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ENVIRONMENTAL
COMPLIANCE CONSULTANCY



ECC-36-246-REP-05-D

ENVIRONMENTAL SCOPING REPORT

CONSTRUCTION OF THE B2GOLD NAMIBIA (PTY) LTD 66 kV POWER LINE,
OTJOZONDJUPA REGION, NAMIBIA

PREPARED FOR



FEBRUARY 2020

TITLE AND APPROVAL PAGE

Project Name:	CONSTRUCTION OF THE B2GOLD NAMIBIA (PTY) LTD 66 kV POWER LINE
Project Number	ECC-36-246-REP-05-D
Client Name:	B2Gold Namibia (Pty) Ltd
Ministry Reference:	N/A
Status of Report:	Final
Date of Issue:	February 2020
Review Period	NA

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EXECUTIVE SUMMARY

B2Gold Namibia (Pty) Ltd, (herein referred to as the proponent) is a world-class gold producer, 90% owned subsidiary of B2Gold Corp. In Namibia, the proponent owns the Otjikoto Gold Mine (OGM) which is located approximately 70 km north of Otjiwarongo in the Otjozondjupa Region of Namibia. The proponent is an internationally recognized Canadian based gold exploration, development and mining company listed on the Toronto, Namibian and New York Stock Exchanges. The proponent has identified the need to upgrade its power supply in order to meet the energy demands resulting from the expanding mining infrastructure. As such, the proponent, on behalf of Namibia Power Cooperation (NamPower) (Pty) Ltd, proposes to build a 66 kV overhead transmission power line for approximately 20 – 25 km long in Otjozondjupa Region.

The proposed project triggers an Environmental Impact Assessment (EIA) to be conducted, as stipulated in the Environmental Management Act No. 7 of 2007 and its Regulations, in order to obtain an environmental clearance certificate. As such, a scoping report and Environmental Management Plan (EMP) shall describe the detailed potential environmental impact assessments and conditions or commitments that shall be adhered to by the proponent. The scoping report and EMP shall be submitted to the competent authorities (Ministry of Environment and Tourism (MET) and Ministry of Mines and Energy (MME)) as part of the decision-making process.

This assessment has evaluated potential environmental impacts resulting from the development of the planned power line. Through this process, it was determined that the likely effects were not deemed significant due to the magnitude of change from the baseline environment; the short duration of potential impacts; and the reversibility of effects once activities end. On this basis, it is the opinion of ECC that an environmental clearance certificate could be issued, on conditions that the management and mitigation measures specified in the EMP are implemented and adhered to.

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ABBREVIATIONS AND DEFINITIONS

DEA	Directorate of Environmental Affairs
ECC	Environmental Compliance Consultancy
EIA	Environmental Impact Assessment
EMP	Environmental Management Plan
IFC	International Finance Cooperation
I&AP	Interested and affected parties
IUCN	International Union for Conservation of Nature
kV	Kilovolt
MET	Ministry of Environment and Tourism
MME	Ministry of Mines and Energy
NamPower	Namibia Power Cooperation
NDP5	Fifth National Development Plan
NTS	Non-Technical Summary
OGM	Otjikoto Gold Mine
OPGW	Optical Ground Wire

1 INTRODUCTION

1.1 PROJECT OVERVIEW

B2Gold Namibia (Pty) Ltd, (herein referred to as the proponent) is a world-class gold producer, 90% owned subsidiary of B2Gold Corp. In Namibia, the proponent owns and operates the OGM which is located approximately 70 km north of Otjiwarongo in the Otjozondjupa Region of Namibia. The proponent is an internationally recognized Canadian based gold exploration, development and mining company listed on the Toronto, Namibian and New York Stock Exchanges. The proponent has identified the need to upgrade its power supply in order to meet the energy demands resulting from the expanding mining infrastructure. As such, the proponent, on behalf of NamPower, proposes to build a 66 kV overhead transmission power line for approximately 20 – 25 km long in the Otjozondjupa Region (Figure 1).

The proposed project triggers an EIA, as stipulated in the Environmental Management Act No. 7 of 2007 and its Regulations, in order to obtain an environmental clearance certificate. As such, a scoping report and EMP shall describe the detailed potential environmental impact assessments and conditions or commitments that shall be adhered to by the proponent. The scoping report and EMP shall be submitted to the competent authorities (MET and MME) as part of the decision-making process.

Environmental Compliance Consultancy (ECC) has been appointed by the proponent to undertake the EIA process for the proposed overhead transmission power line.

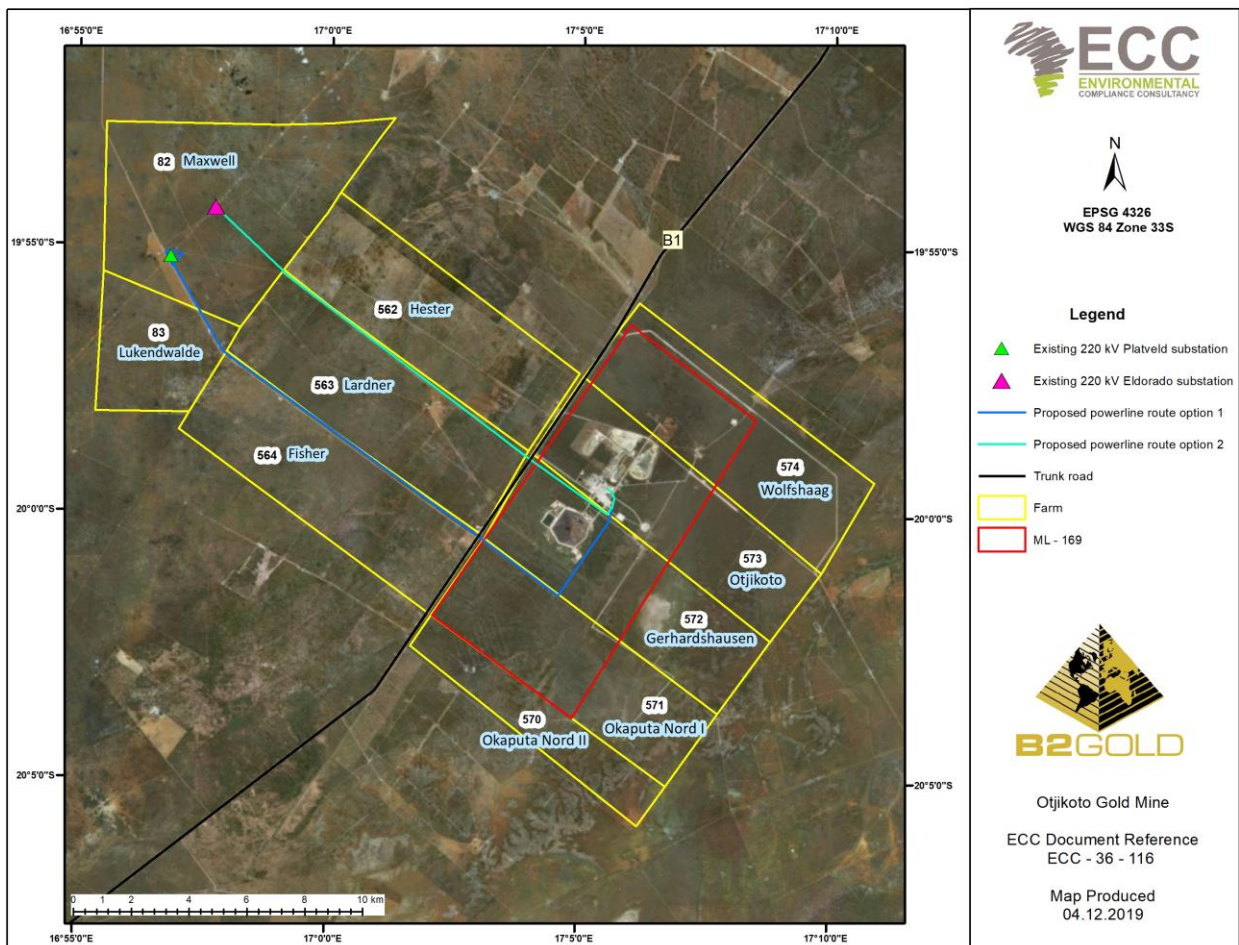


FIGURE 1 – PROPOSED B2GOLD POWER LINE ROUTE, OPTION 1 & 2 AND FARMS LOCATION

1.2 SCOPE OF WORK

The environmental scoping report (this report) and EMP shall be produced as deliverables for the scope of work. The documents address possible impacts, explore alternatives, develop technical recommendations and identify mitigation measures for the proposed 66 kV overhead power line in terms of the Environmental Management Act No. 7 of 2007 and its Regulations. This scoping report, plus assessment, and appendices will be submitted to the Directorate of Environmental Affairs (DEA) at MET for review as part of the application for an environmental clearance certificate decision-making process.

ECC has identified potential impacts through a project-specific environmental and social assessment and suggested mitigation measures for the proposed project, as discussed within this report. In order to address these potential impacts, a specialist study on avifauna was conducted for the proposed power line (Appendix A). A desktop study and site assessment (30th September – 1st October 2019) were conducted to identify areas of potential concern and propose mitigation measures to prevent environmental damage.

1.3 ENVIRONMENTAL LEGAL REQUIREMENTS

The Environmental Management Act, No. 7 of 2007 stipulates that an environmental clearance certificate is required to undertake listed activities in terms of the Act and its Regulations. Listed activities triggered by the proposed project are as follows:

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

1. The construction of facilities for
 - (b) The transmission and supply of electricity

FORESTRY ACTIVITIES

4. The clearance of forest areas, deforestation, afforestation, timber harvesting or any other related activity that requires authorisation in term of the Forest Act No. 12 of 2001 or any other law.

1.4 THE PROPONENT OF THE PROPOSED PROJECT

Founded in 2007, B2Gold is a high-ranking gold producer focused on responsible mining practices with its headquarters in Vancouver, Canada. B2gold has five operating gold mines and numerous exploration and development projects in various countries such as Namibia, Nicaragua, Philippines, Mali, Burkina Faso, and Colombia. The proponent’s strategy is centered around generating significant growth in gold production, revenues and cash flow with a focus on organic growth by optimizing production from their existing gold mines and continue with exploration opportunities. Over the years, B2Gold recognizes that good governance, environmental stewardship and social responsibility are important components of the business and are vital to maintaining for effectiveness. B2Gold’s strategy is in line with Namibia’s national development programs and strategies such as Vision 2030, which have an emphasis on good governance and improvement of issues related to equity in terms of access to productive resources, environmental protection, employment creation and economic growth.

The contact details for the proponent of the proposed project is listed in Table 1.

TABLE 1 – PROPONENT DETAILS

CONTACT PERSON	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE
Mr John Roos	20 Nachtigal Street Ausspannplatz, Windhoek	jroos@b2gold.com	+264 81 680 2354

1.5 ENVIRONMENTAL COMPLIANCE CONSULTANCY

Environmental Compliance Consultancy, a Namibian consultancy registration number 2013/11401, has prepared this document on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa in the public and private sector.

ECC is independent of the proponent and has no vested or financial interest in the proposed project, except for fair remuneration of professional services rendered.

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

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1.6 REPORT STRUCTURE

The report is structured as per the contents set out in Table 2

TABLE 2 – ENVIRONMENTAL SCOPING REPORT SECTIONS

SECTION	TITLE	CONTENT
-	Executive Summary	Executive summary of the EIA
-	Abbreviations and definitions	A list of acronyms and their definitions used in the report
1	Introduction	This section introduces the EIA and provides background information on the proposed project, proponent and purpose of the report
2	Regulatory Framework	This chapter describes the Namibian environmental regulatory framework applicable to the project and how it has been considered in the assessment and EMP.
3	Methodology and Approach	This chapter presents the detailed methods and approach of the assessment applied to the EIA process.
4	Project Description	Presents a description of the proposed project and how the proposed project will be operated.
5	Environmental and Social Baseline	This chapter presents the current environment and social baseline used in the assessment.
6	Environmental Assessment Findings and Mitigation	This chapter predicts the potential environmental and social impacts arising from the project, including residual impacts This chapter also outlines the proposed management strategies for monitoring commitments to ensure the actual and potential impacts on the environment are minimised to “As Low As Reasonably Practicable”, underpinning the EMP.
7	Environmental Management Plan	This chapter provides a short description of the EMP, to take pro-active action by addressing potential problems before they occur and outline mitigation measures for each impact
8	Conclusions	Conclude the findings of the EIA
	References	A list of references used for this report
Appendix	Appendices A-E	A list of appendices used for this report Appendix A: Avifauna Environmental Impact Assessment Appendix B: Environmental Management Plan Appendix C: Non-Technical Summary Appendix D: Evidence of Public Consultation, Site notice, Newspaper adverts, Project Registered Interested & Affected Parties (I&APs) Appendix E: Technical design for the 66 kV power line Appendix F: Technical design for the 220 kV power line Appendix G: ECC CV's

2 REGULATORY FRAMEWORK

This chapter outlines the regulatory framework applicable to the proposed 66 to 220 kV power line construction. A list of applicable national legislation and the relevance to the project are provided in Table 3.

