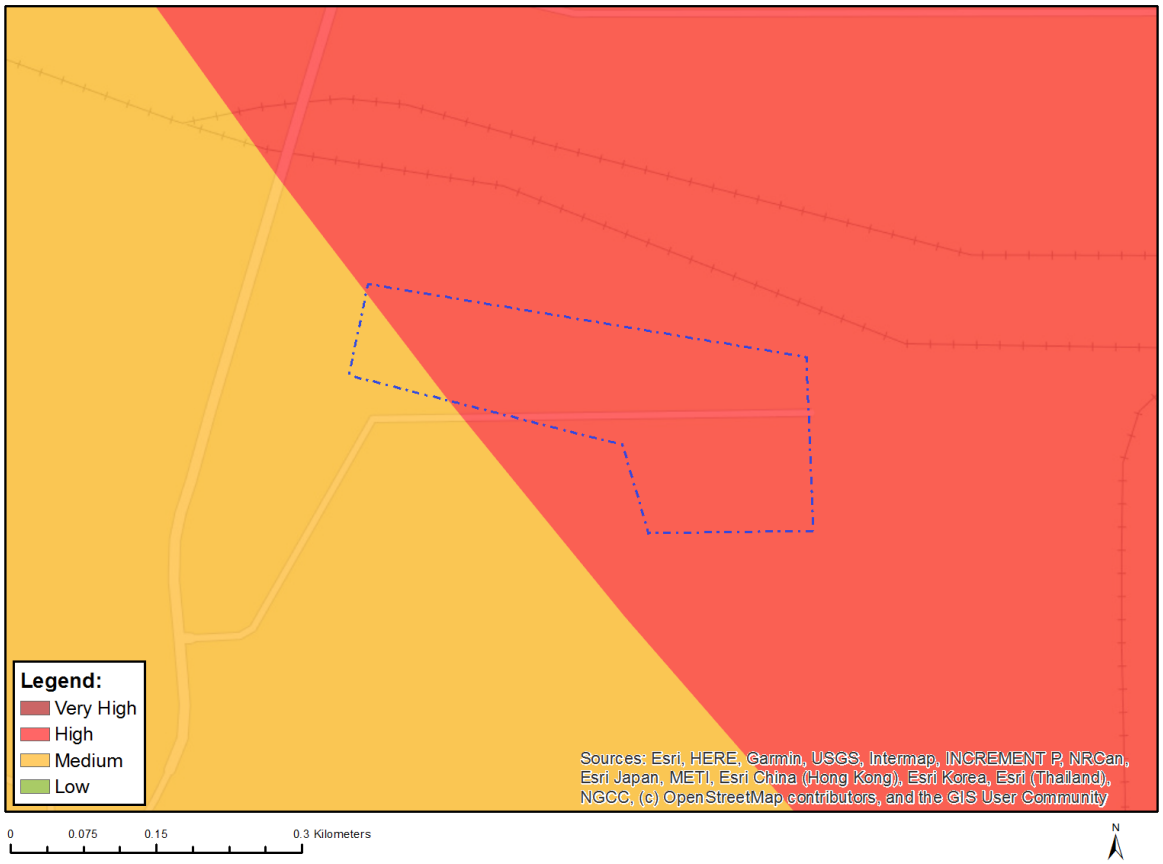


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low sensitivity

MAP OF RELATIVE CIVIL AVIATION THEME SENSITIVITY

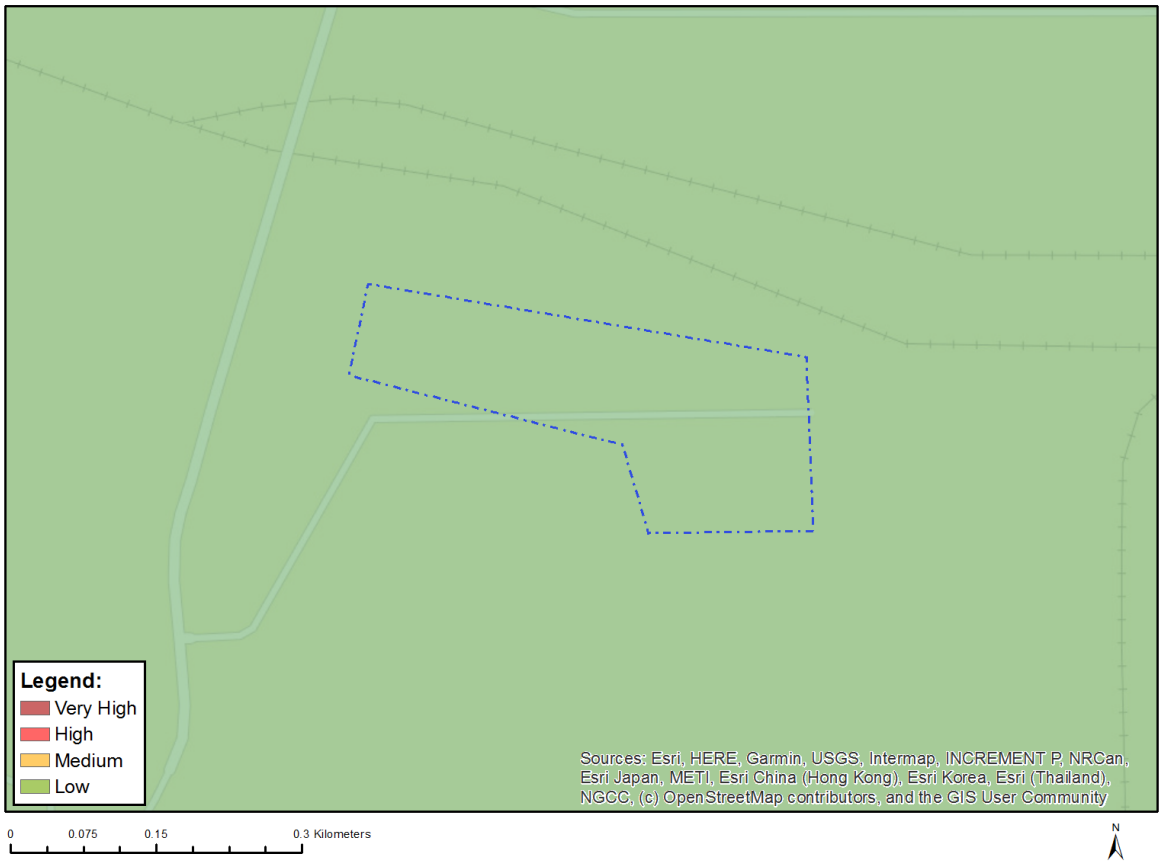


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
	X		

Sensitivity Features:

Sensitivity	Feature(s)
High	Within 8 km of other civil aviation aerodrome
Medium	Between 8 and 15 km of other civil aviation aerodrome

MAP OF RELATIVE DEFENCE THEME SENSITIVITY

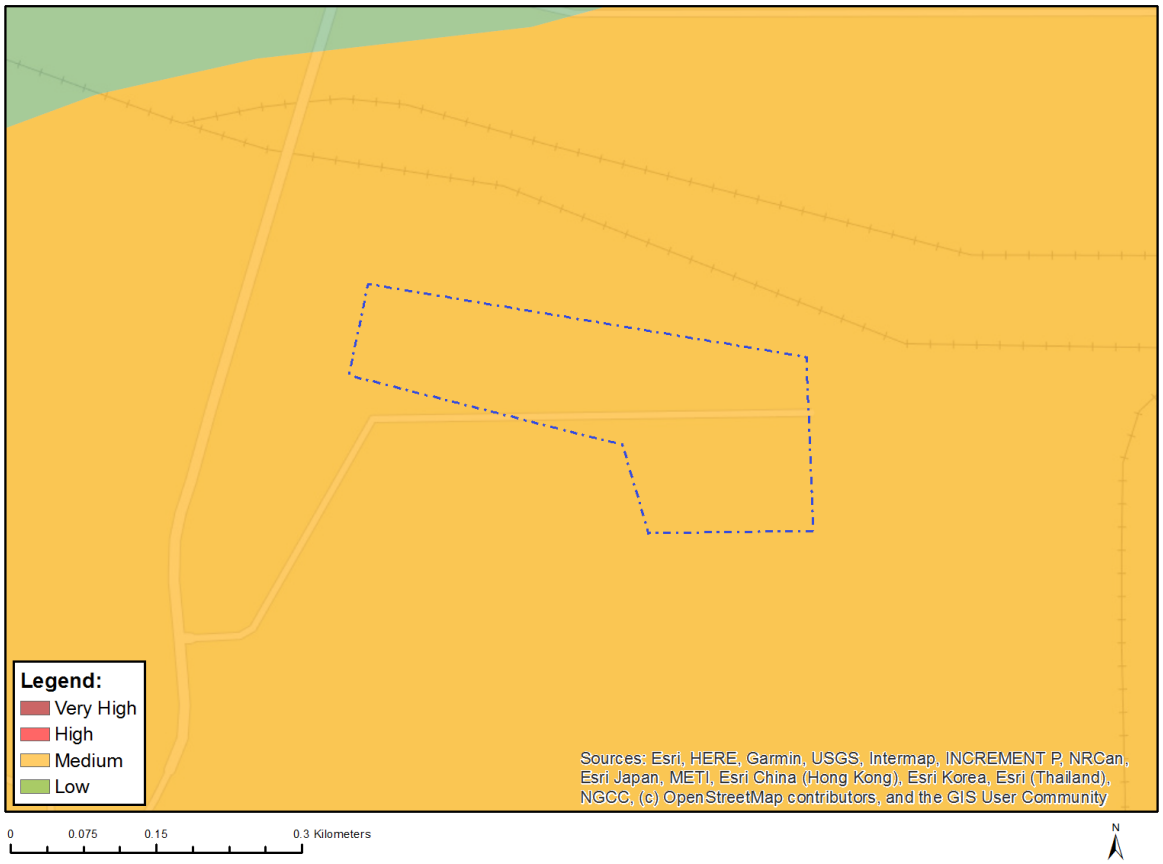


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE PALEONTOLOGY THEME SENSITIVITY

