



Submitted to: Burmeister & Partners (Pty) Ltd Attention: Mr Nic van Schalkwyk P O Box 1496 Windhoek, Namibia

# **EIA REPORT:**

# THE CONSTRUCTION OF FIVE CONCRETE

## TRANSFORMER PLATFORMS AND THE UPGRADE

# OF AN EXISTING WASH AND SERVICE BAY AT

# **BRAKWATER, NAMIBIA**

PROJECT NUMBER: ECC-140-469-REP-04-D

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Project Name:	The construction of five concrete transformer platforms and the
	upgrade of an existing wash and service bay at Brakwater,
	Namibia
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#### **ABBREVIATIONS**

Abbreviation	Description
%	percentage
°C	Degrees celcius
AC	alternating current
BID	Background Information Document
cm	centimetre
DEA	Directorate of Environmental Affairs
EAP	environmental assessment practitioner
ECC	Environmental Compliance Consultancy
EIA	environmental impact assessment
EMA	Environmental Management Act
EMP	environmental management plan
ENE	East-northeast
ESIA	environmental and social impact assessment
I&APs	Interested and affected parties
IFC	International Finance Corporation
km <sup>2</sup>	square kilometre
kWh/m²/day	kilowatt-hour per square metre per day
Ltd	limited
m	metre
m <sup>3</sup>	Square metre
mm	millimetre
MEFT	Ministry of Environment, Forestry and Tourism
MME	Ministry of Mines and Energy
Ν	North
NamPower	Namibia Power Cooperation (Pty) Ltd
NE	Northeast
NNE	North-northeast
Pty	proprietary
REDs	Regional Electricity Distributors (REDs)
RH	relative humidity
SAPP	Southern African Power Pool



## **1 INTRODUCTION**

#### 1.1 COMPANY BACKGROUND

Environmental Compliance Consultancy (Pty) Ltd (ECC) has been contracted to conduct a scoping report plus assessment by Burmeister & Partners (Pty) Ltd (herein referred to as the 'Proponent' or Burmeister) on behalf of Namibia Power Corporation (Pty) Ltd (NamPower). NamPower's core business is the generation, transmission and energy trading, which takes place within the Southern African Power Pool (SAPP), the largest multilateral energy platform on the African continent. NamPower supplies bulk electricity to Regional Electricity Distributors (REDs), mines, farms and local authorities (where REDs are not operational) throughout Namibia. ECC is conducting an ESIA for the proposed construction of five concrete transformers and the upgrade of an existing wash and service bay located in Brakwater, Khomas region shown in Figure 1.

NamPower recently promoted the commissioning of higher-efficiency distribution transformers to be economically and environmentally beneficial. The construction of the transformer platforms will assist and speed up the process of the loading of transformers, should transformers experience breakage. The construction of transformer platforms will also prevent minimal oil spills from impacting the surrounding environment.



The construction of five concrete transformer platforms and the upgrade of an existing wash and service bay at Brakwater, Namibia Burmeister & Partners (Pty) Ltd

17.070 17.072 17.074 17.068 17.076 17.078 Legend -22.414 -22.414 HHH Railway Trunk road District road Transformer platforms site Washbay site -22.416 -22.416 Windhoek Elisenheim -22.418 -22.418 Site coordinates: Latitude: -22.417392 -22.420 Longitude: 17.072846 -22.420 EPSG:4326 WGS 84 Scale 1:5,000 100 200 m 0 Reference: ECC/140/469 17.068 17.070 17.072 17.074 17.076 17.078 Cartography: J le Roux 09/2023

Figure 1 – Project location



#### 1.2 PURPOSE OF THE SCOPING REPORT

The purpose of this report is to present the findings of the scoping study plus assessment. The final scoping report with impact assessment, provides information on the baseline biophysical and socioeconomic environments, project description details, outlines the methodology for the assessment, assesses the potential impacts of the proposed Project and provides a rating of the impact before and after mitigation and management measures have been provided and prepares a final environmental management plan (EMP).

This report provides information to the public and stakeholders to aid in the decision-making process for the proposed Project. The objectives are to:

- Describe the proposed activity and the site on which the activity is to be undertaken, and the location of the activity on the site;
- Describe the environment that may be affected by the activity;
- Identify the laws and guidelines that have been considered in the assessment and preparation of this report;
- Provide details of the public consultation process;
- Describe the need and desirability of the activity; and
- Report the assessment findings, identifying the significance of effects, including cumulative effects, and effective and feasible mitigation measures.

In addition to the environmental assessment, a preliminary Environmental Management Plan (EMP) (Appendix A) is also required in terms of the Environmental Management Act, No. 7 of 2007. A preliminary EMP has been developed to provide a management framework for the planning and implementation of Project activities. The EMP provides specific standards and arrangements to ensure that the identified environmental and social impacts are mitigated, prevented, and/or minimised as far as reasonably practicable, and that statutory requirements and other legal obligations are fulfilled.

#### 1.3 The proponent of the proposed project

The Proponents' details are provided in Table 1.

Table 1 - Proponent's details		
Company Representative	Contact Details	
Mr Nic van Schalkwyk	Burmeister & Partners (Pty) Ltd.:	
Director (Structural engineering)	PO Box 1496, Windhoek	
	126 Andimba Toivo Ya Toivo Avenue	
	Suiderhof	
	Windhoek, Namibia	
	nicvs@burmeister.com.na	

#### Table 1 - Proponent's details



#### 1.4 Environmental assessment practitioner

The report has been prepared by Environmental Compliance Consultancy (Pty) Ltd (ECC) (Reg. No. 2022/0593) on behalf of the proponent.

This report has been authored by employees of ECC, who have no material interest in the outcome of this report, nor do any of the ECC team have any interest that could be reasonably regarded as being capable of affecting their independence in the preparation of this report. ECC is independent from the Proponent and has no vested or financial interest in the Project, except for fair remuneration for professional fees rendered which are based upon agreed commercial rates. Payment of these fees is in no way contingent on the results of this report or the assessment, or a record of decision issued by Government. No member or employee of ECC is, or is intending to be, a director, officer, or any other direct employee of Burmeister & Partners. No member or employee of ECC has, or has had, any shareholding in Burmeister & Partners.

All compliance and regulatory requirements regarding this report should be forwarded by email or posted to the following address:

Environmental Compliance Consultancy PO Box 91193, Klein Windhoek, Namibia Tel: +264 81 669 7608 Email: <u>info@eccenvironmental.com</u>

#### 1.5 Environmental requirements

The Environmental Management Act, 2007, and its regulations, stipulates that an environmental clearance certificate is required before undertaking any of the listed activities that are identified in the Act and its regulations. Potential listed activities triggered by the Project are provided in Table 2.



#### Table 2 - Listed activities potentially triggered by the Project

Listed activity	As defined by the regulations of Act	EIA screening finding
Waste management,	(2.3) The import, processing, use and recycling, temporary	<ul> <li>Wastewater effluents and other types</li> </ul>
treatment, handling,	storage, transit or export of waste.	of waste may pollute groundwater and
and disposal activities		the nearby intermittent river.
		<ul> <li>Wastewater discharge permit will be</li> </ul>
		required.
Hazardous substance	(9.1) The manufacturing, storage handling, or processing of a	<ul> <li>The design and construction of five</li> </ul>
treatment, handling	hazardous substance defined in the Hazardous Substances	concrete platforms includes a collection
and storage	Ordinance, 1974.	of oil spillage near a fluvial system.
	(9.2) Any process of activity which requires a permit, licence	<ul> <li>An upgrade of an existing wash bay</li> </ul>
	or other form of authorisation, or the modification of or	<ul> <li>An upgrade of an existing service bay</li> </ul>
	changes to existing facilities for any process or activity which	for their service vehicles and trucks is
	requires an amendment of an existing permit, licence or	required.
	authorisation or which requires a new permit, licence or	<ul> <li>Design and construct a catchpit for</li> </ul>
	authorisation in terms of a law governing the generation or	collection of possible spillage and oil
	release of emissions, pollution, effluent or waste.	separation.
	(9.4) The storage and handling of dangerous goods, including	
	petrol, diesel, liquid petroleum gas or paraffin, in containers	
	with a combined capacity of more than 30 cubic meters at	
	any one location.	