2.1 NATIONAL REGULATORY REGIME

TABLE 3 – A LIST OF APPLICABLE NATIONAL LEGISLATION AND THE RELEVANCE TO THE PROJECT

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<p>The Constitution of the Republic of Namibia</p>	<p>Article 91 defines the function of the Ombudsman and 91 (c) describes the duty to investigate complaints concerning the over-utilisation of living natural resources, the irrational exploitation of non- renewable resources, the degradation and destruction of the ecosystem and failure to protect the beauty and character of Namibia.</p> <p>Article 95 (1) states that <i>“the State shall actively promote and maintain the welfare of the people by adopting policies that are aimed at maintaining ecosystems, essential ecological processes and the biological diversity of Namibia. It further promotes the sustainable utilisation of living natural resources basis for the benefit of all Namibians, both present and future; in particular the Government shall provide measures against the dumping or recycling of foreign nuclear and toxic waste on Namibian Territory.”</i></p> <p>Article 100 states <i>“that the land, water and natural resources below and above the surface of the land shall belong to the State if they are not otherwise lawfully owned”</i></p>	<p>The Namibian constitution recognises the environmental concerns relating to the management of natural resources in Namibia as guided by the Environmental Management Act No 7 of 2007 and its Regulation.</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
<p>Environmental Management Act No. 7 of 2007 and its associated Regulations, including the Environmental Impact Assessment Regulations No. 30 of 2012</p>	<p>The Act aims to promote sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment.</p> <p>It sets the principles of environmental management as well as the functions and powers of the Minister. The Act requires certain activities to obtain an environmental clearance certificate prior to project development. The Act states an EIA may be undertaken and submitted as part of the environmental clearance certificate application.</p> <p>MET is responsible for the protection and management of Namibia's natural environment. DEA under MET is responsible for the administration of the EIA process.</p>	<p>This environmental scoping report and EMP documents the findings of the environmental assessment undertaken for the proposed project, which will form part of the environmental clearance application. The assessment and report have been undertaken in line with the requirements of this Act and associated Regulations.</p>
<p>Electricity Act, No. 4 of 2007</p>	<p>The Act provides for the establishment of the Electricity Control Board ('Board') and provides for the requirements and conditions for obtaining licences for the provision of electricity and the powers and obligations hereunder.</p> <p>It should be noted that management and regulation of electricity-generating activities fall within the jurisdiction of MME, specifically the Electricity Control Board.</p>	<p>The proposed project will involve the installations for the provision of electricity, including any alterations or extensions thereto, and all other electricity practices and activities by licensees, customers and other persons must be built, operated and conducted with due compliance with the requirements of applicable laws, in particular, laws relating to health, safety and environmental standards.</p>
<p>Soil Conservation Act, No. 76 of 1969</p>	<p>Makes provision for the prevention and control of soil erosion and the protection, improvement and the conservation, improvement and manner of use of the soil and vegetation.</p>	<p>There will be soil disturbance during construction such as trenching as well as the construction of the servitudes.</p>
<p>Forest Act, No. 12 of 2001</p>	<p>It provides the preservation and protection of Trees and Forests Ordinance, No. 37 of 1952 and the Forest Act, No. 72 of 1968. This includes the proclamation of protected species of plants and the conditions under</p>	<p>The proposed project will involve vegetation removal within the servitude. The proponent shall obtain the required vegetation clearing permits from the</p>

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	which these plants can be disturbed, conserved, or cultivated.	Directorate of Forestry with the Ministry of Agriculture, Water and Forestry
The Nature Conservation Ordinance, No. 4 of 1975	The Act consolidates and amends the laws relating to the conservation of nature; the establishment of game parks and nature reserves; the control of problem animals; and to provide for matters incidental thereto.	Section 72 of the Nature Conservation Ordinance restricts picking and transport of protected species.
National Heritage Act, No. 27 of 2004	The Act provides for the protection and conservation of places and objects of heritage significance and the registration of such places and objects. It also makes provision for archaeological 'impact assessments. If applicable, the relevant permits must be obtained before disturbing or destroying a heritage site as set out in the Act.	There is potential for heritage objects to be found on the site, therefore the stipulations in the Act have been taken into consideration. Section 55 compels reporting of any archaeological findings to the National Heritage Council after which a permit needs to be issued before the findings can be disturbed.
The National Land Policy	The Land Policy requires the establishment and proclamation of urban or urbanising areas as townships and municipalities where appropriate, to promote decentralisation and the close involvement of communities in their own administration.	The proposed project will cross commercial land, as such all necessary permits and authorisation from the landowners should be obtained.
The National Resettlement Policy	The Land Resettlement Policy recognizes the need for coordinated efforts and identifies the roles of various institutions in the resettlement areas. Resettlement should be viewed as a National Programme which the Ministry of Lands, Resettlement and Rehabilitation leads.	The proposed project will cross resettlement farms, as such all necessary permits and authorisation from the landowners should be obtained.
The Agricultural (Commercial) Land Reform Act, No. 6 of 1995	The Agricultural Land Reform Act provides for the acquisition of agricultural land by the State for the purposes of land reform and for the allocation of such land to Namibian citizens who do not own or otherwise have the use of any or of adequate agricultural land, and foremost to those Namibian citizens who have been socially, economically or educationally disadvantaged by past discriminatory laws or practices; to vest in the State a preferent right to purchase agricultural land for the purposes of the Act; to provide for the compulsory acquisition of certain agricultural land by the State for the purposes of the Act; to regulate the acquisition of agricultural land by foreign nationals; to establish a Lands Tribunal and determine its jurisdiction, and to provide for matters connected therewith.	The proposed project will cross agricultural land, as such all necessary permits and authorisation from the landowners should be obtained.

2.2 OTHER NATIONAL POLICIES

TABLE 4 – OTHER NATIONAL POLICIES APPLICABLE TO THE PROPOSED PROJECT

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
Vision 2030	<p>Vision 2030 sets out the nation’s development programmes and strategies to achieve its national objectives. It sets out eight themes to realise the country’s long-term vision.</p> <p>Vision 2030 states that the overall goal is to improve the quality of life of the Namibian people to a level in line with the developed world.</p>	The planned project shall meet the objectives of Vision 2030 and shall contribute to the overall development of the country through continued employment opportunities.
The Fifth National Development Plan (NDP5)	<p>NDP5 is the fifth in the series of seven five-year national development plans that outline the objectives and aspiration of Namibia’s long-term vision as expressed in Vision 2030. NDP5 is structured on the pillars of economic progression, social transformation, environmental sustainability and good governance. Under the social transformation pillar is the goal of improved education.</p> <p>A desired outcome of NDP5 is to have a diversified and competitive tourism sector with an increased number of tourists from 1.4 million in 2015 to 1.8 million.</p>	The planned project supports meeting the objectives of NDP5 by creating opportunities for employment to the nearby community and the Namibian nation, especially during the construction phase.

2.3 PERMITS AND LICENCES

Table 5 below lists the permits and licenses that are required for the proposed project.

TABLE 5 – PERMITS AND LICENCES REQUIRED FOR THIS PROJECT

PERMIT/LICENCE	RELEVANT AUTHORITY	VALIDITY
Transmission license	Ministry of Mines and Energy, but only NamPower has the electricity transmission license	25 years

2.4 WORLD BANK STANDARDS

B2Gold Namibia (Pty) Ltd complies with all Namibian legislation, and where legislation is lacking aligns with international best practice procedures, i.e. the International Finance Corporation (IFC) Performance Standards.

The International Finance Corporation (IFC) is a member of the World Bank Group and is the largest global development institution focusing on the private sector in developing countries. Its standards have become a global benchmark for

environmental and social performance. They form the basis for the Equator Principles (IFC, 2013), a voluntary environmental and social risk management framework used by 77 financial institutions worldwide. The Equator Principles are a framework and set of guidelines for evaluating social and environmental risks in project finance activities and apply to all new projects with a total capital cost of US\$10 million or more, no matter what industry sectors, without geographic requirement.

3 METHODOLOGY AND APPROACH

3.1 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The aim of this assessment is to determine which impacts are likely to be significant (the main focus of the assessment); scope the available data and any gaps which need to be filled; determine the spatial and temporal scope; and identify the assessment methodology.

Subsequently, scoping of the EIA was undertaken by the EIA team. The scope of the assessment was determined through undertaking a preliminary assessment of the proposed project against the receiving environment obtained through a desk-top review, available site specific literature, and a site visit, which was conducted on the 30th September until the 1st October 2019.

3.2 THE ASSESSMENT PROCESS

The EIA methodology applied to this EIA 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); Namibian Draft Procedures and Guidance for EIA and EMP (Republic of Namibia, 2008); international and national best practice; and over 25 years of combined EIA experience.

ECCs methodology for environmental impact assessments is adopted and based on models for environmental and social impact assessments set out by the International Finance Corporation (IFC) Performance Standard 1 'Assessment and management of environmental and social risks and impacts. Furthermore, this impact assessment was undertaken for B2Gold in accordance with Namibian legal requirements.

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.

Final mitigation measures and recommendations are based on the cumulative experience of the consulting team and the client, taking into consideration the potential environmental and social impacts.

The process followed through the basic assessment is illustrated in Figure 2 and detailed further in the following sections.

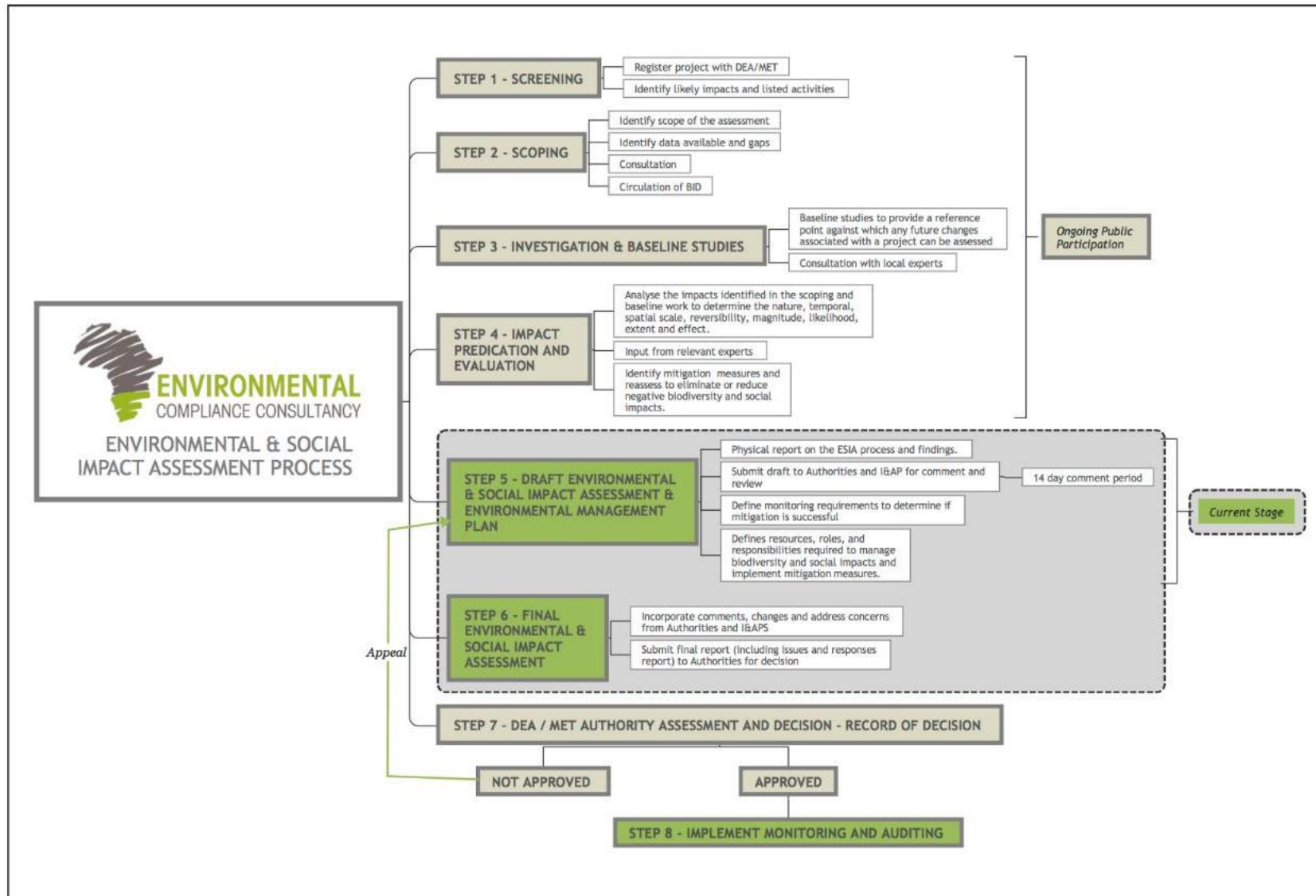


FIGURE 2 – A DIAGRAM DEPICTING ECCs EIA AND SCOPING PROCESS

3.3 METHODOLOGY FOR THE IMPACT ASSESSMENTS

ECC's methodology for environmental impact assessments was used and is based on models for environmental and social impact assessments set out by the IFC Principal 1 'Assessment and management of environmental and social risks and impacts. Furthermore, the impact assessment for the proposed project was undertaken in accordance with Namibian legal requirements.

Desktop studies on the national database are undertaken as part of the scoping stage to get information relating to the current status of the receiving environment. This provides a baseline where changes that occur as a result of the proposed project can be measured. This is verified through site data collection.

The environmental and social topics that may be affected by the proposed project are described in this section. The baseline focuses on receptors which could be affected by the proposed project.

3.4 SCREENING OF THE PROPOSED PROJECT

The first stages in the EIA process are to undertake a screening exercise to determine whether the changes to the project trigger any new or additional listed activity under the Environmental Management Act, 2007 and associated Regulations and if any potentially significant impacts could arise from the project changes that they are assessed. The location, scale and duration of project activities will be considered against the receiving environment.

The screening phase of the project is a preliminary analysis to determine ways which the project may interact with the biophysical, social and economic environment. Impacts that are identified as potentially significant during the screening and scoping phase are taken forward for further assessment in the EIA process. The details and outcome of the screening process are discussed further in sections 6 and 7.

3.5 SCOPING OF THE ENVIRONMENTAL ASSESSMENT

The purpose of the scoping stage in the EIA process is to identify the scope of the assessment, to undertake a high-level assessment to identify potential impacts and to confirm if further investigation is required, to assign the severity of potentially significant effects, and to allocate appropriate mitigation.

This report presents the findings of the scoping phase and high-level assessment, and it confirms that no further investigation is required. This conclusion is presented in Section 6.