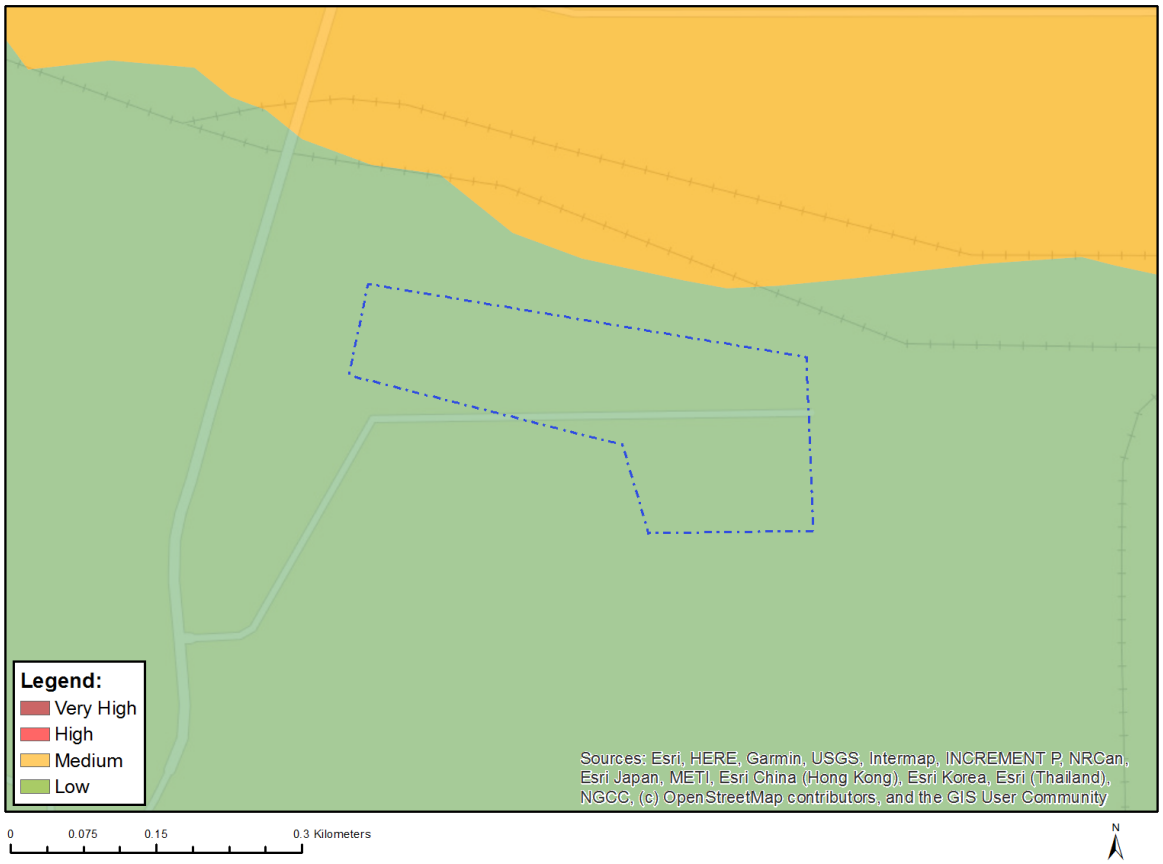


Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Medium	Features with a Medium paleontological sensitivity

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



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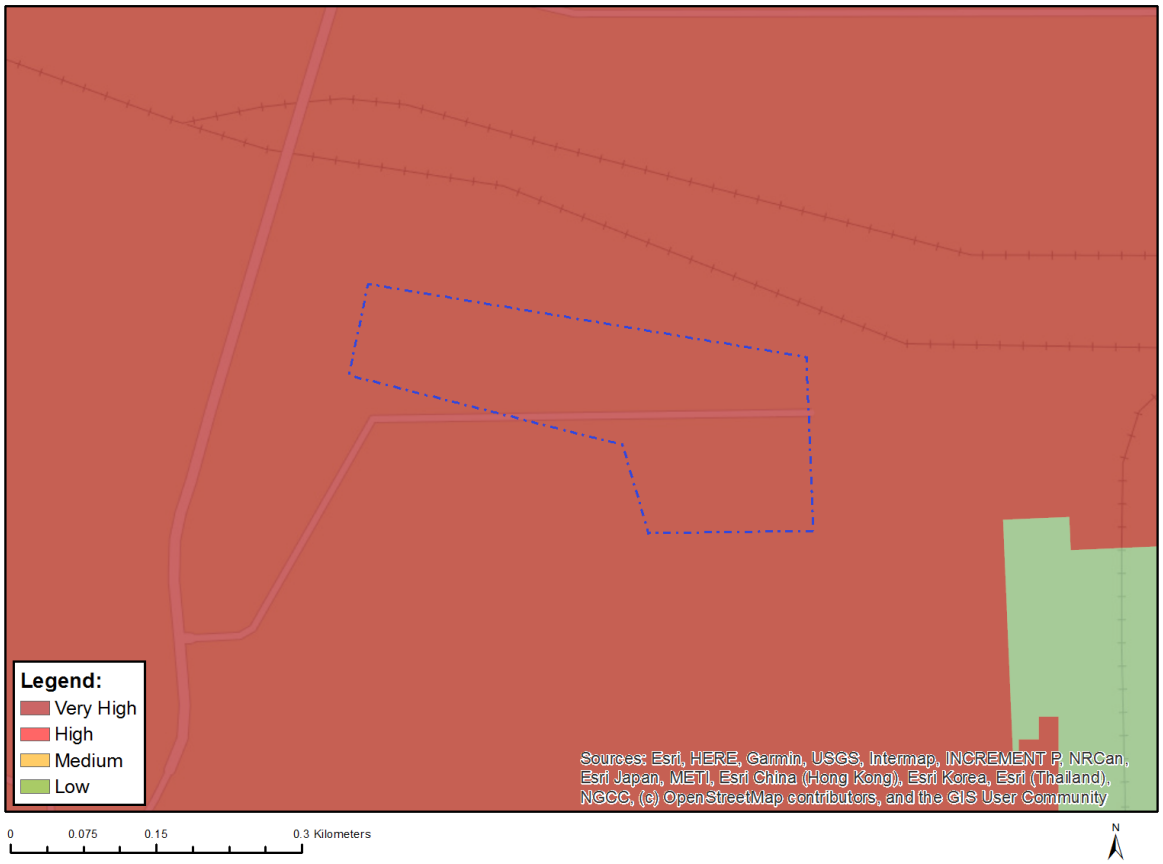
Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
			X

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity

MAP OF RELATIVE TERRESTRIAL BIODIVERSITY THEME SENSITIVITY



Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
X			

Sensitivity Features:

Sensitivity	Feature(s)
Very High	CBA: Irreplaceable
Very High	National Protected Area Expansion Strategy (NPAES)

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Tel: +27 (0) 11 803 5726 **Fax:** +27 (0) 11 803 5745 **Web:** www.gcs-sa.biz

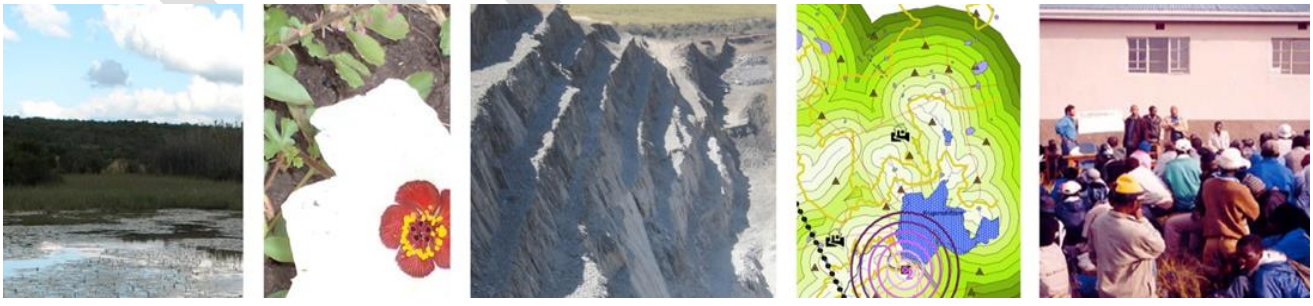
PRELIMINARY SITE SENSITIVITY VERIFICATION FOR THE PROPOSED ESTABLISHMENT OF A 22MW DUAL FUEL GENERATOR AT THE PORT OF RICHARDS BAY, KWA-ZULU NATAL PROVINCE

Version - Draft

February 2024

GCS Project Number: 23-0807

Client Reference: TNPA/2023/06/0023/33545/RFP



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Version – Draft

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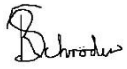
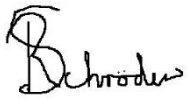
DOCUMENT ISSUE STATUS

Report Issue	Draft		
GCS Reference Number	23-0807		
Client Reference	TNPA/2023/06/0023/33545/RFP		
Title	**PRELIMINARY SITE SENSITIVITY VERIFICATION FOR THE PROPOSED ESTABLISHMENT OF A 22MW DUAL FUEL GENERATOR AT THE PORT OF RICHARDS BAY, KWA-ZULU NATAL PROVINCE**		
	Name	**Signature**	**Date**
Author	Rona Schröder		28 February 2024
Environmental Manager	Gerda Bothma		29 February 2024

Specialist declaration

I, Rona Schröder, in my capacity as a specialist consultant, hereby declare that I:

- Act as an independent consultant;
- Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act (Act No. 107 of 1998);
- Have and will not have vested interest in the proposed activity proceeding;
- Have no, and will not engage in, conflicting interests in the undertaking of the activity;
- Undertake to disclose, to the competent authority, any material information that has or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the National Environmental Management Act (Act No. 107 of 1998);
- As a registered member of the South African Council for Natural Scientific Professions and the Environmental Assessment Practitioners Association of South Africa (EAPASA), I will undertake my profession in accordance with the Code of Conduct of the Council, as well as any other societies to which I am a member;
- Based on information provided to me by the project proponent and in addition to information obtained during the course of this study, have presented the results and conclusion within the associated document to the best of my professional ability; and
- Reserve the right to modify aspects pertaining to the present investigation should additional information become available through ongoing research and/or further work in this field.



Rona Schröder (Pr.Sci.Nat)(EAPASA) Date: 28 February 2024

SACNASP reg. no. 120605

EAPASA Reg. No. 2020/1149

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1 INTRODUCTION

GCS Environment South Africa (Pty) Ltd (GCS) has been appointed by Transnet National Port Authority (TNPA) to conduct a Site Sensitivity Verification Screening Assessment as part of the application for environmental authorisation for the proposed establishment of a 22MW Dual Fuel Generator at the Port of Richards Bay in the Kwa-Zulu Natal Province.