## 2 APPROACH TO THE ASSESSMENT

#### 2.1 PURPOSE AND SCOPE OF THE ASSESSMENT

This assessment aims to determine which impacts are likely to be significant, to scope the available data and identify any gaps that need to be filled, to determine the spatial and temporal scope, and to identify the assessment methodology.

The scope of the assessment was determined by undertaking a preliminary assessment of the proposed Project against the receiving environment, obtained through a desktop review and available site-specific literature.

#### 2.2 THE ASSESSMENT PROCESS

The ESIA methodology applied to this assessment has been developed using the International Finance Corporation (IFC) standards and models, in particular, Performance Standard 1, 'Assessment and management of environmental and social risks and impacts' (International Finance Corporation, 2017) (International Finance Corporation, 2012), which establishes the importance of:

- Integrated assessment to identify the environmental and social impacts, risks, and opportunities of Projects;
- Effective community engagement through disclosure of Project-related information and consultation with local communities on matters that directly affect them; and
- The Proponent's management of environmental and social performance throughout the life of the Project.

Furthermore, the Namibian Draft Procedures and Guidance for ESIA and EMP (Republic of Namibia, 2008), as well as international and national best practice, and over 25 years of combined EIA experience, were also drawn upon in the assessment process. This impact assessment is a formal process in which the potential effects of the Project on the biophysical, social, and economic environments are identified, assessed, and reported so that the significance of potential impacts can be taken into account when considering whether to grant approval, consent, or support for the proposed Project.

#### 2.3 SCREENING OF THE PROJECT

The first stages in the ESIA process are to register the Project with the DEA/MEFT (completed) and undertake a screening exercise to determine whether it is considered a listed activity under the Environmental Management Act, No. 7 of 2007 and associated regulations, and if significant impacts may arise from the Project. The location, scale, and duration of Project activities will be considered against the receiving environment. The assessment process is shown in Figure 2.



The proposed Project is a listed activity and potential impacts could occur. Thus, it was concluded that a scoping report with impact assessment would suffice for the exploration project and that a preliminary EMP would be submitted with the scoping report as part of the application process for the environmental clearance certificate.



### The construction of five concrete transformer platforms and the upgrade of an existing wash and service bay at

Brakwater, Namibia

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Complete         Complete           The first stages in the ESIA process are to undertake a screening exercise to determine whether the Project triggers listed activities under the Environmental Management Act, 2007, and its regulations. The screening phase of the Project si a preliminary analysis, to determine ways in which the Project might interact with the project might interact with the biophysical, social, and economic environments.         A robust baseline is required, to provide a reference point against which any future changes associated with a Project range assessed, and to allow suitable mitigations. The screening phase of the Project is a preliminary analysis, to determine ways in which the Project might interact with the biophysical, social, and economic environments.         The region and general area have been studied for various projects and assessments. This literature was available to be referenced. The project might interact with the polony size scoled into the assessment, means the provide of significant during the screening and scoping phase are taken foroward for further assessment in the ESIA process. These are:         The region and general area have been studied for various projects and assessments. This literature was available to be referenced. The project might interact with the project might interact with the project.           • Registration of the BID <b>SOLOECONOMIC ENVIRONMENT</b> • Impact on Avifauna Groundwater and surface water • Soils and geology • Biodiversity • Topography and landscapes           • Registration of the BID         • The following topics were scoped out of the ESIA, and they are therefore not discussed further in this report. • An assessment of affeity impacts or risks associated with developing the mine are not included within the scope of this assessment and will be addressed by the Proponent in a	1. Project screening	2. Establishing the assessment scope	3. Baseline studies
to undertake a screening exercise to determine whether the Project triggers listed activities under the Environmental Management Act, 2007, and its regulations. The screening phase of the Project is a preliminary and its regulations. The screening phase of the Project is a preliminary and its regulations. The screening phase of the Project is a preliminary and its regulations. The screening the Project is a preliminary and its regulations. The screening phase of the Project is a preliminary and its regulations. The screening phase of the Project is a preliminary and its regulations. The screening phase of the Project is a preliminary and its regulations. The screening issessment of the proposed Project against the receiving environment. Feedback from consultation with the public and the Proponent informs this process. The following environmental and social topics were scoped into the assessment, as a potentially significant timpats to occur. Impacts that are identified as potentially significant timpats to occur. Impacts that are identified as potentially significant during the screening and scoping phase are taken forward for further assessment in the ESIA process. These are: <b>SOCIOECONMIC ENVIRONMENT</b> • Impact on Avifauna • Community health, safety and security on and off site <b>BIOPHYSICAL ENVIRONMENT</b> • Impact on Avifauna • Goography and landscapes The following topics were scoped out of the ESIA, and they are therefore not discussed further in this report. • An assessment of safety impacts or risks associated with developing the mine are not included within the scope of this assessment and will be addressed by	Complete	Complete	Complete
<ul> <li>An assessment of safety impacts or risks associated with developing the mine are not included within the scope of this assessment and will be addressed by</li> </ul>	to undertake a screening exercise to determine whether the Project triggers listed activities under the Environmental Management Act, 2007, and its regulations. The screening phase of the Project is a preliminary analysis, to determine ways in which the Project might interact with the biophysical, social, and economic environments. Stakeholder engagement: • Registration of the project	aim of this stage is to determine which impacts are likely to be significant; to scope the available data and any gaps that need to be filled; to determine the spatial and temporal scope; and to identify the assessment methodology. The scope of this assessment was determined through undertaking a preliminary assessment of the proposed Project against the receiving environment. Feedback from consultation with the public and the Proponent informs this process. The following environmental and social topics were scoped into the assessment, as there was the potential for significant impacts to occur. Impacts that are identified as potentially significant during the screening and scoping phase are taken forward for further assessment in the ESIA process. These are: <b>SOCIOECONOMIC ENVIRONMENT</b> • Community health, safety and security on and off site <b>BIOPHYSICAL ENVIRONMENT</b> • Impact on Avifauna • Groundwater and surface water • Soils and geology • Biodiversity • Topography and landscapes The following topics were scoped out of the ESIA, and they are therefore not	<ul> <li>point against which any future changes associated with a Project can be assessed, and to allow suitable mitigation and monitoring to be identified.</li> <li>The region and general area have been studied for various projects and assessments. This literature was available to be referenced. The Project site-specific area has been studied as part of the ESIA process, and the following has been conducted as part of this assessment: <ul> <li>Field surveys</li> <li>Desktop studies</li> <li>Consultation with stakeholders</li> </ul> </li> </ul>
		<ul> <li>An assessment of safety impacts or risks associated with developing the mine are not included within the scope of this assessment and will be addressed by</li> </ul>	



The construction of five concrete transformer platforms and the upgrade of an existing wash and service

bay at Brakwater, Namibia

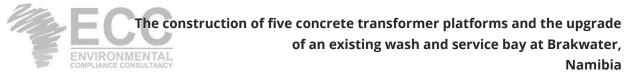
Burmeister & Partners (Pty) Ltd

4. Scoping report and EMP	5. Impact identification and evaluation	6. Draft & Final ESIA and EMP
Complete	Complete	This Stage
The scoping report documents the findings of the current process and provides stakeholders with an opportunity to comment and continue the consultation that forms part of the environmental assessment. The EMP provides measures to manage the environmental and social impacts of the proposed Project, and outlines the specific roles and responsibilities required to fulfil the plan. This scoping report focuses on describing the ESIA process, project description, baseline description and Terms of Reference for the assessment phase. This report will be issued to stakeholders and I&APs for consultation, for a period of 7 days, meeting the mandatory requirement as set out in the Environmental Management Act, 2007. The aim of this stage is to ensure that all stakeholders and I&APs have an opportunity to provide comments on the assessment process, and to register their concerns, if any.	The key stage of the ESIA process is the impact identification and evaluation stage. This stage is the process of bringing together project characteristics with the baseline environmental characteristics and ensuring that all potentially significant environmental and social impacts are identified and assessed. It is an iterative process that commences at project inception and ends with the final design and project implementation. The impact identification and evaluation stages will be updated in the assessment phase. The final design of the proposed Project will be assessed, along with alternatives that were considered during the design process in accordance with the Environmental Management Act, 2007. Section 6 in this report sets out the assessment methodology to be used to assess the Project against the environmental and social baselines that would be affected.	All comments received during the I&AP public review period will be collated in an addendum report, which will accompany the final ESIA report when submitted to the MME and MEFT: DEA. All comments will be responded to, either through providing an explanation or further information in the response table, or by signposting where information exists, or where new information has been included in the ESIA report or appendices. Comments will be considered, and where they are deemed to be material to the decision-making, or might enhance the ESIA, they will be incorporated. The final ESIA report, appendices, and the addendum report, will be available to all stakeholders, and all I&APs will be informed of its availability for review. The ESIA report, appendices and addendum will be formally submitted to the competent authority (MME) and the MEFT: DEA as part of the application for an environmental clearance certificate.
8. Monitoring and a <mark>uditing</mark>	7. Authority ass	essment and decision
Future Phase	Future Stage	F CONSULTANC