3.6 BASELINE STUDIES

Baseline studies are undertaken as part of the scoping stage, which involves collecting all pertinent information from the current status of the receiving environment. This provides a baseline against changes that occur as a result of the proposed project can be measured.

A robust baseline is required in order to provide a reference point against which any future changes associated with a project can be assessed, and it allows for suitable mitigation and monitoring actions to be identified.

For the proposed project baseline information was obtained through a desk-top study, focussing on environmental receptors that could be affected by the proposed project and verified through site data.

The existing environment and social baseline for the proposed project were collected through various methods:

- Site visit;
- Desk-top studies;
- Consultation with stakeholders; and

- Door to door engagement with the owners of the farms Lardner, Fisher, Hester Maxwell and Lukendwalde.

3.7 IMPACT PREDICTION AND EVALUATION

The key stage of the EIA process is the impact prediction and evaluation stage. This stage is the process of bringing together project characteristics with the baseline environmental characteristics and ensuring all potentially significant environmental and social impacts are identified and assessed. It is an iterative process that commences at project inception to the final design and project implementation. The impact prediction and evaluation stage were undertaken in November – December 2019 and the findings of the assessment are presented in Section 6.

Impact prediction and evaluation involve predicting the possible changes to the environment as a result of the proposed project. The recognized methodology was applied to determine the magnitude of impact and whether or not the impact was considered significant and thus warrant further investigation. The assessment considers all stages of the project’s life cycle that is scoped into the assessment and are presented in this report. It is an iterative process that commences at project inception and runs through to the final design and project implementation (construction and operations).

3.8 EIA DETERMINATION OF SIGNIFICANCE

The evaluation and identification of the environmental and social impacts require the assessment of the project characteristics against the baseline characteristics, ensuring all potentially significant impacts are identified and assessed. The significance of an impact is determined by taking into consideration the combination of the sensitivity and importance/value of environmental and social receptors that may be affected by the proposed project, the nature and characteristics of the impact, and the magnitude of potential change (Figure 3). The magnitude of change (the impact) is the identifiable changes to the existing environment which may be negligible, low, minor, moderate, high, or very high; temporary/short term, long-term or permanent; and either beneficial or adverse.

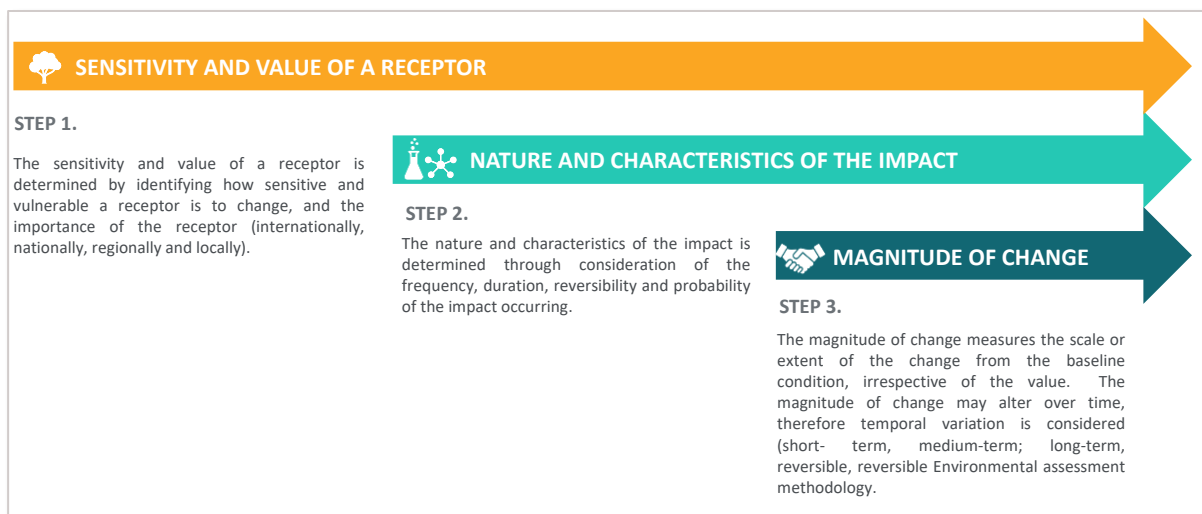


FIGURE 3 – DETERMINATION OF SIGNIFICANCE

The tables provided below set the description and thresholds used in determining impact significance.

TABLE 6 – NATURE OF IMPACT

NATURE	
Term	Description
Beneficial (Positive)	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Adverse (Negative)	An impact that is considered to represent an adverse change from the baseline or introduces a new undesirable factor.

TABLE 7 – TYPE OF IMPACT

TYPE	
Term	Description
Direct	Impacts causing an impact through direct interaction between a planned project activity and the receiving environment/receptors.
Indirect	Impacts that result from other activities that are encouraged to happen as a result/consequence of the Project. Associated with the project and may occur at a later time or wider area
Cumulative	Impacts that arise as a result of an impact and effect from the project interacting with those from another activity to create an additional impact and effect

TABLE 8 – REVERSIBILITY OF IMPACT

REVERSIBILITY	
Term	Description
Reversible	Impacts are reversible and recoverable in the future
Partly Reversible	Some parts of the impact can be reversed while others remain
Irreversible	Impacts which are not reversible and are permanent

TABLE 9 – MAGNITUDE OF CHANGE

MAGNITUDE OF CHANGE	
Term	Description
None / negligible	Very minor loss or detrimental alteration to one (or maybe more) characteristic, feature or element; or Very minor benefit to, or positive addition of, one (or maybe more) characteristic, feature or element.
Low / Minor	Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (or maybe more) key characteristic, feature or element; or Minor benefit to, or addition of, one (or maybe more) key characteristic, feature or element; some beneficial effect on attribute quality or a reduced risk of a negative effect occurring.
Moderate	Loss of resource, but not adversely affecting its integrity; partial loss of/damage to key characteristics, features or elements; or Benefit to, or addition of, key characteristics, features or elements; improvements of attribute quality.
High / Major	Loss of resource, and quality and integrity of resource; severe damage to key characteristics, features or elements; or Large scale or a major improvement of resources quality; extensive restoration or enhancement; major improvement of attribute quality.

Very high/unknown	Loss of resource, significantly affecting the long term quality and integrity of a resource; irreparable damage or loss of key characteristics, features or elements; or the magnitude is too great to quantify as it is unknown.
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TABLE 10 – DURATION OF IMPACT

DURATION	
Term	Description
Temporary	Transient; a period of less than 1 year
Short term	Impacts that are likely to last for the duration of the activity causing the impact and are recoverable (1-5 years)
Medium term	Impacts that are likely to continue after the activity causing the impact and are recoverable (5-15 years)
Long term	Impacts that are likely to last far beyond the end of the activity causing the damage (greater than 15 years with impact ceasing after decommissioning of the project)
Permanent	Permanent

TABLE 11 – SCALE OF CHANGE

SCALE OF CHANGE - EXTENT / GEOGRAPHIC SCALE	
Term	Description
On-site	Impacts that are limited to the boundaries of the proposed project site
Local	Impacts that occur in the local area of influence, including around the proposed site and within the wider community
Regional	Impacts that affect a receptor that is regionally important by virtue of scale, designation, quality or rarity.
National	Impacts that affect a receptor that is nationally important by virtue of scale, designation, quality or rarity.
International	Impacts that affect a receptor that is internationally important by virtue of scale, designation, quality or rarity.

TABLE 12 – PROBABILITY OF CHANGE

PROBABILITY	
Term	Description
Improbably (Rare)	The event may occur in exceptional circumstances yet, rarely occurs in the industry. The event could occur once every 100 years
Low probability (Unlikely)	The event has happened elsewhere yet, is unlikely to occur. The event could occur once every 10 years
Medium Probability (Possible)	The event could occur under some circumstances. The event could occur once every 5 years.
High Probability (Likely)	The event is expected to occur. The event could occur twice per year
Definite (Almost certain)	The event will occur. The event could occur once per month

TABLE 13 – SIGNIFICANCE DESCRIPTION

SIGNIFICANCE OF IMPACT	DESCRIPTION
Low – Major (Beneficial) All scores	Impacts are considered to be beneficial to the environment and society:
Low (negative) 0 - 25	Impacts are considered to be local factors that are unlikely to be critical to decision-making.
Minor (negative) 25 - 50	Impacts are considered to be important factors but are unlikely to be key decision-making factors. The impact will be experienced, but the impact magnitude is sufficiently small (with and without mitigation) and well within accepted standards, and/or the receptor is of low sensitivity/value. Impacts are considered to be short-term, reversible and/or localized in extent.
Moderate (negative) 50 - 75	Impacts are considered within acceptable limits and standards. Impacts are long-term, but reversible and/or have regional significance. These are generally (but not exclusively) associated with sites and features of national importance and resources/features that are unique and which, if lost, cannot be replaced or relocated.
Major (negative) 75 - 100	Impacts are considered to be key factors in the decision-making process that may have an impact of major significance, or large magnitude impacts occur to highly valued/sensitive resource/receptors. Impacts are expected to be permanent and non-reversible on a national scale and/or have international significance or result in a legislative non-compliance.

TABLE 14 – SENSITIVITY AND VALUE OF RECEPTOR

SENSITIVITY AND VALUE	DESCRIPTION
Low	Of value, importance or rarity on a local scale; and/or not particularly sensitive to change or has considerable capacity to accommodate a change.
Medium	Of value, importance or rarity on a regional scale, and with limited potential for substitution; and/or moderate sensitivity to change, or moderate capacity to accommodate a change.
High	Of value, importance or rarity on an international and national scale, and with very limited potential for substitution; and/or very sensitive to change or has little capacity to accommodate a change.

TABLE 15 – SIGNIFICANCE OF IMPACT

		Significance of Impact					
		Significance of Impact	Impacts are considered to be local factors that are unlikely to be critical to decision-making.	Impacts are considered to be important factors but are unlikely to be key decision-making factors. The impact will be experienced, but the impact magnitude is sufficiently small (with and without mitigation) and well within accepted standards, and/or the receptor is of low sensitivity/value. Impacts are considered to be short-term, reversible and/or localized in extent.	Impacts are considered within acceptable limits and standards. Impacts are long-term, but reversible and/or have regional significance. These are generally (but not exclusively) associated with sites and features of national importance and resources/features that are unique and which, if lost, cannot be replaced or relocated.	Impacts are considered to be key factors in the decision-making process that may have an impact of major significance, or large magnitude impacts occur to highly valued/sensitive resource/receptors. Impacts are expected to be permanent and non-reversible on a national scale and/or have international significance or result in a legislative non-compliance.	
			Low	Minor (2)	Moderate (3)	Major (4)	
Sensitivity	Biophysical	Social	Low	Minor (2)	Moderate (3)	Major (4)	
	A biophysical receptor that is protected under legislation or international conventions (CITES) listed as rare, threatened or endangered IUCN species. Highly valued/sensitive resource/receptors	Those affected people/communities will not be able to adapt to changes or continue to maintain pre-impact livelihoods.	High (3)	Minor (3)	Moderate (6)	Major (9)	Major (12)
	Of value, importance or rarity on a regional scale, and with limited potential for substitution; and/or Not protected or listed (globally) but may be a rare or threatened species in country; with little resilience to ecosystem changes, important to ecosystem functions, or one under threat or population decline.	Able to adapt with some difficulty and maintain pre-impact status but only with a degree of support	Medium (2)	Low (2)	Minor (4)	Moderate (6)	Major (8)
	Not protected or listed as common / abundant; or not critical to other ecosystems functions	Those affected are able to adapt with relative ease and maintain pre-impact status. There is no perceptible change to people's livelihood.	Low (1)	Low (2)	Minor (3)	Moderate (4)	

To ensure the beneficial impacts are brought out in the assessment, green has been applied to ensure the different type of impact is clear. The description for each level of significance presented in Table 11 was also followed when determining the level of significance of a beneficial impact.

The significance of impacts has been derived by applying the identified thresholds for receptor sensitivity and magnitude of change, as well as the definition of significance. Moderate and major adverse impacts are considered as significant. The following thresholds were therefore used to double check the assessment of significance had been applied appropriately; a significant impact would meet at least one of the following criteria:

- It exceeds widely recognized levels of acceptable change;
- It threatens or enhances the viability or integrity of a receptor or receptor group of concern; and
- It is likely to be material to the ultimate decision about whether or not the environmental clearance certificate is granted.

3.9 MITIGATION

Mitigation comprises a hierarchy of measures ranging from preventative environmental impacts by avoidance, to measures that provide opportunities for environmental enhancement. The mitigation hierarchy is avoidance; reduction at source; reduction at receptor level; repairing and correcting; compensation; remediation; and enhancement.

Mitigation measures can be split into three distinct categories, broadly defined as:

1. Actions are undertaken by the EIA process that influences the design process, through implementing design measures that would entirely avoid or eliminate an impact or modifying the design through the inclusion of environmental features to reduce the magnitude of change. These are considered as embedded mitigation.
2. Standard practices and other best practice measures for avoiding and minimizing environmental impacts. These are considered as good practice measures.
3. Specified additional measures or follow-up action to be implemented to further reduce adverse impacts that remain after the incorporation of embedded mitigation. These are considered as additional mitigation.

The EIA is an iterative process whereby the outcomes of the environmental assessments inform the project. Considerable mitigation has been built into the proposed project as potentially significant adverse environmental impacts have been identified and design changes have been identified to overcome or reduce them. The EMP (Appendix A) provides good practice measures and specified additional measures or follow-up action.

Embedded mitigation and good practice mitigation have been taken into account in the assessment. Additional mitigation measures have been identified when the significance of impact requires it and causes the impact to be further reduced. Where additional mitigation has been identified, a final assessment of the significance of impacts (residual impacts) was carried out taking into consideration the additional mitigation.

3.10 EIA CONSULTATION

Public participation and consultation are a requirement stipulated in Section 21 of the Environmental Management Act, No. 7 of 2007 and associated Regulations for a project that needs an environmental clearance certificate. Consultation is a compulsory and critical component in the EIA process in achieving transparent decision-making and can provide many benefits.