The assessment will focus on the environmental features associated with the site and how these relate to possible legislated authorisation processes in accordance with the National Environmental related legislation.

2 BACKGROUND

The Transnet National Ports Authority (TNPA) is a division of Transnet SOC Ltd and manages all eight of the Transnet commercial Ports on the South African coastline. The Port of Richards Bay (PoRB) is one of the country's largest ports in size, with total land and water surfaces of 2 174 hectares and 1 443 hectares, respectively. TNPA is responsible for ensure that the ports are economic hubs for the country while ensuring that it also complies with the South African Laws and Regulations which is governed by the National Ports Act (Act No. 12 of 2005) (NPA) which directs the TNPA to facilitate the provision of water, lighting, power, sewerage, and telecommunications within the ports. The PoRB is still developing and constantly upgrading to ensure that the port provides the best possible service and attracts business activities for importing and exporting. Approximately half of the PoRB has been developed. Mining activities and commodities are currently the largest contributor to the imports and exports at the port, with coal being the largest exported commodity.

This Projects entails the construction of the following infrastructure within the existing port areas:

- A dual fuel generator for the electricity generation of 22MW output which can be operated with diesel or liquid natural gas;
- The installation of diesel fuel tank(s) storage of the total capacity of 600m^3;
- The installation of a 200m^3 tank storage of demineralised water;
- Evacuation lines to the substations;
- Fencing for the site;
- An auxiliary pit;
- A drain facility for the used diesel and sludge;
- A transmission line from the generator to the Harbour West Substation, Sorting Yard substation, Liquid Pitch Substation, Arrivals Yard Substation, Eastern Intake Substation, Carina Substation and Admin Quay Substation will be installed in order to allow for power distribution from the generator to the rest of the port; and

- LNG pipeline from the Gas hub to the Generator site.

The study site is approximately 0.51ha in size and is located along the Newmark Road within the Port of Richards Bay on the farm Richards Bay 14217 GV Portion 0. The site is located close to the TNPA administration offices and surrounded by other buildings utilised by contractors on site.

The extent of the study site is provided in Figure 2-2 with the corner point coordinates provided in Table 2-1.

Table 2-1: Corner point coordinates of the study site

Label	Latitude	Longitude
A	28°47'7.47"S	32° 1'52.90"E
B	28°47'7.43"S	32° 1'56.00"E
C	28°47'9.33"S	32° 1'56.10"E
D	28°47'9.46"S	32° 1'53.02"E

Associated linear infrastructure alignments are provided in Figures 2-3 and 2-4.

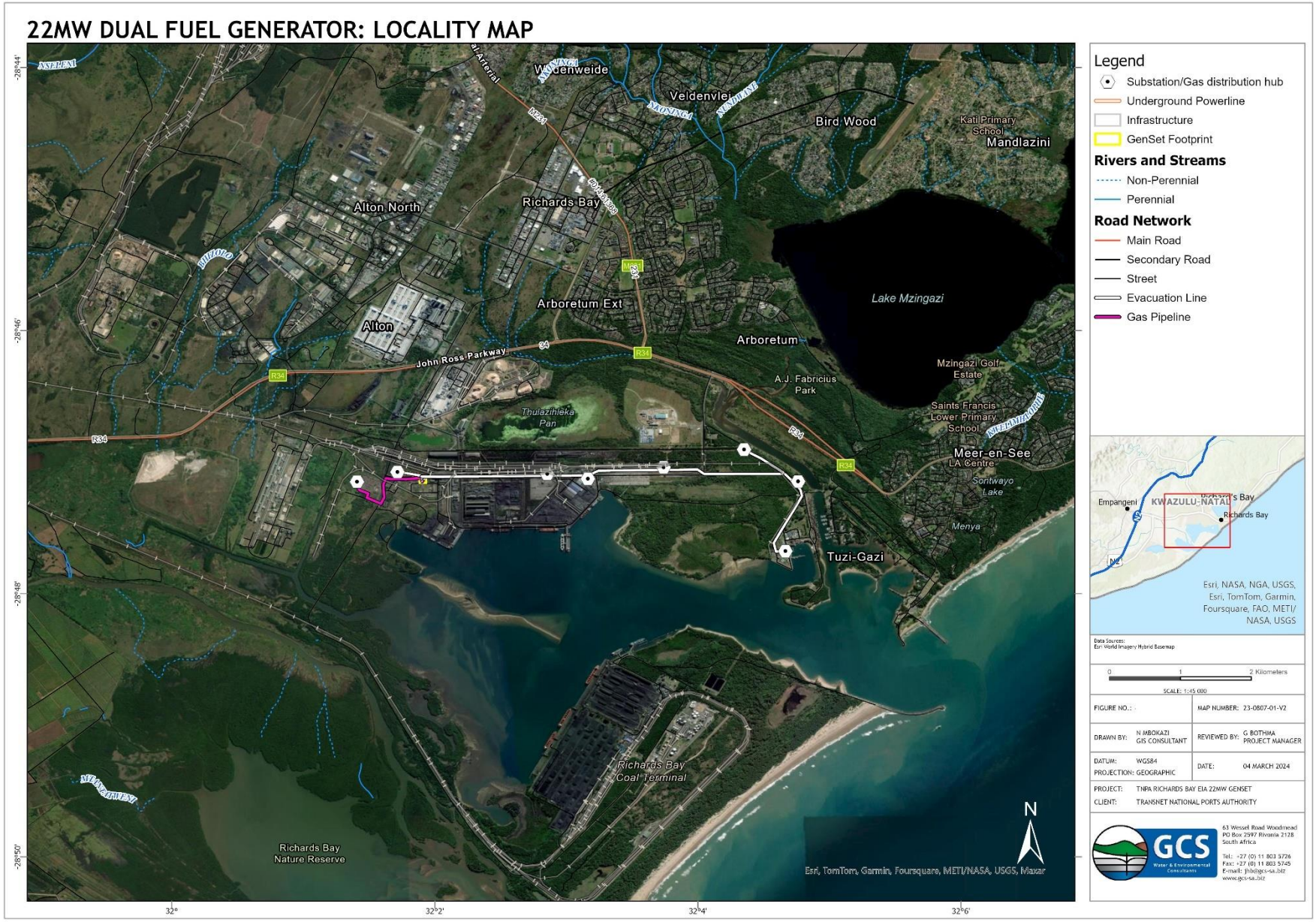


Figure 2-1: Location of the TNPA Generator Project for the Port of Richard Bay (generator site shown in yellow).

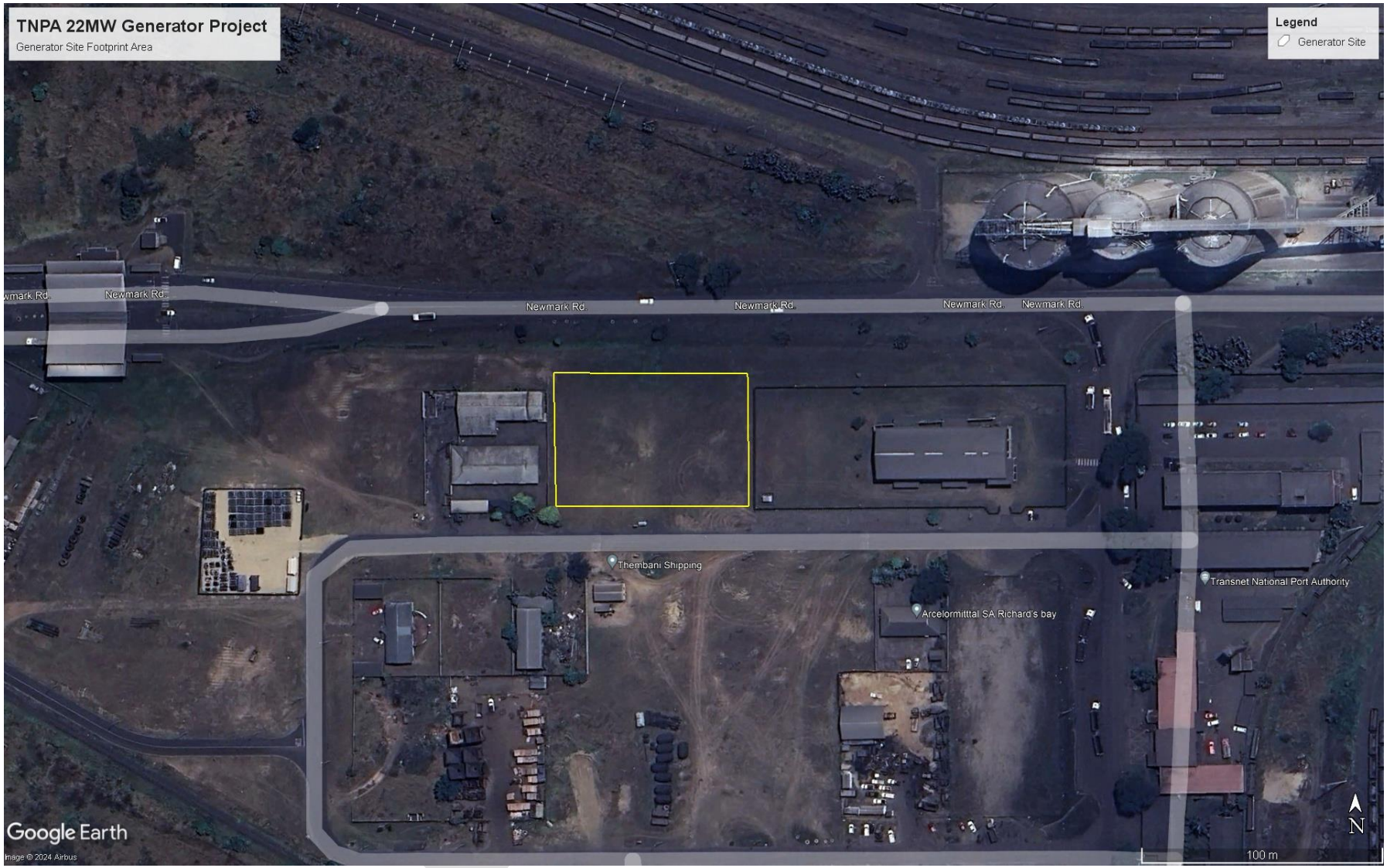


Figure 2-2: Footprint Area of the TNPA Genset Project where the generator infrastructure will be located. (shown in yellow)