In addition to the EMP being implemented by the Proponent, a monitoring strategy and audit procedure will be determined by the Proponent and competent authority. This will ensure key environmental receptors are monitored over time to establish any significant changes from the baseline environmental conditions, caused by Project activities

# The Environmental Commissioner, in consultation with other relevant authorities, will assess if the findings of the ESIA presented in the report are acceptable. If deemed acceptable, the Environmental Commissioner will revert to the Proponent with a record of decision and recommendations.

#### Figure 2 – The full ESIA process



#### 2.4 SCOPING AND THE ENVIRONMENTAL ASSESSMENT

The scoping phase plus assessment for the Project is an analysis to determine ways in which the Project interacts with the biophysical, social, and economic environment. Potential impacts are identified, and the significance is assessed during the screening and scoping phase. The details and outcome of the impact assessment are discussed in sections 6 and 7 of this scoping report. Feedback from consultation with the Proponent and stakeholders also informs the analysis of the impacts. The following environmental and social aspects were considered in the impact assessment process:

#### SOCIO-ECONOMIC ENVIRONMENT

- Community health, safety and security on and off site

#### **BIOPHYSICAL ENVIRONMENT**

- Impact to Avifauna
- Groundwater and surface water
- Soils and geology
- Biodiversity
- Topography and landscape

#### 2.5 BASELINE STUDIES

Baseline studies involves collecting all pertinent information from the status of the receiving environment. This provides a baseline against which changes that occur as a result of the proposed Project can be measured. For the proposed Project, baseline information was obtained through a desktop study, consultation, and engagement with stakeholders (Appendix B), focusing on environmental receptors that could be affected by the proposed Project, and verified through site-specific information. The baseline information is covered in Chapter 5.

#### 2.6 PUBLIC CONSULTATION

Public participation and consultation are a requirement as stipulated in the Environmental Impact Assessment Regulations (Regulations 21 and 23) of the EMA, No.7 of 2007, for a project undertaking a listed activity that requires an environmental clearance certificate. Consultation is a compulsory and critical component of the assessment process for achieving transparent decision-making and can provide many benefits. Consultation is ongoing during the ESIA process. The objectives of the public participation and consultation process are to:

- Provide information on the Project, introducing the overall project concept and planning in the form of a background information document (BID).
- Determine the relevant government, regional, and local regulating authorities.
- Listen to and understand community issues, record concerns and questions.



 Explain the process of the ESIA and the timeframes involved and establish a platform for ongoing consultation.

#### 2.6.1 IDENTIFICATION OF KEY STAKEHOLDERS AND INTERESTED AND AFFESTED PARTIES

A stakeholder mapping exercise was undertaken to identify individuals or groups of stakeholders and the method by which they will be engaged during the assessment process. Stakeholders were approached through direct communication such as stakeholder letters, the national press, or directly by email. A summarised list of stakeholders for this project is given below:

- Surrounding neighbouring businesses;
- The general public with an interest in the Project;
- Ministry of Environment, Forestry, and Tourism (MEFT);
- Ministry of Mines and Energy (MME);
- Khomas Regional Council; and
- City of Windhoek.

The records of the public consultation process in the form of a summary report will provide a list of interested and affected parties (I&APs), evidence of consultation, including minutes of public meetings, advertisements in national newspapers, and a summary of the comments or questions raised by the public.

The draft scoping report was submitted to the competent authority, and all interested and affected parties for their review on the 16<sup>th</sup> of April 2024. The public review period was open for a period of 14 days from the 16<sup>th</sup> to 30<sup>th</sup> of April 2024. No comments or concerns were received from the public. The final scoping report will be submitted to the competent authority and MEFT for their review and record of decision.

#### 2.6.2 BACKGROUND INFORMATION DOCUMENT

The BID presents a high-level description of the proposed Project, sets out the assessment process, and outlines when and how consultation will be undertaken. It also provides contact details for further Project-specific inquiries to all registered I&APs. The BID was distributed to registered I&APs, and it can be found in Appendix B.

#### 2.6.3 NEWSPAPER AND ADVERTISEMENTS

Notices of the proposed project were circulated on 6 February 2024 and 13 February 2024 in the "Republikein", "Namibian Sun" and "Allgemeine Zeitung" newspapers (Appendix C). The purpose of this was to commence the consultation process by informing the public and potential I&APs, allowing them to register an interest with the project.



#### 2.6.4 SITE NOTICES

A site notice was placed at the proposed project site to ensure that neighbouring properties and stakeholders were informed of the proposed Project. The notice was set up at the boundary of the site as illustrated in Appendix D.

#### 2.6.5 PUBLIC MEETING

In terms of Section 22 of the Environmental Management Act, No. 7 of 2007 and its regulations, to register I&APs, a public meeting is not a requirement during the public consultation process for all projects. The EAP decided not to arrange public meetings but rather invited all registered I&APs to raise their concerns and make comments in writing. This is due to the minor impacts of the Project, lack of interest from the public and the Project location, as it is in an industrial zone far from other businesses.

#### 2.7 DRAFT SCOPING REPORT WITH IMPACT ASSESSMENT AND PRELIMINARY EMP

The draft scoping report with impact assessment and preliminary EMP will be submitted to the public for review prior to submission to the competent authority and DEA. The report documented the findings of the assessment process, provides stakeholders with the opportunity to comment and continue to engage in consultation and forms part of the environmental clearance application.

The preliminary EMP provides measures to manage the potential environmental and social impacts of the proposed Project and outlines specific roles and responsibilities to fulfil the plan. The draft documents were updated, however no comments or concerns were received.

#### 2.8 FINAL SCOPING REPORT WITH IMPACT ASSESSMENT AND EMP

The final scoping report with impact assessment, and associated appendices will be available to all stakeholders on the ECC website <a href="https://eccenvironmental.com/download/the-proposed-construction-of-five-concrete-transformer-platforms-and-the-upgrade-of-an-existing-wash-and-service-bay-at-brakwater-khomas-region-namibia/">https://eccenvironmental.com/download/the-proposed-construction-of-five-concrete-transformer-platforms-and-the-upgrade-of-an-existing-wash-and-service-bay-at-brakwater-khomas-region-namibia/</a> and MEFT portal at <a href="https://www.eia.met.gov.na/">http://www.eia.met.gov.na/</a>. All I&APs will be informed of this via email.

These same final documents are formally submitted to the competent authority, namely, the Ministry of Mines & Energy (MME). A copy of the submission proof and the same set of the documents are submitted to the Office of the Environmental Commissioner, DEA department, as part of the application for an environmental clearance certificate.

#### 2.9 AUTHORITY ASSESSMENT AND RECORD OF DECISION

The Environmental Commissioner in consultation with the MME and other relevant authorities will assess the findings of the final scoping with impact assessment. If deemed acceptable, the



Environmental Commissioner will revert to the Proponent with a record of decision and any recommendations. If the clearance is not granted, then reasons are normally provided. For example, it may be required for the Proponent to undertake a detailed assessment. A detailed assessment would most likely entail the commissioning of specialist studies with impact assessments.