The objectives of the stakeholder engagement process are to:

- Provide information on the project: introduce the overall concept and plan;
- Clarify responsibility and regulating authorities;
- Listen to and understand community issues, concerns and questions;
- Explain the process of the EIA and timeframes involved; and
- Establish a platform for ongoing consultation.

3.10.1 INTERESTED AND AFFECTED PARTIES

Appendix B provides a list of interested and affected parties, and evidence of newspaper consultation for the amendment application. B2Gold advertised the amendment in two national newspapers.

3.10.2 NON-TECHNICAL SUMMARY

The Non-Technical Summary (NTS) presents a high-level description of the proposed project; sets out the EIA process and when and how consultation is undertaken and provides contact details for further project-specific inquiries to all registered I&APs. The NTS was distributed to registered I&APs and can be found in Appendix C.

3.10.3 NEWSPAPER ADVERTISEMENTS

Notices regarding the proposed project and associated activities were circulated in two newspapers namely:

- *The Namibian*, on the 16th December 2019 and 06th January 2020;
- *Informante* on the 19th of December 2019 and 9th January 2020 (Appendix D). The purpose of this was to commence the consultation process by informing the public about the project and enabling I&APs to register an interest with the project.

3.10.4 SITE NOTICES

A site notice ensures neighbouring properties and stakeholders are made aware of a proposed project. The notice was set up at the proposed site as illustrated in Appendix D.

3.10.5 INTERESTED AND AFFECTED PARTIES

Appendix D provides a list of interested and affected parties and evidence of newspaper consultation for the amendment application. B2Gold advertised the amendment in two national newspapers.

4 PROJECT DESCRIPTION

4.1 NEED FOR THE PROJECT

Currently, the proponent's operations are energy-intensive and depend on a solar plant, heavy fuel oil generator and electric power. The current energy requirement does not meet the expected energy demand due to new and/or expanding mining infrastructures. As such, the proponent has identified the need to upgrade the power supply in order to meet the energy demands and enable the mine to operate efficiently.

4.2 PROPOSED POWER LINE INFRASTRUCTURE

Two alternative routes have been considered for the new power line (Figure 1):

- Route Option 1 will run along the D2886 district road between Farm Lardner and Farm Fisher. The power line route will be 45 m from the centre line of the road with a 50 m servitude. This Route Option would be approximately 22.6 km long with ± 7 bend points; and
- Route Option 2 will run between the boundaries of Farm Hester and Lardner. The existing 33 kV (Cenored) distribution power lines in the area will remain. The power line route centre line will be established 25 m from the farm boundary (fence) with a 50 m servitude. This Route Option would be approximately 18.5 km long with ± 5 bend points.

It is proposed to link the new line into the existing NamPower 220 kV Gerus-Otjikoto line via the Eldorado Substation (Figure 1). The technical specifications for each proposed power line infrastructure are summarised below:

4.2.1 A 66-kV POWER LINE INFRASTRUCTURE

The structure (as depicted in Appendix E) comprises a steel type monopole with the following components:

- Intermediate poles will be used on the straight sections of the line that are self-supporting, with no stay wires; however, a guyed design (with four guys per intermediate pole) is also an option. A 20 m pole length, planted into the ground (approx. – 2.6 m).
- Bend Poles with 7 backstays will be used at points where the line changes direction (a 20 m pole length planted 2 m into the ground).
- Terminal H-Pole will be used at the start and at the end of the line with the last pole at substations. A 20 m pole length, planted 2.6 m into the ground with two backstays.
- The height of the structures will be approximately 24 m, with average span lengths of 300 m spacing between poles.

4.2.2 A 220-kV POWER LINE INFRASTRUCTURE

The structure of the 220 kV power line comprises lattice steel pylons, in a combination of guyed and self-support structures, single circuit, with three conductors and one additional Optical Ground Wire (OPGW) running at the top of the configuration. The typical height of the structure is 30.8 m for guyed and 31.8 m for strain towers, with average span lengths of 450 m (Appendix F).

4.3 ALTERNATIVES CONSIDERED

Two route and structure alternatives were examined to determine the best option through the environmental impact assessment. A 66-kV steel monopole and 220 kV lattice steel pylons overhead transmission power line structures (Appendix E and F). The two power line route alternatives that were assessed are the Route Option 1, located along the D2886 district road between the farms Lardner and Fisher, whereas power line Route Option

2 is located between the boundaries of the farms Hester and Lardner (Figure 1). Through the impact assessment, consultations and an avifauna specialist study, the 66 kV structure and Route Option 1 were recommended due to reasons summarised in the findings of the scoping assessment, set out in Table 18.

4.3.1 NO-GO ALTERNATIVE

The option of not constructing a new power line would mean that B2Gold will not be able to meet the expected operation energy demands to cater to the increased and expanding mining infrastructure. As a result, the proponent will not be able to maintain its full operations which will allow the mine to distribute significant economic value to employees, suppliers, shareholders, governments in form of taxable revenue and local communities as part of social cooperate responsibilities. In conclusion, the “no-go alternative” is not preferred, because the power line would positively contribute to economic growth and other development benefits, with only minimal negative environmental impacts.

4.4 PROPOSED ACTIVITIES

4.4.1 CONSTRUCTION PHASE

The construction phase includes activities such as:

- Vegetation removal
- Connection to the substation
- Installation of prefabricated standard substation components
- Minor ground preparation (trenches and levelling) of the site, for the installation of steel poles
- Construction of the servitude

The construction of the power line will create approximately 12 jobs, with the majority of employment opportunities during construction reserved for Namibians in line with the proponent and NamPower local recruitment policy. Onsite construction camps will not be required as staff would be transported to and from the work site daily.

Delivery of construction material and equipment will require heavy transport vehicles, but no abnormal or hazardous loads are expected. The typical equipment to be transported would include transformers, cables, and poles. Construction vehicles are to make use of the existing roads to transport equipment and material to the construction site and have to comply with the Namibian road rules.

4.4.2 OPERATIONAL PHASE

During normal operation, the power lines infrastructure requires little intervention. The only exception is periodic inspections and vegetation management within the servitude. The power line and substation require frequent inspections, normally monthly, as appropriate.

NamPower will maintain the power line and the associated infrastructure to ensure the longevity of the infrastructure and to secure current and potential future use.

4.4.3 DECOMMISSIONING PHASE

It is predicted that the proposed project shall continue as long as the demand for electricity exists, therefore, decommissioning is not expected during the operational phase of the proponent, only when mining activities cease. In the event that the proposed project will be decommissioned, the mitigation measures have been outlined in the EMP. Alternatively, and with the agreement of stakeholders, the power line could remain for beneficial future use.

5 ENVIRONMENTAL AND SOCIAL BASELINE

The detailed environmental and socio-economic baseline assessment of the proposed project are provided in this report. Baseline studies aim to assess possible project impacts (positive, negative and cumulative), thus ensure input into the project designs which avoid, reduce or mitigate the potentially adverse environmental and social risks, for example, the impacts on avifauna. This section provides an overview of the existing biophysical environment through the analysis of the available baseline data regarding the receiving environment. Desktop studies, followed by a site visit, were undertaken as part of the scoping process to get information relating to the current status of the receiving environment. This provides a baseline where changes that occur as a result of the proposed project can be measured.

OGM project area has been described in detail in the previous EIAs and their amendments, therefore only the specific project assessment will be repeated in this document. Additional information that has become available, specifically for this project, includes the avifauna specialist study to identify the potential impacts on birds associated with the proposed project.

5.1 CLIMATE

In general, Namibia can be described as an arid environment country which receives approximately 300 days of sunshine per annum. The proposed project is located in an area that receives approximately 350 – 450 mm of rain per year, with a variation coefficient of approximately 30%, as such rainfall is fairly unpredictable. Rainfall events are limited to the summer months, mainly between December and March, in the form of sudden thunderstorms often associated with heavy downpours. Evaporation is approximately 2,000 mm per year. The relative humidity is low, rarely exceeding 20% in winter but may reach 85% in summer before or after thunderstorm build-up. Maximum temperatures average around 32 – 34°C, mainly recorded during the afternoons between December and February, while minimum temperatures are around 4 – 6°C and are normally recorded during nights in June and July. Occasional frost can occur. The dominant wind direction is from the east and south-west, with average speeds of around 15 km per hour (Mendelsohn *et al.*, 2002).

5.2 FAUNA AND FLORA DIVERSITY

Development of permanent linear infrastructure such as power lines may have positive and negative impacts on biological diversity. For examples, some fauna species may prefer foraging in the power line servitude, whereas, others might avoid this area due to noise, the lack of shelter and electromagnetic fields, among others. Power line construction can disturb and alter habitat use by inducing barrier and corridor effects, resulting in changes in species connectivity (Bartzke *et al.*, 2014). However, due to the magnitude and extent of the proposed project, it is unlikely that the power line will have an adversely significant impact on the fauna. Nevertheless, in order to understand the impact of constructing the proposed power line between 66 to 220 kV on the fauna species, a causal relationship between the construction of power lines and potential avoidance, before-after-impact-control studies are recommended, including avian species (Bartzke *et al.*, 2014). Field observations have revealed that mammals utilise the servitude of existing power lines, especially for grazing and migration.

Approximately 91 trees and 128 shrubs are known to occur within the project area with some of the species such as *Aloe littoralis* (Figure 4) being protected by the Namibian legislation (Le Roux *et al.*, 2009).



FIGURE 4 – A PROTECTED SPECIES, ALOE LITORALIS ALONG THE D2886 ROAD (ECC, 2019)

The most important common mammalian species from the area are:

- *Acinonyx jubatus* (Cheetah) – vulnerable, IUCN (2016)
- *Felis nigripes* (Black-footed cat) – vulnerable, IUCN (2016)
- *Eidolon helvum* (Straw-coloured fruit bat) – threatened, IUCN (2016)
- *Hipposideros vittatus* (Striped leaf-nosed bat) – threatened, IUCN (2016)
- *Rhinolophus blasii* (Blasius’s horseshoe bat) – threatened, IUCN (2016)
- *Hyaena brunnea* (Brown hyena) – threatened, IUCN (2016)
- *Panthera pardus* (Leopard) – threatened, IUCN (2016)
- *Atelerix frontalis angolae* (Southern African hedgehog) – rare, under Namibian legislation and

List of common fauna and flora species observed during the site visit are set out in Table 16.

TABLE 16 – LIST OF COMMON FAUNA AND FLORA SPECIES OBSERVED DURING THE SITE VISIT

Fauna species	Flora species
<i>Taurotragus oryx</i> (Eland)	<i>Vachellia erioloba</i> / <i>Acacia erioloba</i> (Camelthorn)
<i>Tragelaphus strepsicero</i> (Kudu)	<i>Vachellia tortilis</i> / <i>Acacia tortilis</i> (Umbrella thorn)
<i>Oryx gazella</i> (Gemsbok)	<i>Boscia albitrunca</i> (shepherd tree)

Fauna species	Flora species
<i>Equus quagga</i> (Plain zebra)	<i>Vachellia fleckii</i> / <i>Acacia fleckii</i> (Sand-veld Acacia)
<i>Alcelaphus buselaphus</i> (Hartebeest)	<i>Vachellia luederitzi</i> / <i>Acacia luederitzi</i> (Kalahari Acacia)
<i>Sylvicapra grimmia</i> (Common duiker)	<i>Vachellia reficiens</i> / <i>Acacia reficiens</i> (Red umbrella thorn)
<i>Bos taurus</i> (Cattle)	<i>Aloe littoralis</i> (Mopan Aloe)
<i>Capra aegagrus hircus</i> (Goats)	<i>Grewia flava</i> (The brandy bush)
<i>Ovis aries</i> (Sheep)	<i>Grewia flavescens</i> (Donkey berry)
	<i>Dichrostachys cinerea</i> (Sicklebush)
	<i>Kirkia acuminata</i> (White seringa) Only observed on the rocky hill/koppie and shall be avoided

Additionally, there are termite mounds as well as small and large mammals' burrows around the proposed route options that shall be avoided as practically as possible.

5.3 REPTILE AND AMPHIBIAN DIVERSITY

There are 80 species of reptiles that are expected to occur around the proposed project area, with 21 species being endemic. *Stigmochelys pardalis* (Leopard tortoise), *Psammobates oculiferus* (Kalahari tent tortoise), *Python natalensis* (Southern African python) and *Varanus albigularis* (Rock monitor) that are expected to occur in the area are classified as vulnerable and protected game, while other species have international conservation status.

At least 14 species of amphibians are expected to occur around the proposed project which includes rubber frogs, puddle and sand frogs among others. Only *Phrynomantis annectens* (Marbled rubber frog) is endemic (Griffin, 2000), while the *Pyxicephalus adspersus* (African bullfrog) species is classified as near threatened due to habitat loss (Du Preez and Carruthers, 2009). As such permanent and temporal water bodies that are associated with amphibians, such as ephemeral pans, ephemeral drainage lines, farm reservoirs and earth dams, shall be avoided (Figure 5).

Construction of the power line could potentially have a direct and indirect impact on the reptile diversity, especially to the endemic and rare species. For example, a direct negative impact could be death, injury, habitat destruction/modification and disturbance caused by vehicle movement during construction or maintenance of the power line servitude. However, it is unlikely such an impact will occur and mitigation measures are set out in the EMP.



FIGURE 5 – EPHEMERAL PAN WHICH IS A POTENTIAL HABITAT FOR AMPHIBIANS AND BIRDS (ECC, 2019)

5.4 AVIAN DIVERSITY

Impacts of the power line on avifauna were identified to be significant, and as such a specialist study was conducted in order to understand the potential impacts and recommend mitigation measures (Appendix A). Potential impacts of the power line on birds include physical disturbance, habitat destruction or modification, collision on power line structures, and electrocution on power line structures, especially to large birds such as vultures (Figure 6).