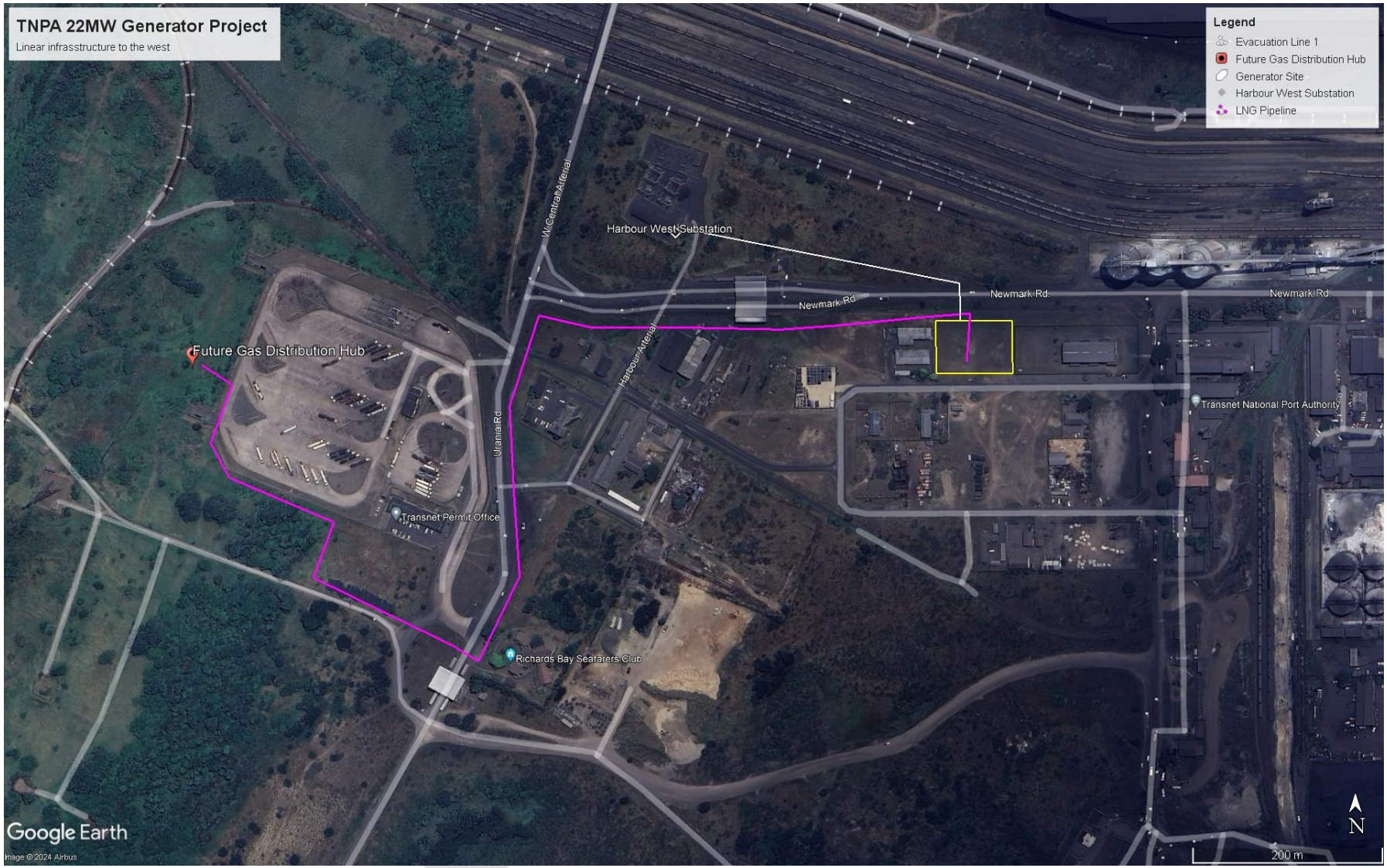


Figure 2-3: Proposed linear infrastructure alignment to the west of the generator site

Figure 2-4: Proposed linear infrastructure alignment to the east of the generator site

3 SCOPE OF WORK

The Site Verification Assessment will make provision for the identification of any possible areas of environmental sensitivities within the property boundaries. The Screening Report as generated from the DFEE Screening Tool will be used to guide the possible sensitivities in the site area, and a verification of the existing site conditions and sensitivities was investigated.

In addition to the above, the assessment will make provision for an evaluation of the applicable South African environmental legislation and regulations. This will be done to determine the required authorisation(s) that will be required for enable the establishment of a power generation facility on the study site. The Legislation that will be considered in the assessment are as follows:

- National Environmental Management Act (Act No. 107 of 1998): Environmental Impact Assessment Regulations (2014), as amended;
- National Water Act (Act No. 36 of 1998), with focus on Section 21 of the Act;
- National Environmental Management: Biodiversity Act (Act No. 10 of 2004); and
- National Environmental Management: Protected Areas Act (Act No. 57 of 2003).

The outcome of this legal assessment will provide a clear Permitting and Authorisation Framework for the project as well as an indicative programme and associated cost estimates.

4 METHODOLOGY

The findings of the assessment are based on a Desktop Assessment of available GIS databases to identify any possible environmentally sensitive features within the site or within the immediate vicinity of the site. These features were then used to plan the site visit to verify these areas and to identify any additional features that might require consideration.

The site visit was conducted on 15 February 2024 by Rona Schröder and Gerda Bothma of GCS Environment SA (Pty) Ltd.

5 ASSUMPTIONS AND KNOWLEDGE GAPS

The site is located within the existing footprint area of the Richards Bay Port and the vegetation has been altered and cultivated throughout the years. There are grass species present that is an indication of wet soils, which is possibly due to the shallow water table but will be confirmed by the wetland specialist.

It is assumed that the generator complex will not surpass the proposed site extent.

The proposed pipeline and the powerline will be traversing the more sensitive areas. Specialists have been appointed to determine the possible impacts on the surrounding environment and determine the sensitivity.

It is assumed that the visual and aviation impacts would be low considering the silo's situated in close proximity of the generator area is more than double the height of what the generator complex would be. See Figure 5-1 for the location and visual aspect next to the proposed generator site.

Figure 5-1: Current silo's situated opposite to the proposed generator complex site.

6 DESKTOP FINDINGS

The desktop assessment considered the following databases:

- Information contained in the Department of Forestry Fisheries and Environment Online Screening Tool Report;
- Biodiversity databases available on the SANBI Website;
- 1 in 50 000 topographical map sheet for the area;
- Recent aerial imagery for the site; and
- Previous specialist studies conducted for the Port of Richards Bay Area.

6.1 Department of Forestry Fisheries and Environment (DFFE) Online Screening Tool

The site sensitivities identified in the DFFE Online Screening Tool are provided in Table 6-1.

Table 6-1: Site sensitivities identified in the DFFE Online Screening Tool

Theme	Very high sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
Agriculture theme	X			
Animal species theme		X		
Aquatic biodiversity theme	X			
Archaeological and cultural heritage theme				X
Civil aviation theme		X		
Defence theme				X
Palaeontology theme			X	
Plant species theme				X
Terrestrial biodiversity theme	X			

The findings of the DFFE Online Screening Tool provides and indication of the specialist studies that may need completion during an Application for Environmental Authorisation process. The following studies will, as a minimum, require completion:

- Ecological- & Estuarine Investigation (including aquatic & wetlands).
- Soil, Surface- & Groundwater Baseline Investigation.
- Foundation Phase Geotechnical Assessment.
- Air Quality Assessment (air, climate change and acoustic).
- Plant Species Assessment; and
- Animal Species Assessment.

6.2 South African National Biodiversity Institute Biodiversity Databases

The following biodiversity related databases applicable to the study site from the South African National Biodiversity Institute (SANBI) BGIS website were interrogated.

6.2.1 National Wetlands Map 4 (NFEPA Wetlands Map)

This database provides an indication of possible wetlands on a specific site. There are no estuary wetlands identified on the site, but they are in close proximity to the site. To be further investigated by a wetland specialist.

6.2.2 National Threatened Ecosystems

The Kwambonambi Hygrophilous Grasslands threatened ecosystem which is under the KZN 9 code is located over the entire area. An ecological assessment will be done to determine the sensitivity of the site location.

6.2.3 National Protected Areas Database

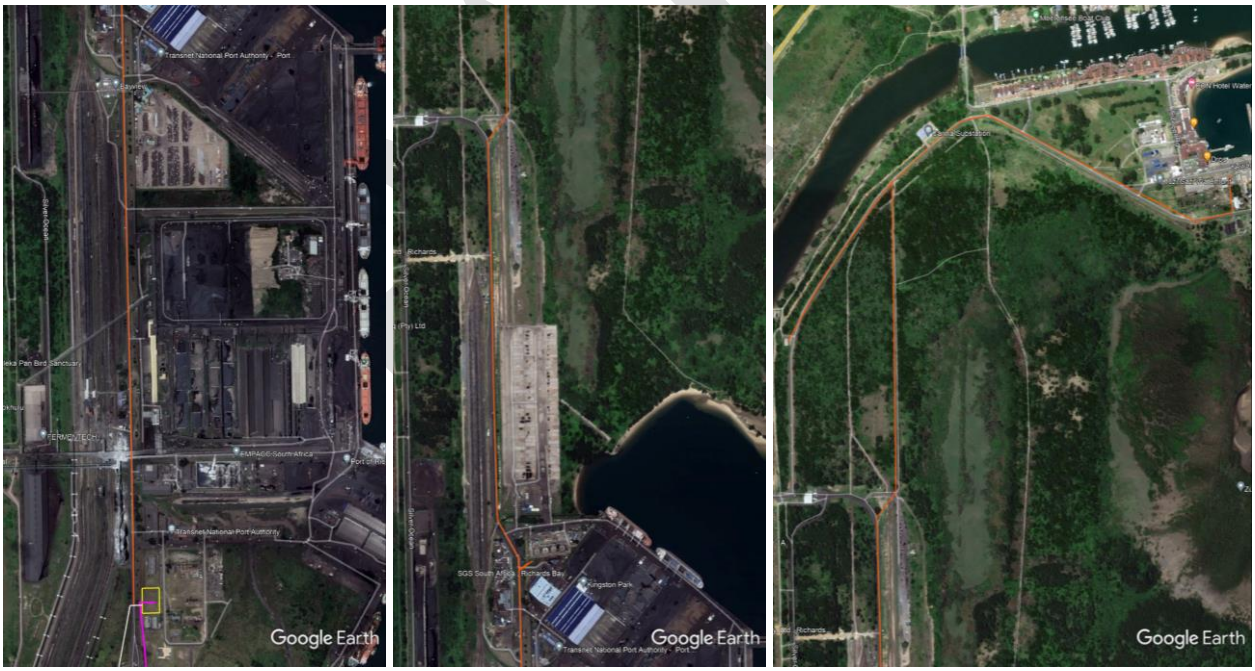
No national protected areas overlap with the study site. The nearest such area is the Richards Bay Nature Reserve approximately 1km to the south-west of the study site.