## **3 REVIEW OF THE LEGAL ENVIRONMENT**

As stated in Section 1, an environmental clearance certificate is required for any activity listed in the Government Notice No. 29 of 2012 of the EMA 2007. A thorough review of relevant legislation has been conducted for the proposed Project. Table 3 below identifies relevant legal requirements specific to the Project. Table 4 specifies permits relevant to the Project. This chapter outlines the regulatory framework applicable to the proposed Project.



#### 3.1 NATIONAL REGULATORY FRAMEWORKS

#### Table 3 - Details of the regulatory framework as it applies to the proposed project

National regulatory regime	Summary	Applicability to the Project	
Constitution of the Republic of	The constitution defines the country's position in relation	The proposed project will ensure the sustainable	
Namibia (1990)	to sustainable development and environmental	use of the environment, and has aligned its	
	management.	corporate mission, vision, and objectives with the	
		Constitution of the Republic of Namibia (1990).	
	The constitution refers that the state shall actively		
	promote and maintain the welfare of the people by		
	adopting policies aimed at the following:		
	"Maintenance of ecosystems, essential ecological		
	processes and biological diversity of Namibia, and the		
	utilisation of living, natural resources on a sustainable		
	basis for the benefit of all Namibians, both present, and		
	future."		
Environmental Management Act,	The Act aims to promote sustainable management of the	This environmental scoping report documents the	
2007 (Act No. 7 of 2007) and its	environment and the use of natural resources. The Act	findings of the scoping phase of the environmental	
regulations (2012), including the	requires certain activities to obtain an environmental	assessment undertaken for the proposed Project.	
Environmental Impact	clearance certificate prior to Project development.		
Assessment Regulation, 2007 (No.	The Act states that an EIA should be undertaken and	The process has been undertaken in line with the	
30 of 2011)	submitted as part of the environmental clearance	requirements under the Act and its regulations.	
	certificate application process.		
	The MEFT is responsible for the protection and		
	management of Namibia's natural environment. The		



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National regulatory regime	Summary	Applicability to the Project	
	Department of Environmental Affairs, under the MEFT, is		
	responsible for the administration of the EIA process.		
The Regional Councils Act (No. 22	This Act sets out the conditions under which Regional	The construction site falls under the Khomas	
of 1992)	Councils must be elected and administer each delineated	Regional Council, which will form a part of the	
	region. From a land use and project planning point of	I&APs and will be consulted during the ESIA	
	view, their duties include, as described in section 28 "to	Process.	
	undertake the planning of the development of the region		
	for which it has been established with a view to physical,		
	social, and economic characteristics, urbanisation		
	patterns, natural resources, economic development		
	potential, infrastructure, land utilisation pattern and		
	sensitivity of the natural environment.		
	The main objective of this Act is to initiate, supervise,		
	manage, and evaluate development.		
Water Resource Management	This Act provides for the control, conservation and use of	The Act stipulates obligations to prevent the	
Regulations of 2023, Water	water for domestic, agricultural, urban, and industrial	pollution of water. Possible pollution of water will	
Resources Management Act, Act	purposes; and to make provision for the control of	be evaluated in the impact assessment.	
No. 11 of 2013	certain activities on or in water.		
		Measures to minimise potential surface and	
	The Department of Water Affairs, within the Ministry of	groundwater pollution are contained in the EMP.	
	Agriculture, Water and Land Reform (MAWLR), is		
	responsible for the administration of the Act.	All the relevant water permits will be obtained as	
		required.	



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National regulatory regime	Summary	Applicability to the Project	
Soil Conservation Act, No. 76 of	Makes provision for the prevention and control of soil	During the activities in the construction phase,	
1969	erosion and the protection, improvement and the	there will be minimal soil disturbance.	
	conservation, improvement and manner of use of the		
	soil and vegetation.		
The Forestry Act, No. 12 of 2001	Section 22 deals with the protection of natural	The Proponent will ensure minimal vegetation to	
as amended by the Forest	vegetation that is not part of the surveyed erven of a	be removed before construction activities and that	
Amendment Act, No. 13 of 2005	local authority area as defined.	all required permits are in place before removal	
		commences.	
	Section 21 states that no person shall cut, destroy, or		
	remove vegetation that is growing within 100 metres of a		
	river, stream, or watercourse.		
Hazardous Substances	This Ordinance provides for the control of toxic	The Proponent shall ensure safe handling,	
Ordinance, No. 14 of 1974	substances and can be applied in conjunction with the	transfer, storage, and disposal protocols are	
	Atmospheric Pollution Prevention Ordinance, No. 11 of	developed, implemented and audited throughout	
	1976.	its construction phase and operations. The	
		Proponent will prevent and mitigate any possible	
	This applies to the manufacture, sale, use, disposal, and	oil spill events that may occur.	
	dumping of hazardous substances, as well as their		
	import and export.	The Proponent will obtain all relevant permits	
		required under this Ordinance.	
Labour Act (No. 6 of 1992)	The Ministry of Labour, Industrial Relations and	The proponent should ensure the safety and	
	Employment is aimed at ensuring harmonious labour	welfare of employers throughout the construction	
	relations through promoting social justice, occupational	and operational phase.	



National regulatory regime	Summary	Applicability to the Project
	health and safety and enhanced labour market services	
	for the benefit of all Namibians. This ministry insures	
	effective implementation of the Labour Act no. 6 of 1992.	

#### 3.2 RELEVANT PERMITS AND LICENCES

#### Table 4 - Relevant permits and licences required for the project

Permit/Licence	Act/Regulation	Related activities requiring permits	Relevant Authority
Environmental clearance	Environmental Management	Required for all listed activities	Ministry of Environment, Forestry and
certificate	Act, No. 7 of 2007	shown in Table 2.	Tourism
Wastewater discharge permit	Water Act, No. 54 of 1954	Required for waste disposal	Ministry of Agriculture, Water and Land
		activities	Reforms



## **4 PROJECT DESCRIPTION**

#### 4.1 NEED FOR THE PROJECT

Transformers are a device that is able to transfer electric energy from an alternating current (AC) electrical energy to one or more circuits, either increasing or decreasing the voltage. The function of transformers is to provide power supply over a long distance to various locations from a single source (power plant). Fewer construction and operations of power plants are produced because of this which is both economically and environmentally beneficial. Transformers also ensure that power that reaches consumers are safe for light bulbs and outlets.

An oil-immersed transformer utilises oil as a cooling method to reduce the transformer temperature. The platforms aids in loading of transformers and its main intention are to speed up the process in the case of an emergency when breakage of transformers at regional substations occurs. As a precautionary measure, the concrete platforms also prevent accidental spills of the insulating oil potentially affecting surrounding environment, groundwater and the intermittent river approximately 72 m from the proposed site. However, this is highly unlikely and has not occurred yet. Figure 3 shows an example of a typical concrete platforms.



(a)

(b)

#### Figure 3 - Examples of transformer platforms

#### 4.2 ALTERNATIVES CONSIDERED

Best practice environmental assessment methodology calls for consideration and assessment of alternatives to the Project. In terms of the Environmental Management Act, No. 7 of 2007 and its



regulations, alternatives considered should be analysed. Considering the need for power supply and the area suitable for the construction of transformer platforms, a location in Brakwater was selected and no other alternatives were taken into account.

#### 4.2.1 NO-GO ALTERNATIVES

The intention of the project is to assist and speed up the process of the loading of transformers, should transformers experience breakage. Should the platforms not be constructed, the efficiency of the transformers may be impacted due to the delay in the power supply process. Additionally, platforms prevent minimal oil spills from impacting the surrounding environment. In that regard, the "no-go alternative" is not preferred, and as such, the project support the efficiency of the transformers and is an environmentally friendly approach.