FIGURE 6 – A VULTURE NESTING ON TYPICAL VEGETATION AROUND OPTION 2 (BETWEEN FARM HESTER AND LARDNER) (ECC, 2019)

5.5 LANDSCAPE, GEOLOGY AND SOILS

The landscape, geology and soils can influence the proposed project in different ways. Topographical features such as outcrops, plains, ridges, rocky hills/koppies can play a major role in determining the power line route (Figure 7). The proposed project is planned to cross in a landscape with a rather flat gradient and sporadic elevations such as koppies/hills and mountains which are important for biodiversity as a result of shelter, food and the microclimate, for example, *Kirkia acuminata* woodlands that should not be cut down (Figure 8).



FIGURE 7 – TYPICAL LANDSCAPE ALONG THE D2886 ROUTE OPTION 1 (ECC, 2019).



FIGURE 8 – A KIRKIA ACUMINATA (WHITE SERINGA) TREE GROWING ON A KOPPIE (ECC, 2019)

5.6 SURFACE WATER

Availability of surface water is a key factor to some of the project biodiversity habitats such as avifauna and amphibians. During the site visit, a number of surface water systems, including shallow ephemeral pans and earth dams, were identified. It was reported that ephemeral pans can hold water regularly during the rainy season, which attracts water birds, amphibians and insects into the area (Figure 5).

5.7 SOCIO-ECONOMIC ENVIRONMENT

More than a decade ago, Namibia's population has increased from 2.1 to 2.5 million (estimate) in 2019 with the population density estimated at 3 persons per km². Whereas, the population density of the Otjozondjupa Region, where the proposed project is located is estimated at about 1.5 persons per km². The proposed project is planned to cross over commercial and resettlement farms which the most agricultural and forestry economic sector around the area. Consequently, 544 farms were counted in operation within the Erongo Region in 2015 (Namibia Census of Agriculture, 2015). Even though majority of the total farmlands in Namibia, about 7 800 966 hectares are used for grazing, other portions of land are fenced off for game farming and/or used for charcoal production which an alternative source of income during dry periods.

There is no existing power line along the proposed Route Option 1, running along the D2886 district road between Farm Lardner and Farm Fisher. However, there is an existing 33 kV (Censored) distribution power line, along with the proposed Route Option 2, running between the boundaries of Farm Hester and Lardner will stay. As such, the current visual impact in the area is minimal and limited along the proposed Route Option 2 and at the connecting substation. Through the scoping assessment, the proposed power line will have positive and negative impacts on the socio-economic and the surrounding environment as described in the summary of findings of the scoping assessment in Table 18. For example, one of the indirect positive impacts resulting from the proposed project will be on employment creation at OGM as a secured supply of energy will allow the mine expansion, thus more job opportunity and possibly increase social corporate responsibilities by the proponent.

The proposed project has the potential to improve the socio-economic in the area through the power supply to the neighbouring farms. As a result, availability of power could result in other economic opportunities such as the growing tourism and biomass industry in the area, thus improving the living standards for the local community and the region which is predominantly dependent on agriculture.

6 ENVIRONMENTAL ASSESSMENT FINDINGS AND MITIGATION

6.1 SCOPING ASSESSMENT FINDINGS

The assessment has found likely environmental impacts as a result of the construction of the power line for both route options, however, Route Option 1 is recommended. The major negative impacts found is the potential effect on avifauna as described in details within the assessment report (Appendix A). The proponent shall comply with all the national and international regulatory frameworks and regulations as indicated in Section 2.

6.2 LIMITATIONS AND UNCERTAINTIES

A number of limitations and uncertainties were identified during the EIA process. In line with EIA best practice, assumptions have been made based on realistic worst-case scenarios, thereby ensuring that the worst-case potential environmental impacts are identified and assessed. The following assumptions and uncertainties were identified during the assessment process as indicated in Table 17.

TABLE 17 – A LIST OF LIMITATIONS AND ASSUMPTIONS OF THE ASSESSMENT

LIMITATION / UNCERTAINTY	ASSUMPTION
Difficulty in obtaining confirmed records of bird flight paths.	A combined Southern African Bird Atlas Project (SABAP) 1&2 and other data were used to provide a representative indication of the bird species likely to occur in the study area throughout the seasonal and inter-annual cycles

The findings of the scoping assessment are summarized in Table 18.

TABLE 18 – A SUMMARY OF THE FINDINGS OF THE SCOPING ASSESSMENT

DESCRIPTION OF ACTIVITY	DESCRIPTION OF POTENTIAL IMPACT/S	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Habitat destruction/modification and physical disturbance during the construction of the power line and servitude during construction	<ul style="list-style-type: none"> - Loss of avifauna species diversity - Death/injury - Possible avifauna species migration 	<ul style="list-style-type: none"> - Negative - Direct - International - Short-term - Irreversible - Likely 	High	Minor	Minor (4)	<ul style="list-style-type: none"> - Pre-inspection of any avifauna nesting areas, especially vulture nest before vegetation removal and servitude construction. - Disturbance of nesting birds, in particular, large raptors/vultures, or Kori Bustards, should be avoided during construction. - Awareness campaigns and inductions with a focus on the value of biodiversity, negative impacts of disturbance, especially to breeding birds, and of poaching and road mortalities. 	Low (1)

DESCRIPTION OF ACTIVITY	DESCRIPTION OF POTENTIAL IMPACT/S	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Possible conflict, grievance or complains due to poor communication during construction (Route Option 1)	<ul style="list-style-type: none"> - Access to farms without earlier arrangements - Possible poaching, littering, noise, illegal camping, stock theft - Social discomfort/anxiety to the landowners and nearest neighbours 	<ul style="list-style-type: none"> - Negative - Direct - Local - Short-term - Irreversible - Likely 	High	Minor	Low (2)	<ul style="list-style-type: none"> - Establish effective communication programmes with I&APs. - Develop and implement the operations manual or procedures to work on private farms and implement monitoring programmes thereafter. 	Low (1)
Possible conflict, grievance or complains due to poor communication during construction (Route Option 2)	<ul style="list-style-type: none"> - Access to farms without earlier arrangements - Possible poaching, littering, noise, illegal camping, stock theft - Social discomfort/anxiety to the landowners and nearest neighbours 	<ul style="list-style-type: none"> - Negative - Direct - Local - Short-term - Irreversible - Likely 	High	Moderate	Minor (4)	<ul style="list-style-type: none"> - Establish effective communication programmes with I&APs. - Develop and implement the operations manual or procedures to work on private farms and implement monitoring programmes thereafter. 	Low (2)

DESCRIPTION OF ACTIVITY	DESCRIPTION OF POTENTIAL IMPACT/S	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Vegetation removal during construction	- Loss of trees and shrubs diversity, especially for protected and endemic species	- Negative - Direct - Local - Temporary - Irreversible - Likely	Low	Negligible	Low (2)	- Obtain a permit to remove protected and endemic species - Avoid sensitive areas such as koppies	Low (1)
Creation of new employment opportunities to the Namibian citizens during construction	- Job creation	- Positive - Direct - Local - Temporary - Reversible - Likely	Medium	Moderate	Moderate (6)	- Inform the communities about employment opportunities and required skills. - Prioritise job opportunity to the Namibian citizens	Low major beneficial
Procurement of goods and services from local/regional business	Sourcing of goods and services from local or regional business could increase economic benefits	- Positive - Direct - Local/regional - Short-term - Reversible - Likely	Medium	Moderate	Moderate (6)	- Provide opportunities to local and regional enterprise to participate in the tender process. - Where possible, procurement of good and service should be sourced from the local or regional business.	Low major beneficial

<p>Avifauna collision and electrocution by direct contact, or streamers on power line structures</p>	<ul style="list-style-type: none"> - Injuries or death, especially to large raptors. - Loss of avifauna diversity 	<ul style="list-style-type: none"> - Negative - Direct - International - Permanent - Reversible - Likely/unlikely 	<p>High</p>	<p>Minor</p>	<p>Moderate (6)</p>	<ul style="list-style-type: none"> - Design the power line structures according to South African National Standards 10280 standards, in which the safety clearances between phase and earth are specified. - Sensitive sections of power line should be marked to increase visibility (Appendix A, Figure 34, Table 9, p44). - The top OPGW (earth/ground) wire should be marked, using large SWAN-FLIGHT Diverters in order to increase the visibility of the line. - The Bird Flight Diverters should be alternating grey and yellow and fitted at a distance of 5 – 10 m apart and the full length of each span should be marked. - Construct a simple bird perch device on top of the tower structure on top of the 66 kV tower structure to encourage birds to perch above dangerous structures (insulators) rather than on them, or use braced insulators in vulture-sensitive areas. - Disturbance of nesting birds, in particular, large raptors/vultures, or Kori Bustards should be avoided, if encountered during operations. 	<p>Minor (3)</p>
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DESCRIPTION OF ACTIVITY	DESCRIPTION OF POTENTIAL IMPACT/S	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
						<ul style="list-style-type: none"> - Ensure that the entire power line route is monitored for any signs of bird mortalities resulting from the operation of the line e.g. regular monitoring patrols should be carried out once a month for at least the first year after construction, and thereafter at least once per quarter. - Existing power lines in the area should also be inspected from time to time, for cumulative impacts. - Record all bird mortalities on a standardised form, with the GPS coordinates and power line structure and other details, and photographs of the carcass (especially the head of the bird), power line structure and general habitat. 	

DESCRIPTION OF ACTIVITY	DESCRIPTION OF POTENTIAL IMPACT/S	EFFECT/DESCRIPTION OF MAGNITUDE	VALUE OF SENSITIVITY	MAGNITUDE OF CHANGE	SIGNIFICANCE OF IMPACT	IMPACT MANAGEMENT/CONTROL MEASURES	RESIDUAL IMPACT AFTER MITIGATION
Compensation to the farmers for leasing the land	- Long term financial sustainability or economic growth to the farmers	- Positive - Direct - Local - Long-term - Reversible - Likely	Medium	Moderate	Low major beneficial	- Negotiate acceptable and lawful land lease price with the local authority.	Low major beneficial

7 ENVIRONMENTAL MANAGEMENT PLAN

The EMP for the proposed project is presented in Appendix B. It provides detailed environmental management options to ensure the impacts of the proposed project are avoided, minimised or mitigated. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed during project execution, although additional mitigation measures might be included if unforeseen events force the proponents to address these.

The management measures should be adhered to during all stages of the project activities. All persons involved in the proposed activities should be made aware of the measures outlined in the EMP to ensure activities are conducted in an environmentally responsible manner.

The objectives of the EMP are:

- To include all components of the project;
- To prescribe the best practicable control methods to lessen the environmental impacts associated with the project;
- To monitor and audit the performance of operational personnel in applying such controls; and
- To ensure that appropriate environmental training is provided to responsible operational personnel.

8 CONCLUSIONS

ECC's EIA methodology was used to undertake the environmental assessment for the proposed project to identify if there is potential for significant effects to occur as a result of the proposed project. Through the scoping process, it was determined that there was no potential environmental risk that requires further specialist studies and assessment. The identified impacts on the environment were found to be minor. Various mitigation measures have been identified and listed for implementation in the EMP to avoid and/or reduce impacts as far as reasonably practicable. Additionally, this will ensure the environment is protected and unforeseen effects and environmental disturbances are avoided.

On this basis, it is the opinion of ECC that an Environmental Clearance Certificate could be issued, on conditions that the management and mitigation measures specified in the EMP are implemented and adhered to.

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APPENDIX A – AVIFAUNA ENVIRONMENTAL IMPACT ASSESSMENT

APPENDIX B – EMP

APPENDIX C – NON-TECHNICAL SUMMARY

APPENDIX D – EVIDENCE OF PUBLIC CONSULTATION

The following was advertised in the *Informante* on the 19th December 2019 and 9th January 2020, (online newspaper) as well as in *The Namibian* on the 16th December 2019 and 6th January 2020. The site notice was set up at the proposed site in January 2020.

NOTICE OF ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS IN CONSTRUCTION OF THE PLANNED B2GOLD NAMIBIA (Pty) Ltd 220 kV POWER LINE, OTJOZONDJUPA REGION, NAMIBIA

Environmental Compliance Consultancy CC (ECC) hereby gives notice to the public that an application for an Environmental Clearance Certificate in accordance with the Environmental Management Act, No.7 of 2007 will be made as per the following:

Applicant: B2Gold Namibia (Pty) Ltd
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Otjozondjupa Region, Namibia

Project: Construction of the B2Gold Namibia (Pty) Ltd 220 kV power line in the Otjozondjupa Region, Namibia

Proposed Activity: B2Gold Namibia (Pty) Ltd has identified the need to upgrade their power supply in order to meet the energy demands resulting from the expanding mining infrastructure. As such, B2Gold Namibia (Pty) Ltd on behalf of NamPower (Pty) Ltd plans to build a 220 kV overhead transmission power line. The structure of the power line comprises of lattice steel pylons, in a combination of guyed and self-support structures, with three conductors and one additional optical ground wire running at the top of the configuration. The height of the structures will be approximately 40 m, with average span lengths of 450 m.

Application for Environmental Clearance Certificate: In terms of the Environmental Management Act, No.7 of 2007, ECC on behalf of B2Gold Namibia (Pty) Ltd is required to apply for an Environmental Clearance Certificate to the Ministry of Mines and Energy and the Ministry of Environment and Tourism for the above-mentioned project.

Purpose of the Review and Comment Period: As part of the public participation process, the purpose of the review and comment period is to present the proposed project and to afford Interest and Affected Parties (I&APs) an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.

How you can participate: To ensure that all potential issues and concerns are included in the assessment, I&APs and stakeholders are requested to register for the project using the website provided: <https://eccenvironmental.com/projects/>

Review Period: The review and comment period are effective from 16/12/2019 to 13/01/2020.