6.2.4 Kwa-Zulu Natal CBA Irreplaceable Ecosystems (2016)

According to the map the generator complex is situated in a Critical Biodiversity Area (CBA) which is irreplaceable. An ecological, estuary and wetland specialist will determine the sensitivity of the site-specific status.

6.3 Dated Aerial Imagery for the Study Site

The below sequence of dated aerial imagery was sourced from Google Earth. The images range from circa 2004 to 2024 and serve to indicate the levels of disturbance to the study site over the past 20 years. The area focused on was the generator site itself as the linear infrastructure is mostly aligned with existing infrastructure routes as indicated in the figure below (orange lines):



In Figure 6-2 taken on 04/06/2004 of the area and surrounding landscape it is visible that the site has already part of the port footprint area. The roads on either side of the site were already constructed, as well the buildings adjacent to the site towards the west. As seen in Figure 6-2 the building towards the east of the site was already constructed in 2011.

In is visible from the aerial image taken in 2017 in Figure 6-3 that the site has remained clear for several years and the surrounding infrastructure has increased as the port facilities expanded over the years within the port footprint area. From the image in Figure 6-4 taken in 2022 to the site visit done on the 15th of February 2024, it is clear that the site has remained undeveloped land, although it is cultivated grass which are cut from time to time within the port footprint area.

Figure 6-1: Google Earth image dated 04/06/2004.

Figure 6-2: Google Earth image dated 29/03/2011.

Figure 6-3: Google Earth image dated 01/19/2017.

Figure 6-4: Google Earth image dated 21/11/2022.

7 ENVIRONMENTAL BASELINE

The section below deals with the baseline conditions on the assessment site and makes provision for site assessment conducted on the 15th of February 2024. The time of the site assessment is during the summertime. The seasonality of the site visit does not compromise the findings of the assessment.

7.1 Topography and drainage

The topography of the site is flat with no distinct natural topographical features. No drainage features were identified within the boundaries of the study site. Runoff from the site reports to the existing stormwater trenches constructed as part of the Storm Water Management Plant for the Port of Richards Bay.

7.2 Soils

The soils on the study site are largely consisting of sandy alluvial soils. The soil type and characteristics will be determined during the soils assessment specialist study.

7.3 Aquatic features

There are no natural drainage features (watercourses) within the study site. There are wetlands situated outside of the Port area and within 500m. The status of the wetlands will be determined by the Wetland Assessment that will be completed as a specialist study for the Application for Environmental Authorisation as well as an Estuary Assessment.

7.4 Vegetation

The vegetation on the study site is classified as Maputaland Coastal Belt vegetation type by the National Vegetation Map (2012) managed by the South African National Biodiversity Institute (SANBI).

The study site is considered to be secondary vegetation as a result of current and historical disturbances to this area. The pipeline and powerline structures for the LNG will traverse primary vegetation in certain sections. Most of the lines will be buried within the existing road reserves were possible. The disturbance to the site is due to the footprint area of the Port of Richards Bay being cleared with the development of the port and site falling within the existing footprint area. Figure 7-1 provides a map of the vegetation types in the surrounding area and the site. Figure 7-2 to Figure 7-3 illustrates the disturbances on and around the site.

Figure 7-1: Vegetation Type Map of the Area

Figure 7-2: Current vegetation on the site area where the proposed generator complex will be constructed.

Figure 7-3: The site enclosed by fences from the adjacent buildings.

The area where the generator would be located in considered as secondary vegetation which consist of some indigenous grasses and some smaller plants which is cut from time to time to ensure the area is not overgrown and clear for security purposes. The sedges grass present on the site is indictive of the shallow groundwater table in the Richards Bay Port and the stormwater trench situated next to the site.

Around the Port of Richards Bay the vegetation types range from subtropical lagoons to forests and freshwater wetlands.

Even though large parts of the vegetation on the study site is considered to be secondary in nature, it still meets the definition of "indigenous vegetation" as per the National Environmental Management Act (Act No. 107 of 1998): Environmental Impact Assessment Regulations (2014), as amended.

7.5 Land use

The site has been used as an open space area within the Port of Richards Bay. The sites is zoned and approved as part of the port as the site is nestled between the existing buildings which are rented to contractors or used for storage and offices at the port.

8 LEGISLATIVE REVIEW

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

The legislative review is based on the consideration of the requirements of the National Environmental Management Act (Act No. 107 of 1998): Environmental Impact Assessment Regulations (2014), as amended.

These regulations make provision for lists of activities that have been identified to potentially result in environmental degradation and as such require assessment and authorisation before they can be undertaken.

The Listed Activities occur in three separate lists, referred to as Listing Notice 1 (Government Notice R327), Listing Notice 2 (Government Notice R325) and Listing Notice 3 (Government Notice R324). Each of these Listed Activities in the individual Listing Notices have specific Application for Environmental Authorisation procedures.

The following are key definitions contained in the regulations that are pertinent to the project:

- **"development"** means the building, erection, construction or establishment of a facility, structure or infrastructure, including associated earthworks or borrow pits, that is necessary for the undertaking of a listed or specified activity, including any associated post development monitoring, but excludes any modification, alteration or expansion of such a facility structure or infrastructure, including associated earthworks or borrow pits, and excluding the redevelopment of the same facility in the same location, with the same capacity and footprint;
- **"development footprint"** means any evidence of physical alteration as a result of the undertaking of any activity;
- **"indigenous vegetation"** refers to vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding ten years;
- **"industrial complex"** means an area used or zoned for industrial purposes, including bulk storage, manufacturing, processing or packaging purposes;
- **"linear activit[ies]y"** means an activity that is arranged in or extending along one or more properties and which affects the environment or any aspect of the environment along the course of the activity, and includes railways, roads, canals, channels, funiculars, pipelines, conveyor belts, cableways, power lines, fences, runways, aircraft landing strips, firebreaks and telecommunication lines;
- **"NEMBA"** means the National Environmental Management: Biodiversity Act (Act No. 10 of 2004);

- **"NEMPAA"** means the National Environmental Management: Protected Areas Act (Act No. 57 of 2003)
- **"urban areas"** means areas situated within the urban edge (as defined or adopted by the competent authority), or in instances where no urban edge or boundary has been defined or adopted, it refers to areas situated within the edge of built-up areas;
- **"watercourse"** means – (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, pan, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse as defined in the National Water Act (Act No. 28 of 1998); and a reference to a watercourse includes, where relevant, its bed and banks;
- **"wetland"** means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered in shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil.

In addition, the following definitions in terms of the National Environmental Management: Integrated Coastal Management Act (Act No. 24 of 2008) are pertinent to the project:

The tables below provides and assessment of the potential Listed Activities that may be enacted by the construction and operation of the generator complex.

Table 8-1: NEMA: Environmental Impact Assessment Regulations: Listing Notice 2 (GNR R325) (2014 as amended)

ACTIVITY	2
Description	
The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more.	
Discussion	
The installation of the 22MW energy output generator and associated infrastructure. This is more than the minimum limited stated	
Outcome	**ENVIRONMENTAL AUTHORISATION REQUIRED**

ACTIVITY	4
Description	
The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres	
Discussion	
The installation of fuel tanks with a storage capacity of 600m^3 this activity will require and environmental authorisation prior to construction.	
Outcome	**ENVIRONMENTAL AUTHORISATION REQUIRED**

Table 8-2: NEMA: Environmental Impact Assessment Regulations: Listing Notice 3 (GN R324) (2014 as amended)

ACTIVITY	10
Description	
The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres (d) in KZN, (vi) within 500m of an estuarine functional zone; (ix) within a CBA.	

Discussion	
The installation of fuel tanks with a storage capacity of 600m^3.	
Outcome	**ENVIRONMENTAL AUTHORISATION REQUIRED**

ACTIVITY	12
Description	
The clearance of an area of 300 square metres or more of indigenous vegetation….; (d) in KZN, within …(v) CBA	
Discussion	
The construction of the LNG pipeline which fall within the CBA.	
Outcome	**ENVIRONMENTAL AUTHORISATION REQUIRED**

8.2 National Water Act (Act No. 36 of 1998)

Section 21 of the National Water Act (Act No. 36 of 1998) makes provision for the Water Uses that requires a Water Use License or General Authorisation in terms of the Act. The following definitions provided in the Act as well as the associated regulations are appliable to the project.

- **"diverting"** means to, in any manner, cause the instream flow of water to be rerouted temporarily or permanently;
- **"impeding"** means to, in any manner, hinder or obstruct the instream flow of water temporarily or permanently, but excludes the damming of flow so as to cause storage of water;
- **"regulated area of a watercourse"** for Section 21 (c) or (i) of the Act water uses in terms of this Notice means: (a) the outer edge of the 1 in 100 year flood line and/or delineated riparian habitat, whichever is the greatest distance, measured from the middle of the watercourse of a river, spring, natural channel, lake or dam; (b) in the absence of a determined 1 in 100 year flood line or riparian area the area within 100m from the edge of a watercourse where the edge of the watercourse is the first identifiable annual bank fill flood bench; or (c) a 500m radius from the delineated boundary (extent) of any wetland or pan.
- **"riparian habitat"** included the physical structure and associated vegetation of the areas associated with a watercourse which are commonly characterized by alluvial soils, and which are inundated or flooded to an extent and with a frequency sufficient to support vegetation of species with a composition and physical structure distinct from those of adjacent land areas;
- **"watercourse"** means (a) a river or spring; (b) a natural channel in which water flows regularly or intermittently; (c) a wetland, lake or dam into which, or from which, water flows; and (d) any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse and a reference to a watercourse includes, where relevant, its bed and banks;
- **"water resource"** includes a watercourse, surface water, estuary, or aquifer;
- **"wetland"** means land which is transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is periodically covered with shallow water, and which land in normal circumstances supports or would support vegetation typically adapted to life in saturated soil;

The table below provides the possible Section 21 Water Uses that may require an authorisation.