#### 4.3 PROJECT BACKGROUND AND EXPLORATION HISTORY

#### 4.3.1 PROPOSED WASH AND SERVICE BAY CONSTRUCTION/UPGRADE

The following activities are envisioned during the upgrade and operations:

- Oils will be drained from vehicles into an existing oil sump, ready to be collected for disposal at a municipal waste site
- In addition, at the wash bay, vehicles will be washed with high pressure water jets
- Waste wash water will go through a system of a 3-chamber oil separator, from where the oils and other impurities will be collected and disposed at a municipal waste site
- The remainder of the wash water will be discharged into the river after a wastewater permit is granted
- The floors of the wash bay will be raised so that storm water cannot reach and flood the 3-chamber separator.

#### 4.3.2 CONSTRUCTION PHASE OF THE CONSTRUCTION OF THE PLATFORMS

The following activities are envisioned during the construction phase:

- Vegetation removal to construct the five concrete transformer platforms;
- Minor ground preparation of the site
- Frame the area and lay out of concrete

#### 4.3.3 EQUIPMENT AND MATERIALS

Delivery of construction machinery will be required, but no abnormal loads are expected. The equipment required during the construction phase are earth moving equipment, compactor, rollers transport vehicles, cranes and lifting equipment, concrete batching plant and cement trucks, hand tools and workers machineries. A site storage facility and laydown area for construction equipment may also be required.



#### 4.3.4 WORKERS AND ACCOMMODATION

Workers are already employed by the contractors and accommodation is not a necessity.

#### 4.3.5 WATER SUPPLY

Throughout the construction process, water usage for concrete batching will be entirely unnecessary, as pre-mixed concrete sourced from a ready-mix plant will be transported to the site via concrete trucks. Water will solely be drawn from a local connection point on site for the preparation of engineered fill, where a specific minimum water content is essential to enhance the compaction process. Additionally, water will be utilised for the routine cleaning of construction equipment on a daily basis.

#### 4.3.6 RESOURCE USE AND WASTE MANAGEMENT (SOLID AND EFFLUENT WASTE)

General waste generated during the construction phase will be removed by a skip and disposed of at the waste disposal site works in Windhoek.

It is imperative that no polluted water or any other liquids be allowed to spill into the natural catchments. All pollutants will be effectively contained and collected in appropriate receptacles, and subsequently disposed of at the designated Windhoek Municipal Waste Site.

#### 4.3.7 OPERATIONAL PHASE

During the operational phase, the transformers and associated infrastructure will require little intervention. Regular inspections (monthly and yearly) during construction and annually in operations will be conducted by the site manager.

#### 4.3.8 DECOMMISSIONING PHASE

Should the transformers no longer be required, safe and systematically dismantling may occur whereby transformer metal may be used or recycled.

The EMP developed for the proposed Project sets out auditable management and rehabilitation actions for the Proponent to ensure careful and sustainable management measures are implemented.



## **5 ENVIRONMENTAL AND SOCIAL BASELINE**

An environmental and socio-economic baseline and a description of the existing biophysical environment is given in this section. This section has been compiled from a desktop study.

#### 5.1 LAND USE

The location of the proposed project is at the NamPower Depot in Brakwater, approximately 15 km north of Windhoek. This area is relatively vacant with sparse industrial buildings, the closest industrial infrastructure (WP Transport Namibia) being 500 m away. Several portions of land in Brakwater have been rezoned for industrial purposes which was previously zoned for residential purposes. The NamPower facility in Brakwater is used as a storage facility for NamPower vehicles and equipment. The space also includes a service and wash bay.

#### 5.2 CLIMATE

Brakwater is located within the Khomas Hochland Plateau and has a semi-arid highland savannah climate with high temperatures, medium to high summer rainfall and high solar radiation (Mendelsohn, Jarvis, Roberts, & Robertson, 2002). Brakwater experiences similar weather conditions to Windhoek due to the proximity to the capital city. The area's climate is characterised by warm summers and cool winters. The average annual solar radiation ranges between 6.0 to 6.2 kWh/m<sup>2</sup>/day (Mendelsohn, *et al*, 2002). The average maximum temperature during summer months (December, January and February) is 30°C, with minimum temperature around 18°C during these months. The average maximum temperature during winter months (June, July and August) is 22°C, while lowest average temperatures in these months range between 6 to 8°C as shown in Figure 4.

The humidity in the most humid months ranges between 70 and 80% relative humidity (RH), while the least humid months has a humidity between 10 to 20% RH. The annual maximum rainfall is recorded in February at approximately 120 mm. The average annual rainfall experienced in the area ranges between 300 -350 mm. Wind are likely to occur in the morning reaching up to 37 km/h, with the predominant winds from the N, NNE, NE and ENE (Figure 5).



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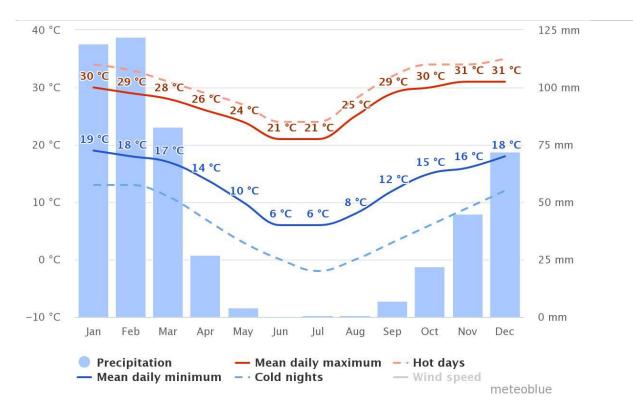
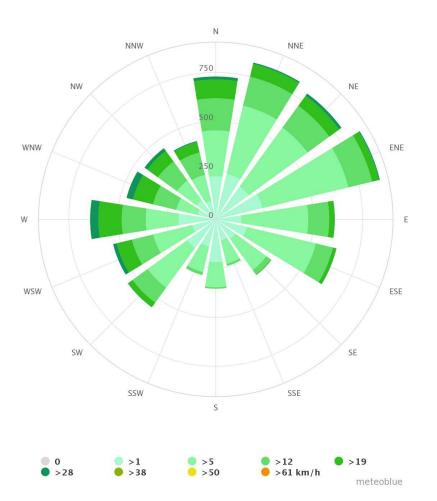


Figure 4 - Annual temperatures and precipitation at Brakwater, Khomas region (meteoblue, 2023)



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# Figure 5 - Wind rose showing the hours blown per year from the indicated direction at Brakwater, Khomas region (metoblue, 2023)

#### 5.3 SOIL, GEOLOGY AND TOPOGRAPHY

The Brakwater and Windhoek area consist of Lithic Leptosols and Regosols. Leptosols soil typically form in actively eroding landscapes, are generally coarse and thin layered caused by the continuous presence of hard-rock or cemented layer within 30 cm of the surface (Mendelsohn *et al*, 2002). Due to their coarse texture, their water holding capacity is low and vegetation growing in this soil are often subjected to drought. Regosols are young soils in arid conditions or interrupted by erosion or recent deposition of sediments (Mendelsohn, Jarvis, Mendelsohn, & Robertson, 2022).

The bedrock geology of the proposed area consists of the Khomas Highlands (Mendelsohn *et al*, 2002). The Khomas subgroup is the youngest of the Damara Supergroup and Gariep Complex and consist of metamorphic rocks such as mica schist, traversed by micaceous quartzite, subordinate calcareous schist and impure marble, and amphibole schist (JARO Consultancy, 2016). The



topography and landscape of the proposed site is distinguished by a rugged higher lying undulating mountainous area situated to the east and west with central lower lying lowlands.

#### 5.4 HYDROGEOLOGY

According to Mendelsohn, *et al* (2022) the proposed site falls near the Windhoek aquifer. The aquifer may have potential and yields more than 15 m<sup>3</sup> of water per hour. The amount of water is suitable for farming or settlements with large livestock, municipal water supplies and irrigation. The productivity of the aquifer is moderate but variable due to porosity and fractures from the mica schist. Aquifers may also form along the Klein Windhoek River nearby the Project site.