Environmental Compliance Consultancy Close Corporation
Registration Number: EC2013/21404
Members: Mr JS Bezuidenhout and Mrs J Mooney
PO Box 91193, Klein Windhoek
Tel: +264 61 617 609
E-mail: info@eccenvironmental.com
Website: <https://eccenvironmental.com/projects/>
Project ID: ECC-36-246-REP-05-D



Public Notice

PROFESSIONAL LEGAL TRAINING

The Justice Training Centre at the University of Namibia hereby invites all law graduates from Common Law Countries wishing to undergo professional legal training, in terms of the Legal Practitioners Act No. 15 of 1995, to apply for registration as Candidate Legal Practitioners.

Application forms are obtainable from the Justice Training Centre offices in Rooms X047 and X048, Main Campus, University of Namibia – Windhoek.

Training duration: April 2020 – December 2020
Admission requirements: LLB or an equivalent qualification
Closing date for applications: 07 February 2020

For further information contact:

Ms Aina Kakoto
Justice Training Centre (JTC)
Tel: 061 206 3840 / 3989 | E-mail: akakoto@unam.na

Ms Amber-Ivana Coerecius
Ministry of Justice
Tel: 061 280 5317 | E-mail: Amber.Coerecius@moj.gov.na

Applications addressed to:
Acting Director:
Justice Training Centre (JTC)
Main Campus
University of Namibia
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VACANCIES

Namibia Drydock & Ship Repairs (NAMDOCK) (Pty) Ltd is a Namibia leading marine engineering company operating three floating docks in Walvis Bay. This company consists of various divisions geared to perform large ship repair works and other engineering related projects. Namdock invites suitably qualified persons to apply for the following positions:

1. ENVIRONMENTAL COORDINATOR C4

Key Performance Areas:

- Planning, Organizing, Preparations and Communications.
- Control, Reports and Investigations.
- Transport and inspections.
- Training and Development.
- Human Resource Management.

Qualifications, Skills, Competencies and Experience Requirements:

- Grade 12 Certificate.
- Environmental Diploma.
- Minimum of 5 years environmental related experience of which 2 years should have been served at supervisory level.
- Good knowledge of environmental matters and compilation of reports.
- Knowledge of ISO 14001.
- Ability to perform under pressure and work as a team.
- Computer literacy.
- Code B driver's license.

2. CUSTOMER CLEARANCE OFFICER C3

- Monitor and control customs clearance process and insure conformance with customs requirements.
- Obtain and confirm with requests for repairs/new parts from customers.
- Monitor the repairs regularly in line with customs procedures.
- Distribute and submit all documentation to all stakeholders.
- Verify customs official inspections and audits conducted.
- Record and analyses fuel consumptions.
- Any administrative related duties on adhoc basis.
- Ensure proper document control.

Qualifications, Skills, Competencies and Experience Requirements

- Grade 12 Certificate.
- A Procurement Diploma will be an added advantage.
- Minimum of 5 years' experience in a similar role.
- Computer literacy (MS Suite & SYSPRO).
- Good communication skills.
- Attention to detail.
- Advanced ability to analyse and solve problems.
- Valid Code B driver's licence.

Namdock offers market-related remuneration and benefits appropriate to the position.

Interested candidates should forward their CVs with supporting documents via email to recruitment.hr@namdock.com. Attachment on email must be scanned in a single PDF document.

The closing date is 31 December 2019.

Only shortlisted candidates will be notified, and no documentations will be returned!

SMS Of The Day

n PRESIDENT of the Republic of Namibia, why do the ministers have to overly depend on the government for housing, clothing, food, entertainment, petrol and car allowances? These benefits come on top of their big salaries that are more than enough to satisfy all their needs. Remember, the bigger the salaries, the bigger the greed!

n SWAPO-LED government, you are a disgrace to the world. The construction workers went into the festive season with no salaries because payments were not done. Please sympathise with others – these are men and women with homes. It's really painful. Secondly, you penalise us for not paying tax on time, but we don't penalise the government if payments are delayed for even up to three months. It's very painful to be a poor Namibian.

n ANCESTRAL Land Commission, if anyone defaults on payments of farms, it should be repossessed! If anyone buys a house or farm or even a stove and do not honour their commitment in paying back their debt, repossess that asset and give someone else an opportunity. That is how it works all over the world.

n PRIME minister, why is it taking so long after all interviews have been conducted and recommendations made to appoint a recommended candidate, especially when it comes to the ministry of education?

To The President

n MR PRESIDENT, please order the minister of education to help us, the Grade 10 Namcol pupils. We don't know where to go. Are we going to Grade 11, are we going back to Grade 10? or are we going to register for Grade 12 with Namcol? Please help us. We are really confused and we don't know where to go. The new year has already started without us knowing anything. We need answers before the schools open.

Have Your Say
SMS your views to
99902
An SMS costs N\$1



n WE need drastic changes in our government. President Hage Geingob, some of your ministers are very weak – like the one of agriculture. We need the strongest person who can act decisively, not someone who engages in self-enrichment. We need someone who can turn around the troubled Agribusdev and all green scheme projects.

From The Regions

n I AM an unemployed youth and I want to work for the Karasburg Town Council. It's very nice because people are getting paid for staying home after receiving the loan money they applied for and some even get leave whenever they want for random funerals. People stay home for months, but still get paid on the 25th like everyone else and they never get warnings or get suspended and we are here struggling to get jobs.

n ANTI-CORRUPTION Commission and the Office of the Ombudsman, please visit Oshakati Police Station. Members are suffering from no promotion which is only for a certain group of people who dine and smile together. Members are silent because of victimisation and charged for exposing corrupt management in Oshana. Only a few members are promoted, while others are being ignored.

n please build hospitals that can accommodate more people. Build hospitals that can accommodate even 2 000 patients and phase out the overcrowded old hospitals. Katutura Intermediate Hospital, Windhoek Central Hospital, Keetmanshoop State Hospital and Oshakati Intermediate Hospital are all old hospitals built before independence. Where are your new hospitals? We are tired of these self-enriching schemes.

n REGIONAL director of health and regional council, we, the sprayers of the malaria programme for Ohangwena need our salaries for November.

Please be reminded that we have put in very long shifts to earn that money and we are not even supposed to beg you for it.



n MINISTRY of health, we are sick and tired of sitting in one line with family planning clients and sick patients at Black Chain clinic. Some of us have big septic wounds and are forced to wait for hours. Please create a separate room for us.

Law & Order

n INSPECTOR general of the Namibian Police, please ignore any letter sent to

your office that is recommending promotions of a few members from the Etosha Anti-Poaching Unit. That letter was drafted by chief inspector Shiyamandje requesting that a few members deserve to be promoted but all the names mentioned are his close associates. If it's like that, then all the members in the Etosha National Park should be promoted.

n I AM a concerned resident of Karasburg. I went to open a case of domestic violence and I waited at the charge office for almost three hours just to be told by one officer that I am the problem. Station commander, your officers are failing us ... they drive up and down the streets inside the open-door minibus but they never solve our problems.

School Matters

n OLOF Palme Primary School in Windhoek is forcing parents to pay school fees (N\$50 per term). The principal refused to give school reports of 2019 to children whose parents could not afford to pay the fee and that's against the education policy. The school also gave a long list of stationery items to be bought, even for things that the school is supposed to buy. The ministry of education should look into this matter immediately.

n DIRECTOR of education for Erongo region, why do certain schools in your region conduct interviews up to cleaners posts only while the other schools, especially in the Omaruru circuit, are just recommending their unqualified teachers at the expense of the unemployed graduates? What happened to consistency and fair recruitment in your region?

Health

n GOVERNMENT,

n WE, the parents of children at On-

ampila Combined School, are requesting the principal to look well into the issue of the school uniform because it is too expensive. Some of us are not working and we find it hard to buy that specific uniform.

Labour

n WE, the guards of Eagle Night Watch, working at Husab Mine, are very unhappy with the time we have to go to work. We have to wake up very early in the morning to go wait for the bus at the bus terminal. However, it is not safe at all and some of us have even been beaten up by thugs and robbed of our belongings. We want the company to please review their shifts because of safety. Safety doesn't start at the mine but at home. Management of Swakop Uranium, please be considerate.

n THE workers of that big restaurant opposite Oshana Mall are working long hours every Sunday without a lunch break. They work a 12-hour shift but don't get paid overtime. They are told to take their food at the lockers which are opposite the toilets. They are expected to work on public holidays with no overtime pay. Ben Zaaruka, please increase their salaries. They only get N\$1 000 per month. We respect you but you're treating your employees badly. Please do something asap!



Panduleni Itula

n TUNACOR company did not give bonuses to the fishermen. They thought workers who voted for Dr Itula were the reason why the ministers were arrested, therefore the company will no longer going to get its corrupt quotas as usual. Someone must come to the fishermen's rescue because the labour ministry, unions and ACC are all incompetent. – *Concerned citizen*

Service Please

n MANAGER of Checkers at Gustav Voigts Centre, please deal with the three ladies from the restaurant. We always go there to support the business and they like asking if we don't eat at home. There is one particular lady who is behaving badly towards customers. +264813770559

n MTC Namibia, please increase your data bundles. It is frustrating purchasing SuperAweh just to receive a text saying you have depleted your data within five minutes.

Lost And Found

n I, NGHYEELKWA Fanuel, lost a wallet in Windhoek with my ID card, voter's card and NamPost SmartCard. If found, please contact me on 081 6147747.

n I, JOHANNES Pinehas Olembe, lost my father Joseph Johannes' ID card between Oshakati and Onandjokwe. If found, please contact me on 081 854 3659.

n I, INDONGO Radegundis, lost my ID card at Otjiwarongo. If found, please contact me on 081 211 5808.

n I, KANANGURE Brenden, lost my ID card. If found, please contact me on 081 797 3025.

Please note that the opinions expressed do not necessarily reflect the views of *The Namibian*.

Food For Thought

n I DON'T know why students have to beg NSFAF to pay what is due to them as per contracts signed. Is that the same slow way the students should use in paying back those loans?

Bouquets & Brickbats



n THE current government is oppressing the SMEs. Why did they ban selling beer on specific days during the festive season? That is awkward. Closing shebeens on Christmas day and New Year's day, what is that? There is nothing wrong with keeping shebeens and bars open for the sake of the economy.

Tell it like it is!

Make your views known. It costs N\$1 for 160 characters.
You will receive an acknowledgment for 'telling it like it is!' Selected views will be published in the newspaper.
We are subsidising the costs and are not making profit from this service to the public.

Official responses only may be emailed to: smsfeedback@namibian.com.na
NB: We would also like to call on members of the public to exercise good judgement when sending their comments to the newspaper. *The Namibian* publishes the SMSes to promote fair and civil discussion.



NOTICE OF ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS IN CONSTRUCTION OF THE PLANNED B2GOLD NAMIBIA (PTY) LTD 220 KV POWER LINE, OTJOZONDJUPA REGION, NAMIBIA



Environmental Compliance Consultancy CC (ECC) hereby gives notice to the public that an application for an Environmental Clearance Certificate in accordance with the Environmental Management Act No. 7 of 2007 will be made as per the following:

Applicant: B2Gold Namibia (Pty) Ltd
Environmental Assessment Practitioner (EAP): Location: Environmental Compliance Consultancy Otjozondjupa Region,

Project: Construction of the B2Gold Namibia (Pty) Ltd 220 kV power line in the Otjozondjupa Region, Namibia

Proposed Activity: B2Gold Namibia (Pty) Ltd has identified the need to upgrade their power supply in order to meet the energy demands resulting from the expanding mining infrastructure. As such, B2Gold Namibia (Pty) Ltd on behalf of NamPower (Pty) Ltd plans to build a 220 kV overhead transmission power line. The structure of the power line comprises of lattice steel pylons, in a combination of guyed and self-support structures, with three conductors and one additional optical ground wire running at the top of the configuration. The height of the structures will be approximately 40 m, with average span lengths of 450 m.

Application for Environmental Clearance Certificate: In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of B2Gold Namibia (Pty) Ltd is required to apply for an Environmental Clearance Certificate to the Ministry of Mines and Energy and the Ministry of Environment and Tourism for the above-mentioned project.

Purpose of the Review and Comment Period: As part of the public participation process, the purpose of the review and comment period is to present the proposed project and to afford Interest and Affected Parties (I&APs) an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.

How you can participate: To ensure that all potential issues and concerns are included in the assessment, I&APs and stakeholders are requested to register for the project using the website provided: <https://eccenvironmental.com/projects/>

Review Period: The review and comment period are effective from 16/12/2019 to 13/01/2020.

Environmental Compliance Consultancy Close Corporation
Registration Number: CC/2013/11484
Members: Mr. JS Bezuidenhout and Mrs. J Mooney
PO Box 91193, Klein
Windhoek Tel: +264 916 697
909
E-mail: info@eccenvironmental.com
Webster: <https://eccenvironmental.com/projects/>
Project ID: ECC-36-246-ADT-03-B



Informante on the 19th December 2019 and 9th January 2020, (online newspaper)



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Proposed Activity: B2Gold Namibia (Pty) Ltd has identified the need to upgrade their power supply in order to meet the energy demands resulting from the expanding mining infrastructure. As such, B2Gold Namibia (Pty) Ltd on behalf of NamPower (Pty) Ltd plans to build a 220 kV overhead transmission power line. The structure of the power line comprises of lattice steel pylons, in a combination of guyed and self-support structures. All VLO structures will be constructed on a levelled ground surface. The top of the configuration. The height of the structures will be approximately 40 m, with average span lengths of 450 m.

Application for Environmental Clearance Certificate: In terms of the Environmental Management Act, No.7 of 2007, ECC on behalf of B2Gold Namibia (Pty) Ltd is required to apply for an Environmental Clearance Certificate to the Ministry of Mines and Energy and the Ministry of Environment and Tourism for the above-mentioned project.

Purpose of the Review and Comment Period: As part of the public participation process, the purpose of

The site notice for the proposed power line project.