Table 8-3: Possible Section 21 Water Use Authorisation required

Section 21 Water Use	Description	Applicability	Water Use Authorisation (Y/N)
(a)	Taking water from a water resource	It is assumed that the demineralised water will be generated from abstracting water from a borehole on site.	YES
(b)	Storing water	The water stored on site will be within surface storage tank similar to JoJo tanks which does not require a Section 21(b) water use authorisation.	NO
(c)	Impeding or diverting the flow of water in a watercourse	The presence of a wetland is assumed on the study site (to be confirmed by the Wetland Assessment). It is therefore assumed that a portion of the generator complex footprint will be located within the "regulated area of a watercourse" (within a 500m radius of a wetland). As such there will be a need for a Water Use Authorisation for this water use.	YES
(d)	Engaging in a stream flow reduction activity contemplated in Section 36 of the Act	The proposed activity will not require any stream flow reduction activities to be undertaken as part of its construction or operation. As, there will be no need for a Water Use Authorisation for this water use.	NO
(e)	Engaging in a controlled activity identified as such in Section 37(1) or declared under Section 38(1)	The proposed activity will not require any controlled activities to be undertaken as part of its construction or operation. As, there will be no need for a Water Use Authorisation for this water use.	NO
(f)	Discharging waste or water containing waste into a water resource through a pipe, canal, sewer, sea outfall or other conduit	It is understood that no waste or water containing waste will be discharged into any water resource. Based on this assumption, it is understood that there will be no need for a Water Use Authorisation for this water use.	NO
(g)	Disposing of waste in a manner which may detrimentally impact on a water resource	It is possible that a water use licence might be required for the fuel storage are, which will be confirmed during the pre-application meeting with the Department of Water and Sanitation.	**NO**

Section 21 Water Use	Description	Applicability	Water Use Authorisation (Y/N)
(h)	Disposing in any manner of water which contains waste from, or which has been heated in, any industrial or power generation process	Neither the construction or the operation of the proposed genitor complex will require the discharge of water containing waste that has been heated in an industrial or power generation process.	NO
(i)	Altering the bed, banks, course or characteristics of a watercourse	The presence of a wetland is assumed on the study site (to be confirmed by the Wetland Assessment). It is therefore assumed that a portion of the generator complex footprint will be located within the "regulated area of a watercourse" (within a 500m radius of a wetland). As such there will be a need for a Water Use Authorisation for this water use.	NO
(j)	Removing, discharging or disposing of water found underground if it is necessary for the efficient continuation of an activity or for the safety of people	During construction of the proposed activity dewatering of underground water from the active construction site may be required as a result of the high water table in the area. As such there will be a need for a temporary Water Use Authorisation for this water use.	YES
(k)	Using water for recreational purposes	No water associated with the proposed activity will be used for recreational purposes. As, there will be no need for a Water Use Authorisation for this water use.	NO

8.3 National Forest Act (Act No. 84 of 1998.

The purposes of this Act are to-

a) promote the sustainable management and development of forests for the benefit of all;

b) create the conditions necessary to restructure forestry in State forests;

c) provide special measures for the protection of certain forests and trees;

d) promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health and spiritual purposes;

e) promote community forestry;

f) promote greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination.

The following definitions provided in the Act as well as the associated regulations are appliable to the project.

- **"forest includes"** – (a) a natural forest, a woodland and a plantation; (b) the forest produce in it; and (c) the ecosystems which it makes up;
- **"natural forest"** means a group of indigenous trees – (a) whose crowns are largely contiguous; or (b) which have been declared by he Minister to be a natural forest under section 7(2);
- "protected tree" means a tree declared to be protected, or belonging to a group of trees, woodland or species declared to be protected, under section 12(1) or 14(2);
- "tree" includes any tree seedling, sapling, transplant or coppice shoot of any age and any root, branch or other part of it;

When clearance of any trees is required during the pipeline or powerline installation, any protected species will require a permit before removal. Any removal of these trees will require a permit from the Department of Forestry, Fisheries and Environment before the removal can be initiated.

9 CONCLUSION

The purposed of this assessment was to determine the potential legislative authorisations required for the proposed 22MW Generator Facility based on the current understanding of the extent and possible design of the facility as well as the site-specific features that are associated with the project. The findings are as follows:

- The Generator Facility site is located within the Port of Richards Bay footprint area and has already been altered. The pipeline and powerlines associated with the facility will traverse the more sensitive areas, although the linear activities will have a smaller footprint area. Care should be taken when working within the sensitive areas.
- Environmental Authorisations will be required for several Listed Activities in accordance with the requirements of the National Environmental Management Act (Act No. 107 of 1998): Environmental Impact Assessment Regulations (2014), as amended.
- A Water Use Authorisation may be required for Section 21 (c), (i) and (j) water uses as the facility is located within the "regulated area of a watercourse" as defined in the National Water Act (Act No. 36 of 1998). As such, it will be necessary to engage an appropriate specialist to conduct the necessary assessment(s) to present to the Department of Water and Sanitation as a motivation for an authorisation.
- The removal of specific tree species will require permitting in accordance with the National Forests Act (Act No. 84 of 1998) before these trees can be removed.

APPENDIX A

SPECIALIST CURRICULUM VITAE

APPENDIX C: PUBLIC CONSULTATION

APPENDIX C-1: BACKGROUND INFORMATION DOCUMENT (BID)

BACKGROUND INFORMATION DOCUMENT

Application for an Environmental Authorisation and Water Use Licence for the installation of a 22MW Dual Fuel Generator for the Transnet National Port Authority (TNPA) at the Port of Richards Bay, KwaZulu-Natal

March 2024

The purpose of this Background Information Document (BID) is to:

a. Invite your participation and registration as an Interested and Affected Parties (I&APs).
b. Provide information pertaining to the Transnet National Port Authority's intention to install a 22MW Dual Fuel Generator and supporting infrastructure for the Transnet National Port Authority (TNPA) at the Port of Richards Bay, KwaZulu-Natal.

YOUR COMMENTS AND PARTICIPATION ARE IMPORTANT

You can participate by:

a. Responding (by phone or email) to our invitation for your participation in this application process.
b. Completing the attached registration and comment form and return it to GCS.
c. Writing, or contacting GCS in a convenient way for you if you have a query, comment or require further project information or assistance with the registration process.
d. Attending meetings as a registered I&AP.
e. Reviewing and commenting on the Draft Scoping Report before 11 April 2024.

Contact the GCS Public Participation Office to register as an Interested and Affected Party (I&AP)

Anelle Lötter / Gerda Bothma, Tel: 011 803 5726, Email: anellel@gcs-sa.biz / gerdab@gcs-sa.biz,

Postal Address: PO Box 2597, Rivonia, Johannesburg, 2128

Documents for review and comment are available on https://www.gcs-sa.biz/public-documents/ and at the public place(s) listed below.

Where you provide your personal information to be registered as an Interested and Affected Party (IAP), GCS Environment SA (Pty) Ltd (GCS) will retain this information according to the provisions of the Protection of Personal Information Act 4 of 2013 (POPIA). GCS may also provide this information to third parties, such as the applicant and competent and commending authorities. By submitting your information, you consent to GSC processing your personal information in this manner. You are entitled to leave the IAP List, but then your submissions will not be considered as part of the public participation process. You can revoke your consent by contacting the contact persons described above. GCS and its employees will not process your personal information unless they have a lawful basis to do so.

The Draft Scoping Report is available for public review and comment from 08 March to 11 April 2024 as follows:

Printed Copies	
Richard's Bay Public Library (2 Krugerrand Grove Richard's Bay – Tel: 035 907 5840)	
Electronic Copy	
Website download	https://www.gcs-sa.biz/public-documents/

Please send your *written comments* on the Draft Scoping Report to GCS by 11 April 2024.

Introduction and Project Description

Transnet National Port Authority (TNPA) is proposing to install of a dual fuel (diesel/Liquefied Natural Gas (LNG)/Compressed Natural Gas (CNG)) generator, a Natural Gas supply pipeline within the port, diesel/CNG storage area and ancillary infrastructure for the electricity generation of 22MW output next to their employee care centre offices at the Port of Richards Bay.

The purpose of this dual fuel generator will be to provide emergency power for the port activities. Due to the current insufficient power supply from the national grid, the port is required to provide alternative emergency power generation to be able to effectively manage the port activities.

The infrastructure will include:

- A 22MW generator capable to operate on either diesel fuel or natural gas from LNG;
- Startup generator, switching station(s) and internal reticulation;
- LNG supply pipeline;
- CNG storage area;
- Diesel fuel tank storage area;
- Demineralised water treatment plant and storage tank area;
- Underground evacuation power lines to various substations;
- Auxiliary pit and drain facility for used diesel and sludge;
- Perimeter fencing and access control.

The project is Located on the Farm 14217 GV, Portion 0 within the uMhlathuze Local and King Cetshwayo District Municipalities in the KwaZulu-Natal Province.

The project is part of the Strategic Integrated Projects (SIP), project No. 20 which was gazetted on 06 December 2022 (Government Gazette 437658) in line with the provisions of the Infrastructure Development Act (IDA) (Act No.23 of 2014). These projects are classified as Strategic Integrated Projects (SIP) and are required to be managed within the requirements as set out in the IDA.

The area where the generator will be located is within the port boundary and there are existing access roads surrounding the site.

GCS Environment SA (Pty) Ltd (GCS) has been appointed to undertake the environmental authorisation (EA) and a water use license (WUL) application processes. They will also conduct an associated Public Participation Process (PPP) required for the applications for compliance to the National Environmental Management Act (NEMA) (Act 107 of 1998, as amended), the National Water Act (NWA) (Act 36 of 1998, as amended), and/or Supporting Environmental Management Acts (SEMA's).

Regulatory Context

National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA)

Section 24 of NEMA requires that certain listed activities, which may have an impact on the environment, trigger the need for environmental authorization from a relevant authority before commencing with the activities. Such activities are listed under Regulations Listing Notice 1 GNR 324, Listing Notice 2 GNR 325 and Listing Notice 3 GNR 327 (Dated 4 April 2017) of NEMA.