#### 5.5 SURFACE WATER

The NamPower Depot is approximately 72 m from Klein Windhoek River channel and may be subjected to possible flooding, with the stormwater and run-off flowing parallel to the proposed site. The proposed project will have large volumes of oil, with one of the maximum sized transformers being 45 000 litres. Should a spill occur and possibly contaminate the fluvial river, an oil interception and separation system are proposed for each of the platforms. Mitigation measures are further elaborated in the EMP to prevent possible soil, surface- and groundwater pollution of the river channel.

#### 5.6 CLIMATE CHANGE

Climate projections for Namibia shows that annual temperatures will increase rapidly, as much as 4°C over the next century whereas annual precipitation are expected to decrease by 14% over the next century (Thomson, 2021). Rainstorms and major floods are rare occasions, and it is predicted that prolonged droughts and water scarcity issues would be more likely the trend by climate change. In the past 120 years only one flash flood was recorded in Namibia (World Bank Group, 2021). Furthermore, extreme flood events are projected to occur in the floodplains of the north-eastern parts of Namibia, and therefore is unlikely to occur in the Project area (World Bank Group, 2021).

#### 5.7 BIODIVERSITY BASELINE

#### 5.7.1 FLORA

The proposed site is situated in the Savanna, with the dominant vegetation type being the thornbush shrubland (Mendelsohn et al, 2002). The thornbush shrubland Savanna is characterised by large expanses of grasslands with *Senegalia* and *Vachellia* trees, previously known as Acacia trees. The dominant vegetation and structure are the Highland shrubland consisting of shrubs and low trees (Mendelsohn *et al*, 2002). The plant diversity (more than 500 species) and endemic species is high, estimated to be more than 35 species. Between 26 and 50 species of



large trees and shrubs are found in the Brakwater vicinity, which includes *Senegalia mellifera*, *Vachellia reficiens*, *Senegalia fleckii*, *Boscia albitrunca* and *Vachellia erioloba*.

#### 5.7.2 FAUNA

The overall terrestrial diversity is medium to high. The overall endemic bird species in this region is 6 to 7 species. In this region, there are 13 to 16 reptile species and a variety of small mammals (Mendelsohn et al, 2002). Large mammals such as gemsbok, steenbok, springbok and kudu are scarce in these areas due to increased industrialisation and disturbance of the Brakwater natural environment.

#### 5.8 SOCIAL AND SOCIO-ECONOMIC

The Khomas region has a total population size of 342 141, with almost 19% of Namibian population occupying this region despite being a medium sized region of 36 964 km<sup>2</sup> (Mappr, 2015). One of the foremost socio-economic problems in Windhoek (and Namibia in general) is rapid urbanisation spurred by high rates of in-migration from rural areas. The urban populations in Khomas increased from 250 262 in 2001 to 342 141 in 2011, rural communities experienced a decrease (Namibia Statistic Agency, 2011). Most of rural-urban migrants in Khomas region, i.e., Windhoek are low-skilled and are of working age seeking for working opportunities and better living conditions (Tjipetekera, Gumbo, & Yankson, 2022).

#### 5.8.1 EMPLOYMENT

Approximately 47.4% of Namibian population indicated that their main source of income is retrieved from salaries and/or wages (Namibia Statisticcs Agency, 2019). The total number of the employed population in Namibia was 725 742 of whom 361 508 were males, while the remaining 364 234 were females. More males than females were employed in urban areas 50.9% and 49.1% respectively, however in rural areas the number of employed females (51.7%) was more than that of males (48.3%) (National Planning Commission, 2020) . According to the Khomas 2011 census regional profile, in the Khomas region, approximately 30% of the region is unemployed, which is a total of 54 368 individuals of the total working population (the age of 15 and above) of the region which is 181 334 (Namibia Statistic Agency, 2011). The unemployment rate of the Khomas region, 2020).

#### 5.8.2 ECONOMIC ENVIRONMENT

Namibia had an economic growth of 3.5% in 2022, mostly due to diamond mining activities, there is however a lingering pandemic impact and Namibia is still recovering from the COVID-19 restrictions. Employment is projected to remain below pre-pandemic levels as the workforce slowly recovers. Fuel prices and inflation increased to a five-year high of 6.1% in 2022 a negative impact on consumers. One of the most important inputs for economic growth is an abundance of reliable and affordable energy in Namibia which is increasingly becoming a challenge due to



power supply demand. Presently 61% of Namibia's energy is imported due to local generation producing 39% of electricity. Namibia's total electricity demand is currently estimated at 600 MW per annum. The country's generation capacity currently stands at approximately 486.5 MW. Total generation capacity delivers approximately 400 MW, thereby rendering a deficit of about 200 MW. The Namibian Government remains committed towards providing electricity to all educational and health facilities, and to all household, especially rural households (Republic of Namibia: Ministry of Industrialisation and Trade, 2020).

#### 5.9 CULTURAL HERITAGE

The NamPower Depot site is not known to have a rich historical background, cultural sites or graveyards. The proposed site has no record of possible national, cultural or historical significance.



## 6 IMPACT IDENTIFICATION AND EVALUATION METHODOLOGY

#### 6.1 INTRODUCTION

The impact assessment method described in this chapter by ECC is designed to systematically identify and evaluate potential environmental and social impacts that may arise from a proposed project. The method takes into consideration the baseline characteristics of the project area and assesses the significance of impacts based on various factors, including the sensitivity and value of environmental and social receptors, the nature and characteristics of the potential impact, and the magnitude of potential change.

The method shown in Figure 6 provides assessment guidance that is used to evaluate impacts, and it also acknowledges any limitations, uncertainties, and assumptions associated with the assessment methodology. It outlines how impacts are identified and evaluated, and how the level of significance is derived. The method also addresses the application of mitigation measures in the assessment, and how additional mitigations are identified.

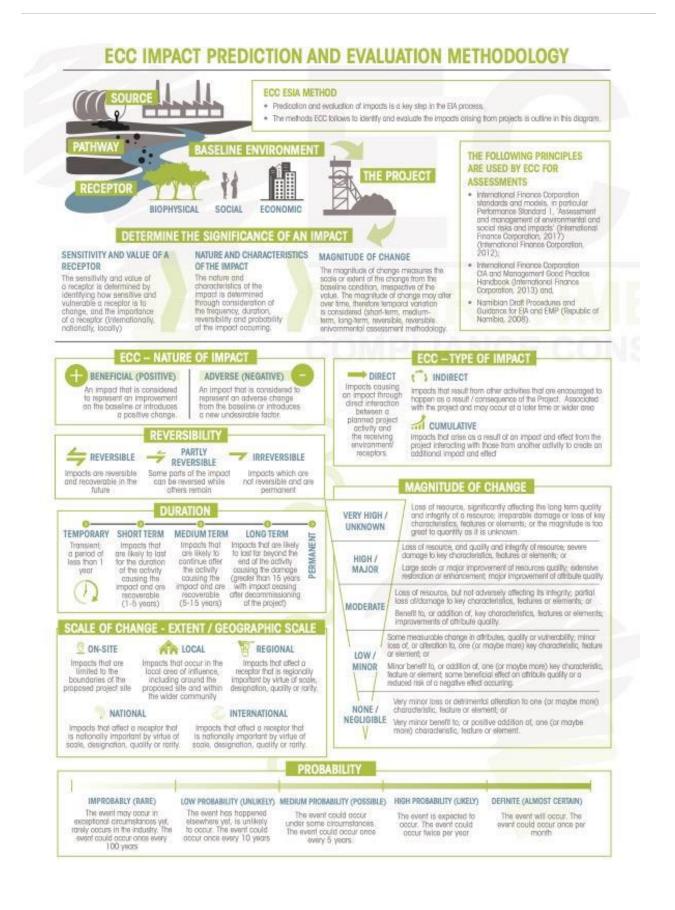
This chapter provides a structured approach for evaluating the potential impacts of a proposed project on the environment and social aspects. It considers various factors to determine the significance of impacts and provides guidance on how to identify and evaluate potential impacts. It also recognises the limitations and uncertainties associated with impact assessment methodologies, which adds transparency and credibility to the assessment process.