NOTICE OF ENVIRONMENTAL ASSESSMENT AND PUBLIC PARTICIPATION PROCESS
CONSTRUCTION OF A 66 kV POWER LINE IN OTJOZONDJUPA REGION, NAMIBIA

Environmental Compliance Consultancy (ECC) hereby gives notice to the public that an application for an Environmental Clearance Certificate in accordance with the Environmental Management Act, No. 7 of 2007 will be made as per the following:

Applicant: B2Gold Namibia (Pty) Ltd
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Otjozondjupa Region, Namibia
Project: Construction of a 66-kV overhead transmission power line in the Otjozondjupa Region, Namibia

Proposed Activity: B2Gold Namibia (Pty) Ltd has identified the need to upgrade its power supply in order to meet the energy demands resulting from the expanding mining infrastructure. As such, B2Gold Namibia (Pty) Ltd on behalf of Namibia Power Corporation (NamPower) (Pty) Ltd proposes to build a 66-kV overhead transmission power line. The structure of a 66-kV overhead transmission power line comprises a steel type monopole with intermediate poles on the straight sections of the line and are self-supporting with no stay wires; bend poles with 7 backstays at points where the line changes direction; terminal H-Poles at the start and at the end of the line. A 30 m pole length, planted into the ground (2 – 2.6 m) with two backstays. The height of the structures will be approximately 28 m, with average span lengths of 300 m spacing between the poles.

Alternative routes have been considered for the new power line:

- Route Option 1 will run along the D1886 district road between Farm Lardner and Farm Fisher. This route option would be approximately 22.6 km long with 17 bend points; and
- Route Option 2 will run between the boundaries of Farm Heester and Farm Lardner. This route option would be approximately 18.5 km long with 15 bend points.



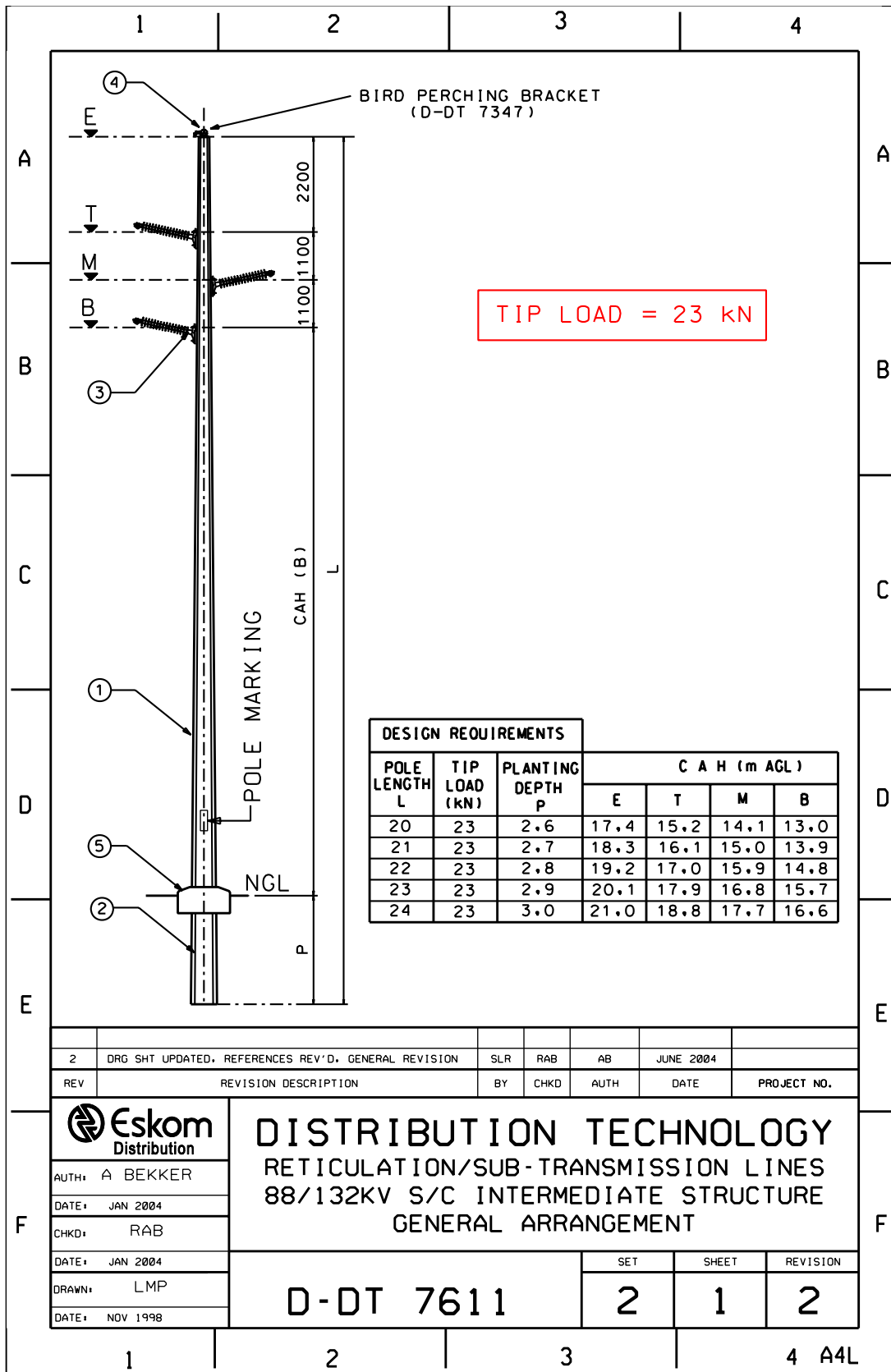
Application for Environmental Clearance Certificate: In terms of the Environmental Management Act No.7 of 2007, ECC on behalf of B2Gold Namibia (Pty) Ltd is required to apply for Environmental Clearance Certificate to the Ministry of Mines and Energy and the Ministry of Environment and Tourism.

How you can participate: To ensure that all potential issues and concerns are included in the assessment, Interested and Affected Parties (I&APs) and stakeholders are requested to register for the project using the link to ECC's website provided: <https://eccenvironmental.com/projects/>

ECC ENVIRONMENTAL COMPLIANCE CONSULTANCY

Environmental Compliance Consultancy Close Corporation
Registration Number: CC/2813/11404
Members: Mr. D. Reupelhorst and Mrs. J. Moseley
PO Box 81193, Klipfontein
Tel: +264 616 497 408
E-mail: info@eccenvironmental.com
Website: <http://eccenvironmental.com/projects/>
Project ID: ECC-16-002

APPENDIX E – TECHNICAL DESIGN FOR THE 66 kV POWER LINE




2	DRG SHT UPDATED, REFERENCES REV'D, GENERAL REVISION	SLR	RAB	AB	JUNE 2004	
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.

AUTH:	A BEKKER
DATE:	JAN 2004
CHKD:	RAB
DATE:	JAN 2004
DRAWN:	LMP
DATE:	NOV 1998

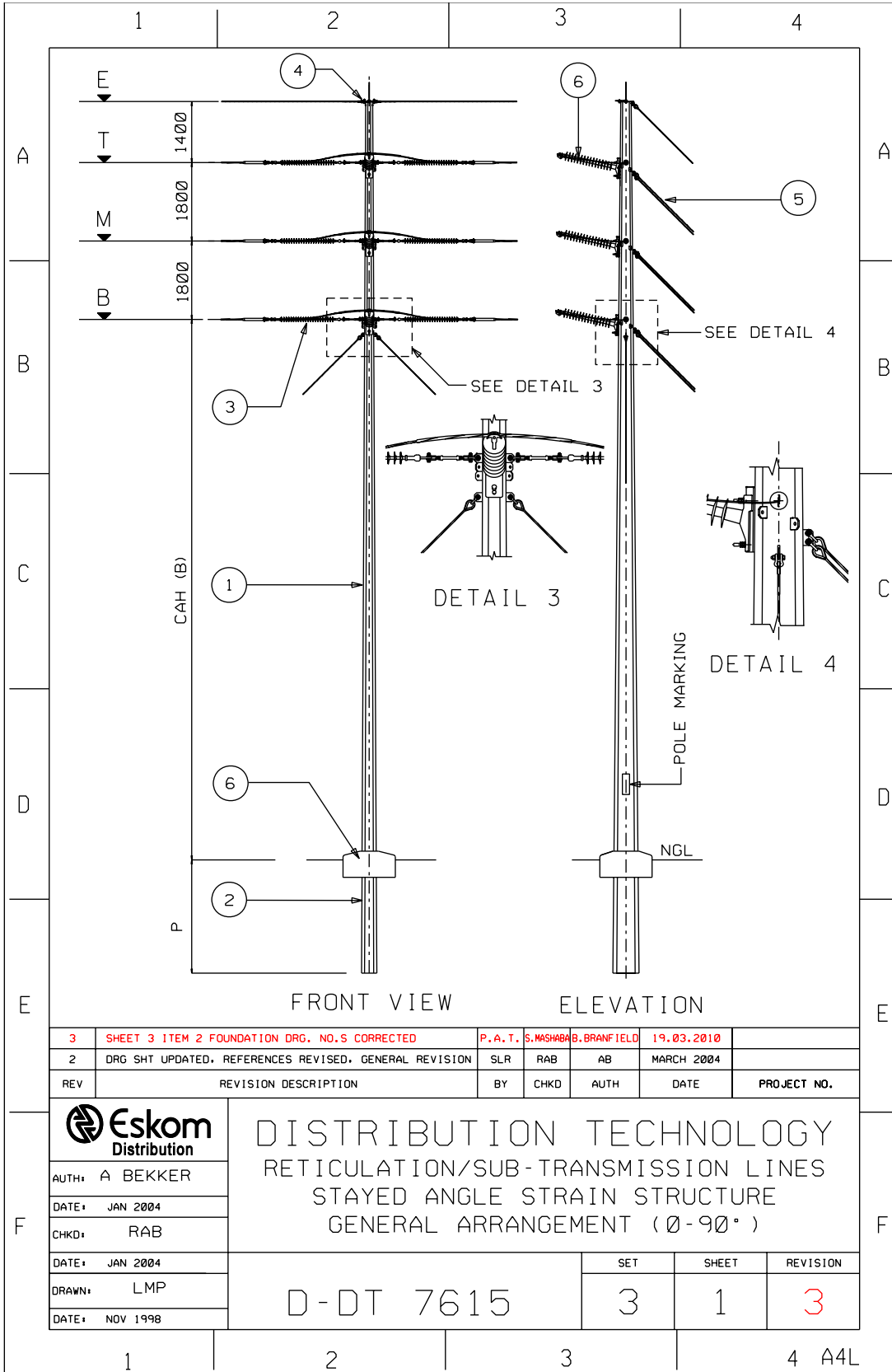
DISTRIBUTION TECHNOLOGY
RETICULATION/SUB-TRANSMISSION LINES
88/132KV S/C INTERMEDIATE STRUCTURE
GENERAL ARRANGEMENT

D-DT 7611	SET	SHEET	REVISION
	2	1	2

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1	2	3	4
A	ITEM NO.	DESCRIPTION	D-DT NO.
		STRUCTURE	
		TYPE 259A	D-DT 7611
		MANUFACTURER: STRUCTATECH	
		TYPE 261A	D-DT 7611
		MANUFACTURER: CIS	
B	1	POLE LENGTH (BODY)	
		20m STEEL	D-DT 7100
		21m STEEL	D-DT 7100
		22m STEEL	D-DT 7100
		23m STEEL	D-DT 7100
		24m STEEL	D-DT 7100
C	2	FOUNDATION	
		TYPE 1 (300kPa)	D-DT 7850 SHT 2
		TYPE 2 (150kPa)	D-DT 7850 SHT 3
		TYPE 3 (100kPa)	D-DT 7850 SHT 4
		TYPE 4 (50kPa)	D-DT 7850 SHT 5
		ROCK & SOFT ROCK	D-DT 7850 SHT 1
		ALTERNATE FOUNDATIONS	D-DT 7851
D	3	INSULATOR ASSEMBLY	
		INTERMEDIATE ASSEMBLY	D-DT 7321
	4	EARTH WIRE ASSEMBLIES	
		NON INSULATED	D-DT 7326
		INSULATED	D-DT 7327
E	5	CONCRETE CAP AND	D-DT 7857
		EARTHING DETAILS	
	2	DRG SHT UPDATED, REFERENCES REVISED, GENERAL REVISION	SLR RAB AB JUNE 2004
REV		REVISION DESCRIPTION	BY CHKD AUTH DATE PROJECT NO.
F			DISTRIBUTION TECHNOLOGY RETICULATION/SUB-TRANSMISSION LINES 88/132KV S/C INTERMEDIATE STRUCTURE REFERENCE TABLE
	AUTH: A BEKKER		
	DATE: JAN 2004		
	CHKD: RAB		
	DATE: JAN 2004		
	DRAWN: SLR		
DATE: JAN 2004			
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1	2	3	4 A4L