Applicable Listed Activities for this application is:

#	Activity description and its applicability
Listing Notice 2 (GN R325)	
2	The development and related operation of facilities or infrastructure for the generation of electricity from a non-renewable resource where the electricity output is 20 megawatts or more. ***The TNPA proposes the installation of a 22 MW energy output generator and associated infrastructure.***
4	The development and related operation of facilities or infrastructure, for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres. ***The TNPA proposes the installation of fuel tanks with a storage capacity of 600m^3.***

Listing Notice 3 (GN R324)	
10	The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic metres (d) in KZN, (vi) within 500m of an estuarine functional zone; (ix) within a Critical Biodiversity Area (CBA). ***The TNPA proposes the installation of fuel tanks with a storage capacity of 600m^3.***
12	The clearance of an area of 300 square metres or more of indigenous vegetation….; (d) in KZN, within …(v) a CBA. ***The TNPA proposes the construction of a LNG pipeline***

Considering the above, a full Scoping and Environmental Impact Assessment (S&EIR) process is to be undertaken.

National Water Act, 1998 (Act 36 of 1998) (NWA)

A Water Use License Application may need to be compiled and submitted to the Department of Water and Sanitation (DWS) to ensure the legality of the proposed project's water uses. The Water Use License Application will be conducted for the project in parallel with the EIA and EMP process for any activity in terms of Section 21 of the NWA.

The water uses triggered as part of the project require authorisation in terms of Section 21 of the NWA:

Section 21:	
c	The flow of water in a watercourse may be impeded or diverted by the proposed activities.
i	The bed, banks or characteristics of a watercourse may be altered. The activities may be located within a watercourse or within 500m from a watercourse.
j	Due to the high water table, construction activities my require the removal of water found underground.

In addition, An application for an Atmospheric Emissions Licence (AEL) as per the requirements of the National Environmental Management: Air Quality Act (Act No. 39 of 2004) Government Gazette, 24 February 2005 (No. 27318) will be submitted to the District Municipality, should it be required.

Structure of the Environmental Impact Assessment Process

The EIA is a legislative tool used to ensure that the potential environmental impacts that may occur due to the proposed development are avoided or mitigated, if authorisation is granted. The 'environment' includes social, economic and biophysical aspects which the EIA must assess equitably.

The EIA process is divided into two phases, the Scoping Phase and the Impact Assessment Phase.

Scoping Phase:

The Scoping Phase aims to:

- Investigate and gather information on and around the proposed site, to establish an understanding of the area.
- Establish how the proposed development activities may potentially impact the environment.
- Identify IAPs and relevant authorities by conducting a Public Participation Process.
- Identify potential environmental impacts through investigation and PPP.
- Describe the proposed project and potential Alternatives.

Impact Assessment Phase:

During this phase, all issues/impacts and proposed alternatives identified in the Scoping Phase are assessed and are rated in terms of their significance. Where necessary, recommendations are made for the mitigation of potential negative impacts, or enhancement of potential positive impacts.

An Environmental Management Programme will also be compiled that will prescribe environmental specifications for the planning, pre-construction, construction, operational and decommissioning phases of the project. As with the Scoping phase, a PPP is an integral part of the Assessment Phase.

The following specialist investigations will be undertaken as a minimum to assess potential impacts:

- Ecological- and Estuarine investigation (including aquatic environment and wetlands).
- Soil, Surface- and Groundwater Baseline Investigation.
- Foundation Phase Geotechnical Assessment.
- Air Quality Assessment (air, climate change and acoustic).

Public Participation Process

The Public Participation Process (PPP) aims to inform a wide range of I&APs (any person or organisation that has a direct, business, financial, personal or other interest in, or may be directly or indirectly affected by, the proposed project) about the proposed development and the environmental authorisation process to be followed. It is a tool to allow the public to exchange information and to express their views and concerns on the proposed development for which the EIA is being conducted. The PPP assists in identifying potential issues and concerns that 2need to be addressed in the impact assessment by highlighting relevant information to be included in the assessment. PPP enables more accurate and descriptive analysis and helps to focus and enhance decision-making.

The EIA will be open and transparent to the public through this process with all registered IAPs continuously updated on events throughout the process. All contributions from IAPs will be fully documented, evaluated and responded to in the EIA.

Activities of the Public Participation Process:

Stakeholders are invited to register as an I&AP and take part in the PPP through:

- Media notices placed in newspapers (Zululand Observer and Isolezwe – 8 March 2024)
- Distribution of this Background Information Documents (BIDs).
- Placement of site notice boards.
- Stakeholder meetings (as appropriate).
- Submission of comments on the media notices, BID, Draft Scoping and Impact Assessment Reports.

How you can participate:

Interested and affected parties I&APs may forward their written comments along with their name, contact details and an indication of any direct business, financial, personal or other interest which they have in the application by post or email to GCS – contact details on page 1 of this BID.

Next steps:

You have until the 11 April 2024 to register as an I&AP and to comment on the Draft Scoping Report. The report describes the project, the baseline conditions of the affected area and the issues and concern to be investigated during the impact assessment phase.

Copies of the report is available as follows:

Printed Copies	
Richard's Bay Public Library (2 Krugerrand Grove Richard's Bay – Tel: 035 907 5840)	
Electronic Copy	
Website download	https://www.gcs-sa.biz/public-documents/

Following stakeholder comments, the Scoping Report will be finalised and submitted to the Competent Authority for approval. Stakeholders will be notified as such, and a copy of the Final Scoping Report will be made available.

During the next phase of the EIA, the impact assessment phase, stakeholders will be notified of the availability of the Impact Assessment Report and reports related to the WUL and AEL applications. These reports will be available for review and comment by stakeholders. Specialist assessments conducted as part of these applications will be appended to the reports for review.

It is proposed that the public review of these reports will be during June 2024. Stakeholder meetings will be held to present and discuss the findings of this phase.

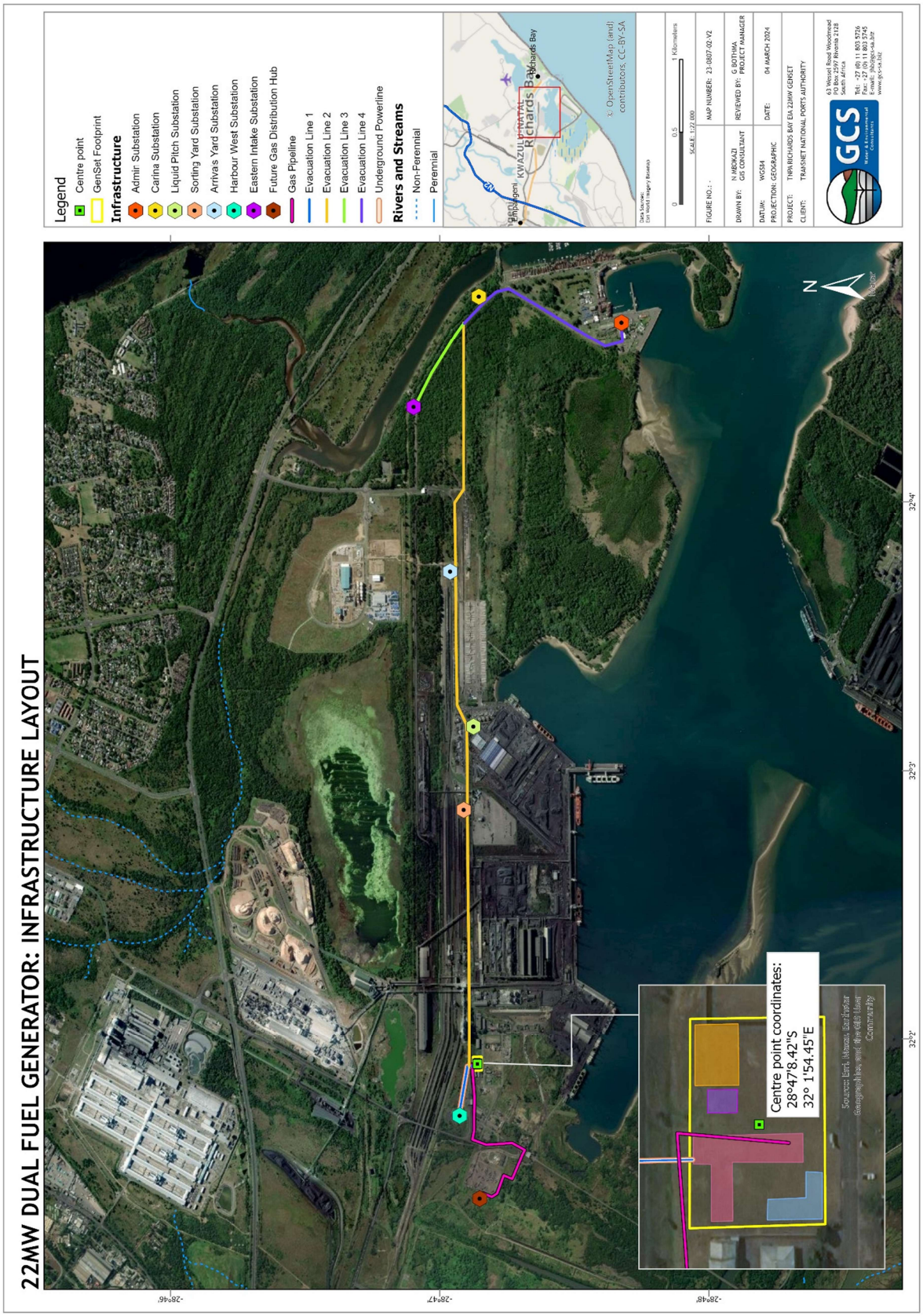


Figure 1: Proposed infrastructure layout

Application for an Environmental Authorisation, and Water Use Licence for the installation of a 22MW Dual Fuel Generator and supporting infrastructure for the Transnet National Port Authority (TNPA) at the Port of Richards Bay, KwaZulu-Natal

Comment and Registration Form

GCS Ref No: 23-0807

Name:		Surname:	
Organisation / interest:			
Postal / Residential address			
		Area:	Code:
Contact details	Tel:	( )	
	Mobile:	( )	
	Email:		

Please mark with an **X** to indicate whether you would like to participate in the process:	
Yes, I would like to participate in this process and receive periodic updates	
No, I am not interested in participating and do not wish to receive further information	
Date commented	(DD / MM / YYYY)

Please indicate any issues, comments and concerns with regards to the proposed project

Please indicate in which aspects you would require more information

Please indicate the contact details of any other I&APs whom you think should be contacted

Name:		Surname:	
Tel:	( )	Fax:	( )
Mobile:	( )		
Email:			

Return the completed comment and registration form to:
Anelle Lötter / Gerda Bothma, Tel: 011 803 5726, Email: anellel@gcs-sa.biz / gerdab@gcs-sa.biz
Postal Address: PO Box 2597, Rivonia, Johannesburg, 2128

APPENDIX C-2: NOTIFICATION DOCUMENTATION

Application for an Environmental Authorisation, Water Use Licence and an Atmospheric Emissions Licence for the installation of a 22MW Dual Fuel Generator for the Transnet National Port Authority (TNPA) at the Port of Richards Bay, KwaZulu-Natal

GCS Ref No: 23-0807

The Transnet National Ports Authority (TNPA) has appointed GCS Environment SA (Pty) Ltd (GCS) to assist with the applications for an Environmental Authorisation (EA), Water Use Licence (WUL) and an Atmospheric Emissions Licence (AEL) for the proposed installation of a dual fuel generator for the electricity generation of 22MW output at the Port of Richards Bay. The port is situated within the uMhlathuze Local Municipality and the King Cetshwayo District Municipality, KwaZulu-Natal.