Overall, this chapter provides a comprehensive and systematic approach for conducting impact assessments, which can help ensure that potential environmental and social impacts are thoroughly evaluated and addressed in the decision-making process for the proposed project. However, it is important to note that the effectiveness of this method would ultimately depend on its implementation and the accuracy of the baseline data and assumptions used in the assessment. Therefore, regular reviews and updates of the methodology based on new information and feedback from stakeholders would be recommended to improve its accuracy and relevance.



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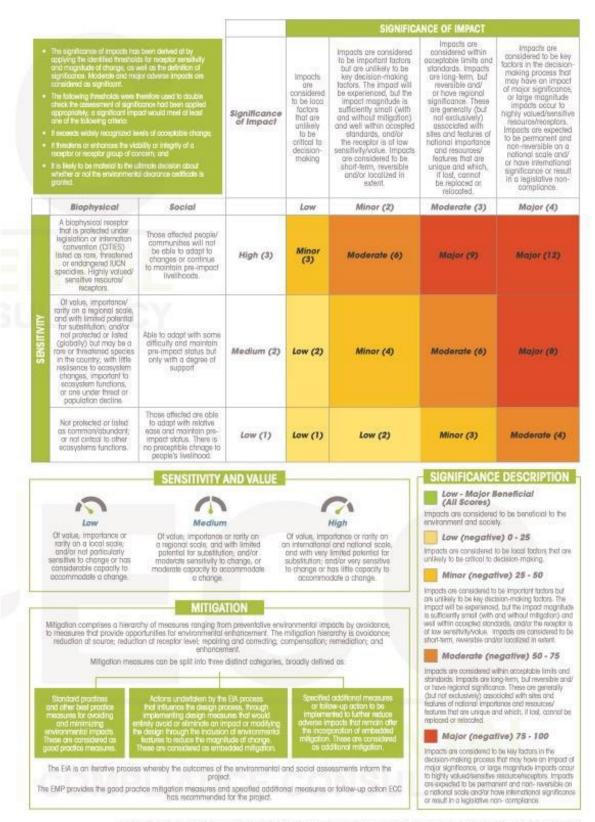
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#### Figure 6 - ECC ESIA methodology based on IFC standards



#### 6.2 LIMITATIONS, UNCERTAINTIES AND ASSUMPTIONS

Table 5 below shows the potential limitations, uncertainties and assumptions associated with the Project.

#### Table 5 - Limitations, uncertainties and assumptions

LIMITATION/UNCERTAINTY	ASSUMPTION
A Physical limitation of the site is that it	As part of the standard operating procedure, the oil
does not allow for oil interceptors and	interceptor will be checked daily, especially during
separators of a size required to handle	the rainy season. In the event of a 45,000 litre spill,
an oil spill and a 1:100-year rainstorm	the oil interception contents will have to be drained
simultaneously.	immediately.



# 7 IMPACT ASSESSMENT FINDINGS AND PROPOSED MITIGATION MEASURES

# 7.1 INTRODUCTION

This chapter presents the findings of the impact assessment for the proposed project, with a focus on significant potential impacts. The design of the proposed project and best practice measures were considered during the assessment to identify likely significant impacts and recommend mitigation measures. A summary list of potential impacts was provided, including water (surface and groundwater), soil, landscape (visual impacts, sense of place), socioeconomics (employment, demographics, and land use), noise, ecology (fauna and flora), air quality (emissions, pollutants, and dust), and heritage (including culture, history, archaeology, and palaeontology).

Below, the impact assessment findings are presented, identifying the activities that could be the source of impacts, the receptors that could be affected and the pathways between them.

# 7.2 SOCIOECONOMIC IMPACTS

The term socio-economic impact assessment embraces both social impacts and economic impacts. Economic impacts include issues such as employment, changes in economic activity, and increased expenditure. The significant economic impact that holds specific interest to the community and stakeholders is employment creation and power supply which is summarised in this section. Table 6 shows the socioeconomic impact findings.

### 7.2.1 POWER SUPPLY

Over recent years, NamPower increased Namibia's local generation capacity by restoring and upgrading its existing generation plants through collaboration with the private sector to deliver safe and reliable power supply. To accommodate the growing electricity demand and generation integration in the country, the upgrade and maintenance of power plants including transformers are required. The transformers at the NamPower Depot are oil-immersed and the proposed platforms ensure that should an oil spill occur, the environment and infrastructure will be protected and maintained. This is in alignment with NamPower's mission – "to provide innovative electricity solutions, in an evolving market, which satisfy the needs of our customers, fulfil the aspirations of our staff and, the expectations of our stakeholders in a competitive, sustainable and environmentally friendly manner."



#### Table 6 – Socioeconomic impact assessment findings

Description of activity	Receptor	Description of	Effect/Description	Value of	Magnitude of	Significance of
	Receptor	impact	of magnitude	Sensitivity	change	impact
			Beneficial			
Dower Cumply	Socioeconomic	Safe and reliable	Direct		Major	Beneficial
		power supply is	Reversible	Medium		
Power Supply – operational phase		beneficial for the	Major			Major
operational phase		socioeconomic	Long Term			iviajoi
		growth in Namibia	Regional			
			Definite			



#### 7.3 **BIOPHYSICAL ENVIRONMENT IMPACTS**

#### 7.3.1 IMPACTS OF THE CONSTRUCTION OF TRANSFORMER PLATFORMS

During the construction phase of the project, various activities are involved such stockpiling, levelling and vehicle movement. Trampling by employees may result in soil compaction and erosion while construction material may cause soil infertility and affect the regrowth rate of vegetation. Furthermore, construction material, excess concrete or waste may contaminate the nearby intermittent river, Klein Windhoek River and seep into the groundwater causing long term impacts. Table 7 below presents the impacts of the construction of the transformer platforms and the activities associated with the construction phase.



#### Table 7 - The impacts of the construction of concrete transformer platforms

Description of activity	Receptor	Description of impact	Effect/ description of magnitude	Value of sensitivity	Magnitude of change	Significance of impact	Residual impact after mitigation
Design and construction of	Soil	Construction activities may lead to soil infertility, soil erosion which may hinder regrowth rates	Adverse Direct Reversible Negligible Long Term On-site Possible	Low	Minor	Low (2)	Low (1)
five concrete platforms	ve concrete	Adverse Direct Irreversible Minor Medium Term Local Possible	Low	Minor	Low (2)	Low (1)	
	Surface water	Construction material or waste	Adverse	Medium	Minor	Minor (4)	Low (2)



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Description of activity	Receptor	Description of impact	Effect/ description of magnitude	Value of sensitivity	Magnitude of change	Significance of impact	Residual impact after mitigation
		may contaminate nearby intermittent water	Direct Irreversible Minor Temporary Regional				
			Possible				

Impact management or control measures may include but are not limited to the following:

- Minimise clearance areas through proper planning of the construction activities;
- Route new tracks around established and protected trees, and clumps of vegetation;
- Identify rare, endangered, threatened, and protected species;
- Where possible rescue and relocate plants of significance with the appropriate permits in place beforehand;
- Any spills must be cleaned up, good housekeeping should be practiced;
- Materials must be located where there isn't a risk of them being washed into waterways; and
- Secure all the chemicals to avoid spillage and conducting the chemical-heavy jobs away from bodies of water.



#### 7.3.2 IMPACTS OF EFFLUENT WASTEWATER AND OTHER WASTE

Effluent wastewater refers to sewage that has been treated in a septic tank or sewage treatment plant. There is a sewer system on the proposed site and continuous increase of workers on site will lead to increased effluent wastewater and possible generation, collection and disposal of other wastes. Possible leakages or unpermitted discharges may result in contaminated/polluted groundwater and surface water including the river adjacent to the proposed site. Effluent wastewater may result in soil salinisation and affect vegetation growth. Table 8 below presents the impact assessment findings associated with effluent wastewater and other waste.