The proposed project site is located at the Port's main entrance and at the Employee Care Centre in the Bayvue Precinct. The project will consist of:

- 22MW generator capable to operate on either diesel fuel or liquified natural gas;
- Start-up generator, switching station(s) and internal reticulation;
- LNG supply pipeline;
- CNG / Diesel fuel tank storage area;
- Demineralised water treatment plant and storage tank area;
- Underground evacuation power lines to various substations;
- Auxiliary pit & drain facility for used diesel and sludge;
- Perimeter fencing and access control.

This notification forms part of the public consultation process for the S&EIR process as required by the National Environmental Management Act,1998 (Act 107 of 1998) (NEMA) EIA Regulations (2014, as amended) and the National Water Act, 1998 (Act 36 of 1998) (NWA).

The following potential Listed Activities in terms of the NEMA EIA Regulations (2014, as amended) will be applied for from the Department of Forestry, Fisheries and Environment (DFFE):

- GN R325, 07 April 2017, Listing Notice 2 – Activities 2 and 4
- GN R324, 07 April 2017, Listing Notice 3 – Activities 10 and 12

A WUL application, to be administered by the Department of Water and Sanitation (DWS) will be lodged for the following potential water uses:

- Section 21 (c); (i) and (j) of the NWA.

An application for an Atmospheric Emissions Licence (AEL) as per the requirements of the National Environmental Management: Air Quality Act (Act No. 39 of 2004) Government Gazette, 24 February 2005 (No. 27318) will be submitted to the District Municipality.

Opportunity to Participate

Interested and affected parties (I&APs) are invited to register as stakeholders for this project and to obtain more information. The Draft Scoping Report (DSR) is available for review and comment from **8 March to 11 April 2024** as follows:

- Electronic copy at: https://www.gcs-sa.biz/public-documents/
- Richard's Bay Public Library (2 Krugerrand Grove Richard's Bay – Tel: 035 907 5840)

To register and to obtain more information contact GCS: Anelle Lötter / Gerda Bothma,
Tel: 011 803 5726, Fax: 011 803 5745, E-mail: anellel@gcs-sa.biz / gerdab@gcs-sa.biz
or Mail: P O Box 2597, Rivonia, 2128.

I&APs are invited to participate by providing written comments and raising issues of concern.

Application for an Environmental Authorisation, Water Use Licence and an Atmospheric Emissions Licence for the installation of a 22MW Dual Fuel Generator for the Transnet National Port Authority (TNPA) at the Port of Richards Bay, KwaZulu-Natal

GCS Ref No: 23-0807

The Transnet National Ports Authority (TNPA) has appointed GCS Environment SA (Pty) Ltd (GCS) to assist with the applications for an Environmental Authorisation (EA), Water Use Licence (WUL) and an Atmospheric Emissions Licence (AEL) for the proposed installation of a dual fuel generator for the electricity generation of 22MW output at the Port of Richards Bay. The port is situated within the Jurisdiction of uMhlathuze Local Municipality of the King Cetshwayo District Municipality, KwaZulu-Natal.

The proposed project site is located at the Port's main entrance and at the Employee Care Centre in the Bayvue Precinct. The project will consist of:

- 22MW generator capable to operate on either diesel fuel or liquified natural gas;
- Start-up generator, switching station(s) and internal reticulation;
- LNG supply pipeline;
- CNG / Diesel fuel tank storage area;
- Demineralised water treatment plant and storage tank area;
- Underground evacuation power lines to various substations;
- Auxiliary pit & drain facility for used diesel and sludge;
- Perimeter fencing and access control.

This notification forms part of the public consultation process for the S&EIR process as required by the National Environmental Management Act,1998 (Act 107 of 1998) (NEMA) EIA Regulations (2014, as amended) and the National Water Act, 1998 (Act 36 of 1998) (NWA).

The following potential Listed Activities in terms of the NEMA EIA Regulations (2014, as amended) will be applied for from the Department of Forestry, Fisheries and Environment (DFFE):

- GN R325, 07 April 2017, Listing Notice 2 – Activities 2 and 4
- GN R324, 07 April 2017, Listing Notice 3 – Activities 10 and 12

A WUL application, to be administered by the Department of Water and Sanitation (DWS) will be lodged for the following water uses:

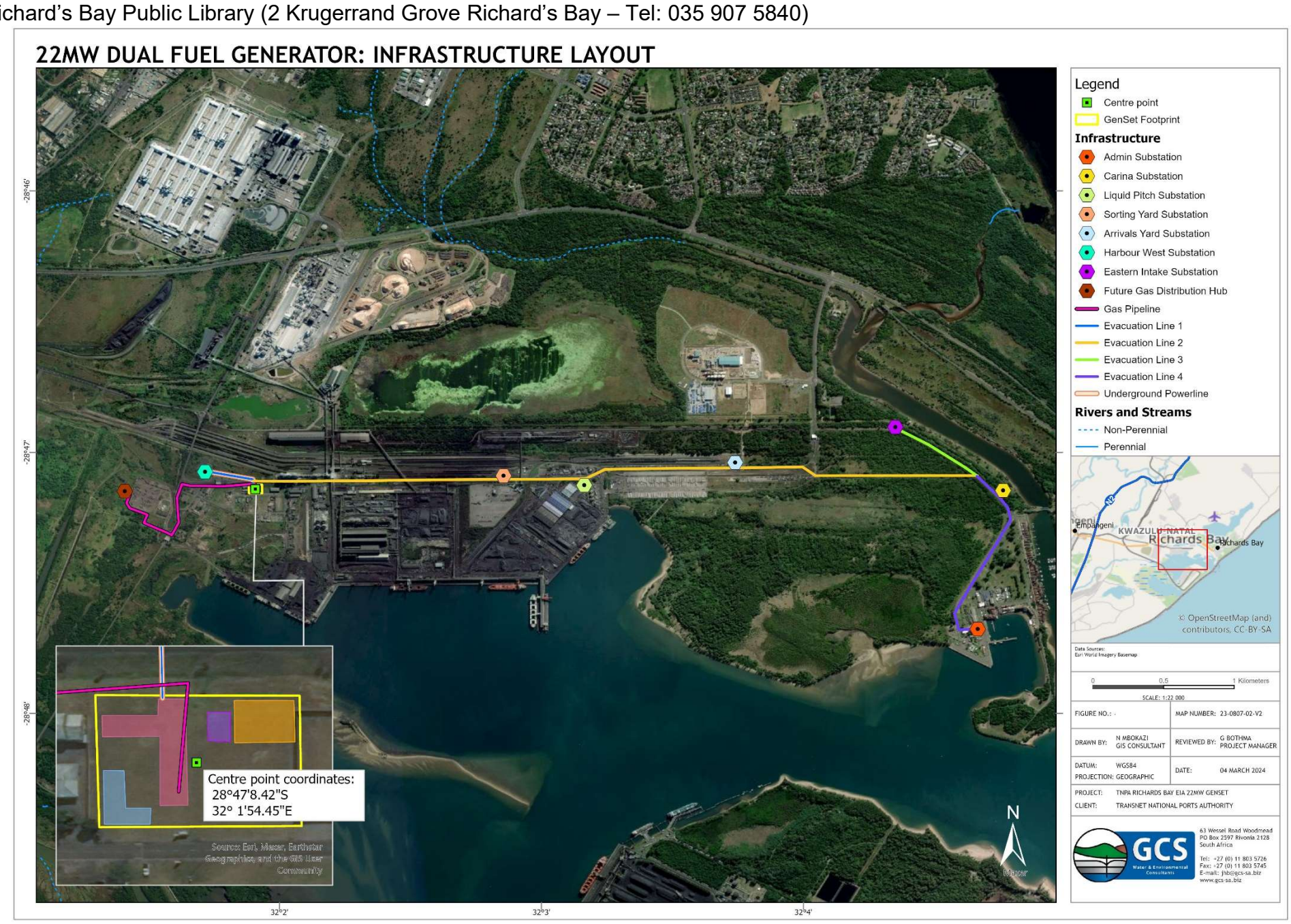
- Section 21 (c); (i) and (j) of the NWA.

An application for an Atmospheric Emissions Licence (AEL) as per the requirements of the National Environmental Management: Air Quality Act (Act No. 39 of 2004) Government Gazette, 24 February 2005 (No. 27318) will be submitted to the District Municipality, should it be required.

Opportunity to Participate

Interested and affected parties (I&APs) are invited to register as stakeholders for this project and to obtain more information. The Draft Scoping Report (DSR) is available for review and comment from **8 March to 11 April 2024** as follows:

- Electronic copy at: https://www.gcs-sa.biz/public-documents/
- Richard's Bay Public Library (2 Krugerrand Grove Richard's Bay – Tel: 035 907 5840)



To register and to obtain more information contact GCS (Pty) Ltd: Anelle Lötter / Gerda Bothma, Tel: 011 803 5726, Fax: 011 803 5745, E-mail: anellel@gcs-sa.biz / gerdab@gcs-sa.biz or Mail: P O Box 2597, Rivonia, 2128.

I&AP's are invited to participate by providing written comments and raising issues of concern.