#### Table 8 - Impacts of effluent wastewater and other waste on the biophysical environment

Description of activity	Receptor	Description of impact	Effect/ description of magnitude	Value of sensitivity	Magnitude of change	Significance of impact	Residual impact after mitigation
Effluent wastewater and other waste generation,	Avifauna	Contaminated/ polluted surface water may be dangerous to birds drinking from these water sources as it may lead to death	Adverse Indirect Irreversible Moderate Short Term Local Possible	Medium	Moderate	Minor (4)	Low (2)
collection, transport and disposal during construction and operational activities	Groundwater	May contaminate groundwater, hindering groundwater quality	Adverse Direct Irreversible Minor Long Term Local Possible	Low	Minor	Minor (3)	Low (2)
	Soil	Effluent wastewater may result in soil salinisation and	Adverse Direct Partly reversible	Low	Minor	Low (2)	Low (1)



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Description of activity	Receptor	Description of impact	Effect/ description of magnitude	Value of sensitivity	Magnitude of change	Significance of impact	Residual impact after mitigation
		accumulation of heavy metals affecting biodiversity	Minor Medium Term Local Possible				
	Surface water quality	Accumulation of heavy metals in the Klein Windhoek River adjacent to the site	Adverse Direct Reversible Moderate Short Term Local Possible	Medium	Moderate	Minor (4)	Low (2)
	Biodiversity	Impact may hinder vegetation growth and may lead to loss of possible sensitive species	Adverse Direct Partly reversible Negligible Medium Term Local Possible	Low	Minor	Low (2)	Low (1)



Impact management/ control measures may include but are not limited to the following:

- Minimise the loss of untreated waste and prevent leakage;
- Waste for further treatment should be collected;
- Septic tanks should be sized to accommodate at least 24 hours of wastewater flow or the minimum size, while still allowing for sludge and scum retention;
- Should a sewer system be on site, it should be maintained and checked often to prevent leakage;
- Minimise wastewater generation, Reuse wastewater, prevent wastewater from entering the intermittent river; and
- Storm water management should be included in the EMP.



#### 7.3.3 IMPACTS OF POSSIBLE CATASTROPHIC OIL SPILLAGE EVENTS

The major cause of oil spills or leakage from a power transformer would likely be because of an aging sealant or a tear/crack in the transformer. This may be detrimental as it may contaminate the nearby intermittent river, and poison fauna and birds that drink water from the river. Oil spills or leakage may change the chemistry, structure and properties of soil, reduce soil fertility and possibly cover plant's roots which may prevent growth of vegetation. Table 9 below shows the impact assessment findings associated with possible catastrophic oil spillage events.



#### Table 9 - Impacts of an oil spillage event on the biophysical environment

Description of activity	Receptor	Description of impact	Effect/ description of magnitude	Value of sensitivity	Magnitude of change	Significance of impact	Residual impact after mitigation
Possible       Avifauna       Sticky contaminants can be ingested by birds and can damage internal organs and may lead to increased deaths       Adverse Indirect       Indirect         Major       Medium       Major	Major	Moderate (6)	Minor (4)				
spillage event	tastrophic oil       Oil in water will         decrease oxygen       in water and will         quality       result in the loss         of species loss       of species loss	Adverse Direct Partly reversible Very high Long Term Regional Possible	Medium	Major	Moderate (6)	Minor (4)	



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Description of activity	Receptor	Description of impact	Effect/ description of magnitude	Value of sensitivity	Magnitude of change	Significance of impact	Residual impact after mitigation
	Soil	Oil spills changes in chemical composition, structure and properties of soil, and reduces soil fertility	Adverse Direct Partly reversible Major Long Term Local Possible	Low	Major	Minor (3)	Low (2)
	Biodiversity	Oil spills could cover the plant's roots, preventing them from absorbing oxygen. It may lead to deaths of freshwater species.	Adverse Direct Partly reversible Major Long Term Local Possible	Low	Major	Minor (3)	Low (2)

Impact management/ control measures may include but are not limited to the following:

• Good housekeeping;



- Training through toolbox talks and induction;
- Accidental spills and leaks (including absorption material) to be collected and cleaned as soon as possible;
- In the event of spills and leaks, polluted soils must be collected and disposed of at an approved site;
- Bioremediation of oil contaminated soil following possible accidental spills should be conducted; and
- Any major spill is reported to the project manager and Ministry of Mines and Energy (MME).



# 8 CONCLUSION

ECC's impact assessment methodology was used to conduct the scoping report for the proposed construction of transformer platforms and associated upgrades to identify if there is a potential for significant impacts to occur as an outcome of the project. This scoping report identified that there was no major potential risk that requires further specialist studies and assessment. The identified impacts were found to be minor after the implementation of mitigation measures. The various mitigation measures have been identified and listed for implementation in the scoping report and EMP to avoid and reduce effects as far as reasonably practical. This will ensure that the environment is protected, and unforeseen effects and environmental disturbances are avoided.



# **9 REFERENCES**

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# **APPENDIX A – ENVIRONMENTAL MANAGEMENT PLAN**



# **APPENDIX B – BACKGROUND INFORMATION DOCUMENT**



# APPENDIX C – NEWSPAPER ADVERTISEMENT



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# **APPENDIX D – SITE NOTICE**



GPS Coordinates: Lat: -22°24′52.98″S Long: 17°04′21.57″E



**APPENDIX E – EAP CVS** 



# **APPENDIX F – STAKEHOLDER LETTER**

Environmental Compliance Consultancy (Pty) Ltd PO Box 91103 Klein Windhoek Namibia info@eccenvironmental.com www.eccenvironmental.com +264 81 669 7608



ECC-140-469-LET-08-D

29 January 2024

Prosopis Timber & Decking

P.O Box 90492

Windhoek

Namibia

RECEIVED BY OFFICIAL STAMP						
Signature:						
Date:	/	/				

IDENTIFIED STAKEHOLDER AND POTENTIALLY INTERESTED PARTY FOR:

#### NOTIFICATION OF AN ENVIRONMENTAL ASSESSMENT FOR THE PROPOSED CONSTRUCTION OF FIVE CONCRETE TRANSFORMER PLATFORMS AND THE UPGRADE OF AN EXISTING WASH AND SERVICE BAY, BRAKWATER, KHOMAS REGION, NAMIBIA.

Dear Sir/Madam,

Environmental Compliance Consultancy (ECC) has been appointed by Burmeister and Partners (Pty) Ltd on behalf of Namibia Power Corporation (Pty) Ltd (NamPower) as the environmental assessment practitioner for the proposed construction of five concrete transformer platforms and the upgrade of an existing wash and service bay at Brakwater, Khomas Region, Namibia.

We are reaching out to potentially Interested and Affected Parties (I&APs) to inform you about the ongoing Environmental Impact Assessment (EIA) process and provide a means of communication with ECC.

The project entails the construction of five concrete transformer platforms to assist in the process of loading transformers and to upgrade of an existing wash and service bay at Brakwater. Apart from the abovementioned activities, Burmeister and Partners proposes to also conduct the design and construction of a catchpit for the collection of potential minimal oil spillage and separation.

Public participation is an integral part of the EIA process, enabling I&APs to gather information about the project and provide their feedback. We engage with I&APs through various means, including newspaper advertisements, public notices, public meetings, and the distribution of a Background Information Document (BID). The BID can be accessed online at (<u>https://eccenvironmental.com/projects/</u>)

Registered I&APs will receive notifications about the availability of the draft scoping report for review. During this review period, I&APs have the opportunity to raise any concerns or issues they may have. If you wish to register as an I&AP, please complete the registration form on the ECC website using the following link: https://eccenvironmental.com/download/the-proposed-construction-of-five-concrete-transformer-platforms-and-the-upgrade-of-an-existing-wash-and-service-bay-at-brakwater-khomas-region-namibia/

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The construction of five concrete transformer platforms and the upgrade of an existing wash and service bay at Brakwater, Namibia

Burmeister & Partners (Pty) Ltd

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If you encounter any difficulties with the online registration form, kindly reach out to us via email at <u>info@eccenvironmental.com</u> for assistance.

Please feel free to contact us if you have any questions or require further information.

Yours sincerely,

Stephan Bezuldenhout

stephan@eccenvironmental.com

zuldenhout Mooney essica@eccenvironmental.com

Environmental Compliance Consultancy (Pty) Ltd | Registration Number: 2022/0593 Members: JL Bezuidenhout & JS Bezuidenhout