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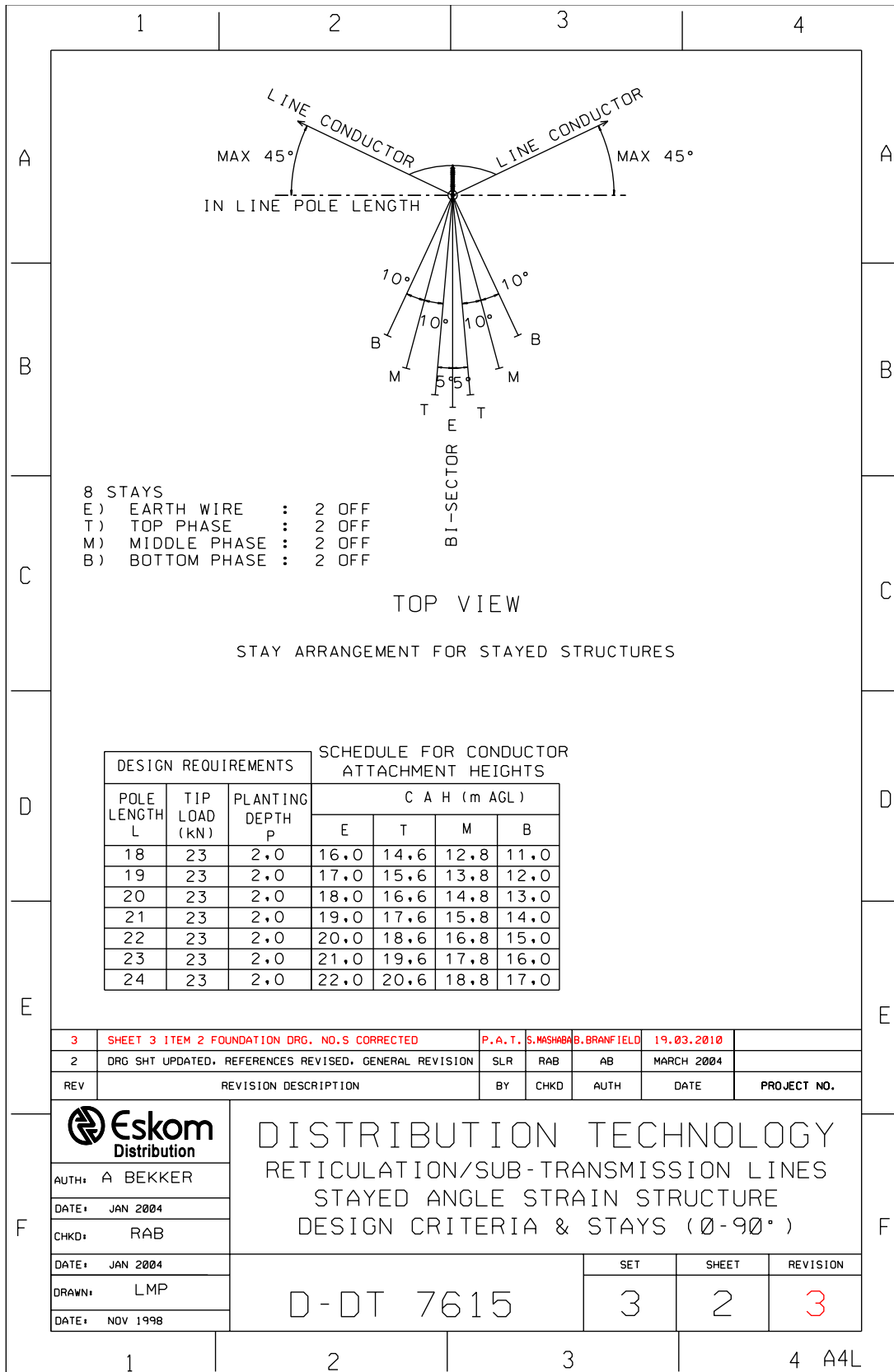


3	SHEET 3 ITEM 2 FOUNDATION DRG. NO.S CORRECTED	P. A. T.	S. MASHABA	B. BRANFIELD	19.03.2010	
2	DRG SHT UPDATED, REFERENCES REVISED, GENERAL REVISION	SLR	RAB	AB	MARCH 2004	
REV	REVISION DESCRIPTION	BY	CHKD	AUTH	DATE	PROJECT NO.


AUTH:	A BEKKER
DATE:	JAN 2004
CHKD:	RAB
DATE:	JAN 2004
DRAWN:	LMP
DATE:	NOV 1998

DISTRIBUTION TECHNOLOGY RETICULATION/SUB-TRANSMISSION LINES STAYED ANGLE STRAIN STRUCTURE GENERAL ARRANGEMENT (0-90°)				
D-DT 7615		SET 3	SHEET 1	REVISION 3

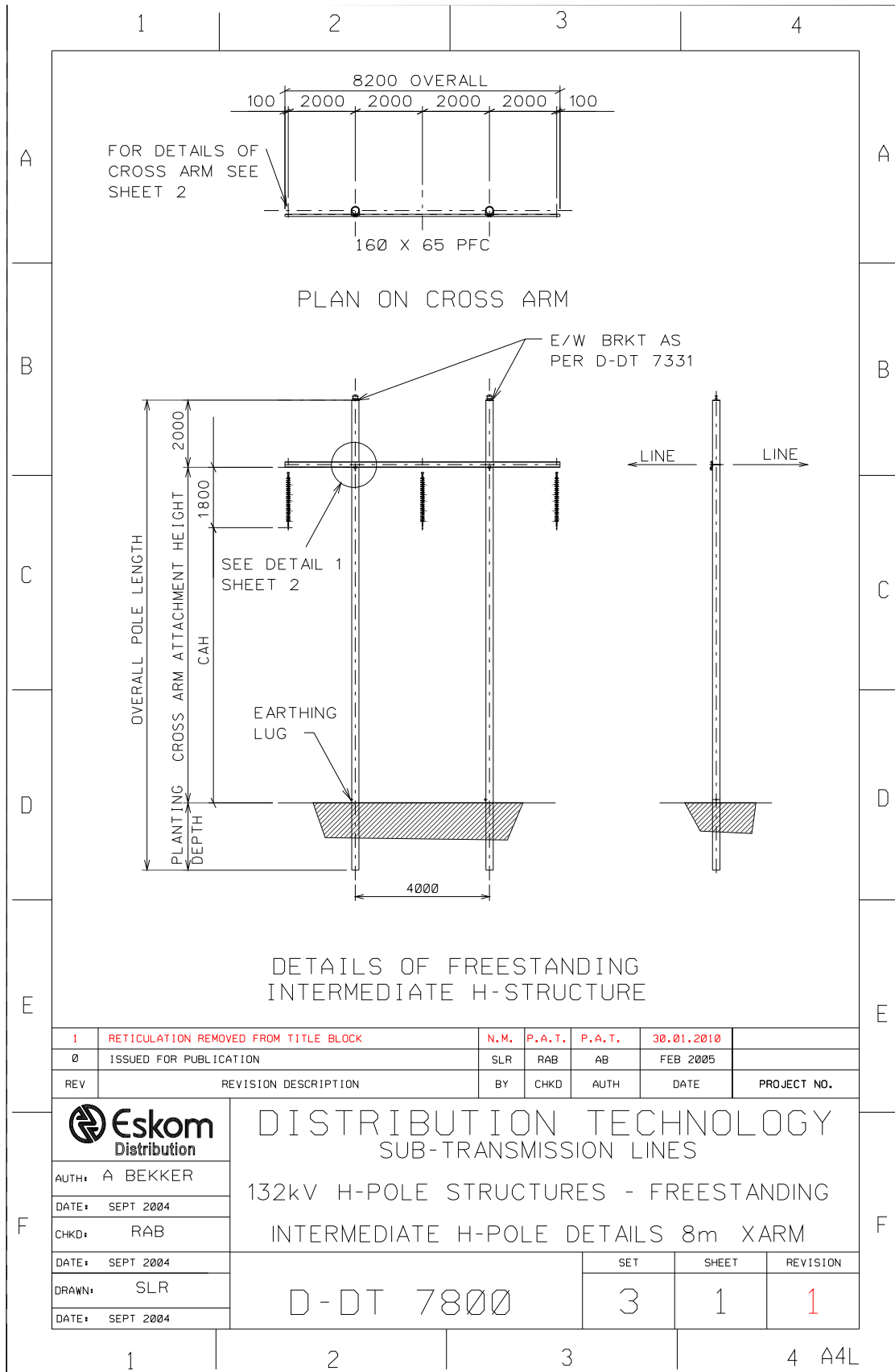
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...\\User\dgn\dms00379\7615 R3.dgn 2010/03/19 03:02:27 PM

		1	2	3	4			
A	ITEM NO.	DESCRIPTION		D-DT NO.				
		STRUCTURE						
B		TYPE 259D		D-DT 7615				
		MANUFACTURER: STRUCTATECH						
C		TYPE 261D		D-DT 7615				
		MANUFACTURER: CIS						
D	1	POLE LENGTH (BODY)						
		18m STEEL		D-DT 7104				
E		19m STEEL		D-DT 7104				
		20m STEEL		D-DT 7104				
F		21m STEEL		D-DT 7104				
		22m STEEL		D-DT 7104				
G		23m STEEL		D-DT 7104				
		24m STEEL		D-DT 7104				
H	2	FOUNDATION						
		TYPE 1 (300kPa)		D-DT 7851 SHT 2				
I		TYPE 2 (150kPa)		D-DT 7851 SHT 3				
		TYPE 3 (100kPa)		D-DT 7851 SHT 4				
J		TYPE 4 (50kPa)		D-DT 7851 SHT 5				
		ROCK & SOFT ROCK		D-DT 7851 SHT 1				
K	3	INSULATOR ASSEMBLY						
		STRAIN ASSEMBLY		D-DT 7311				
L	4	EARTH WIRE ASSEMBLIES						
		STRAIN NON INSULATED		D-DT 7323				
M		STRAIN INSULATED		D-DT 7324				
	5	STAY ASSEMBLY/LOCATION		D-DT 7325/7346				
N	6	JUMPER ASSEMBLY		D-DT 7321				
	7	CONCRETE CAP AND EARTHING		D-DT 7857				
3		SHEET 3 ITEM 2 FOUNDATION DRG. NO.S CORRECTED		P. A. T. S. MASHABA	B. BRANFIELD	19.03.2010		
2		DRG SHT UPDATED. REFERENCES REVISED. GENERAL REVISION		SLR	RAB	AB	MARCH 2004	
REV	REVISION DESCRIPTION			BY	CHKD	AUTH	DATE	PROJECT NO.
F			DISTRIBUTION TECHNOLOGY RETICULATION/SUB-TRANSMISSION LINES STAYED ANGLE STRAIN STRUCTURE REFERENCE TABLE (0-90°)					
	AUTH: A BEKKER DATE: JAN 2004 CHKD: RAB DATE: JAN 2004 DRAWN: LMP DATE: NOV 1998							
		D-DT 7615		SET	SHEET	REVISION		
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1		2		3		4 A4L		

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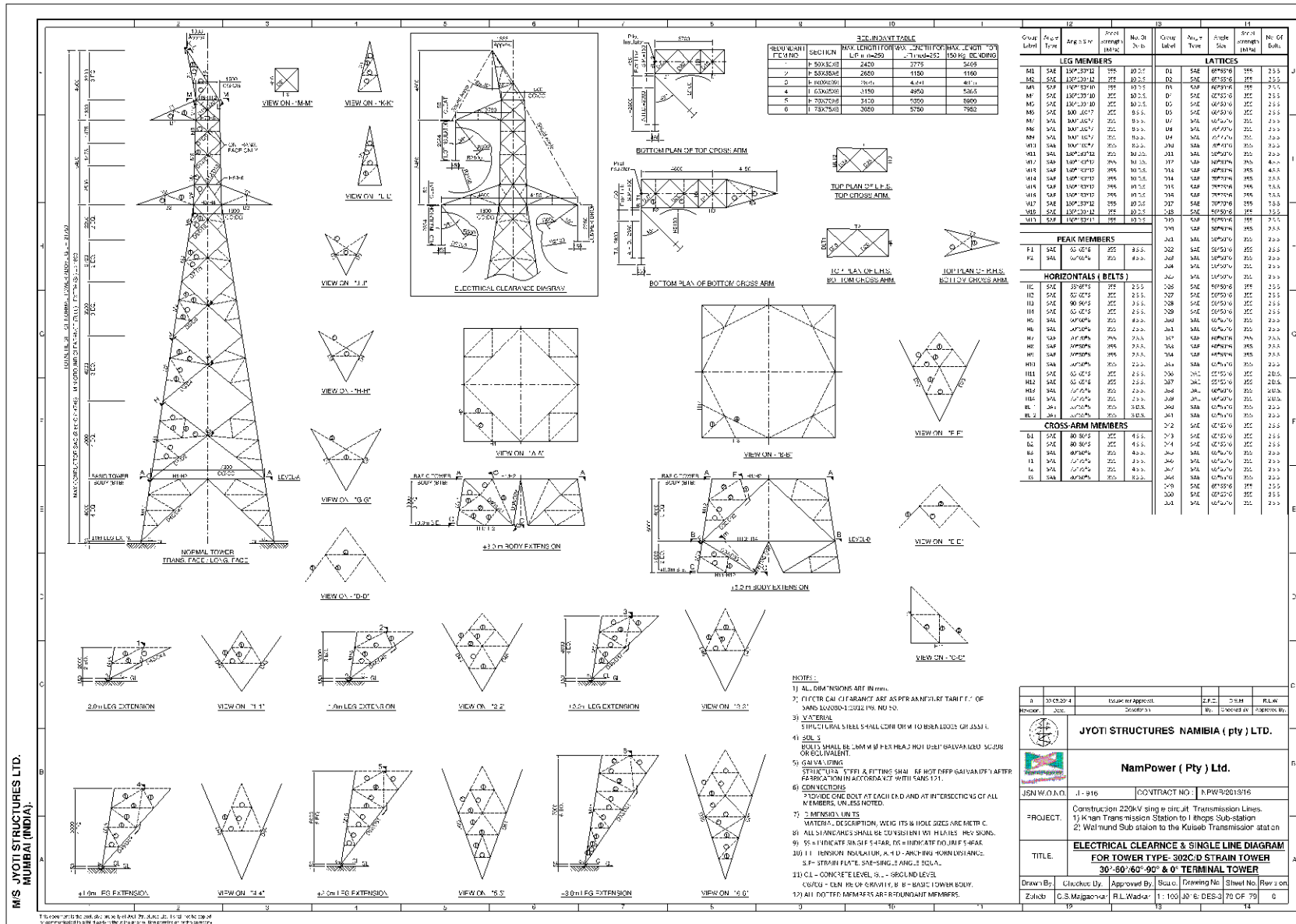


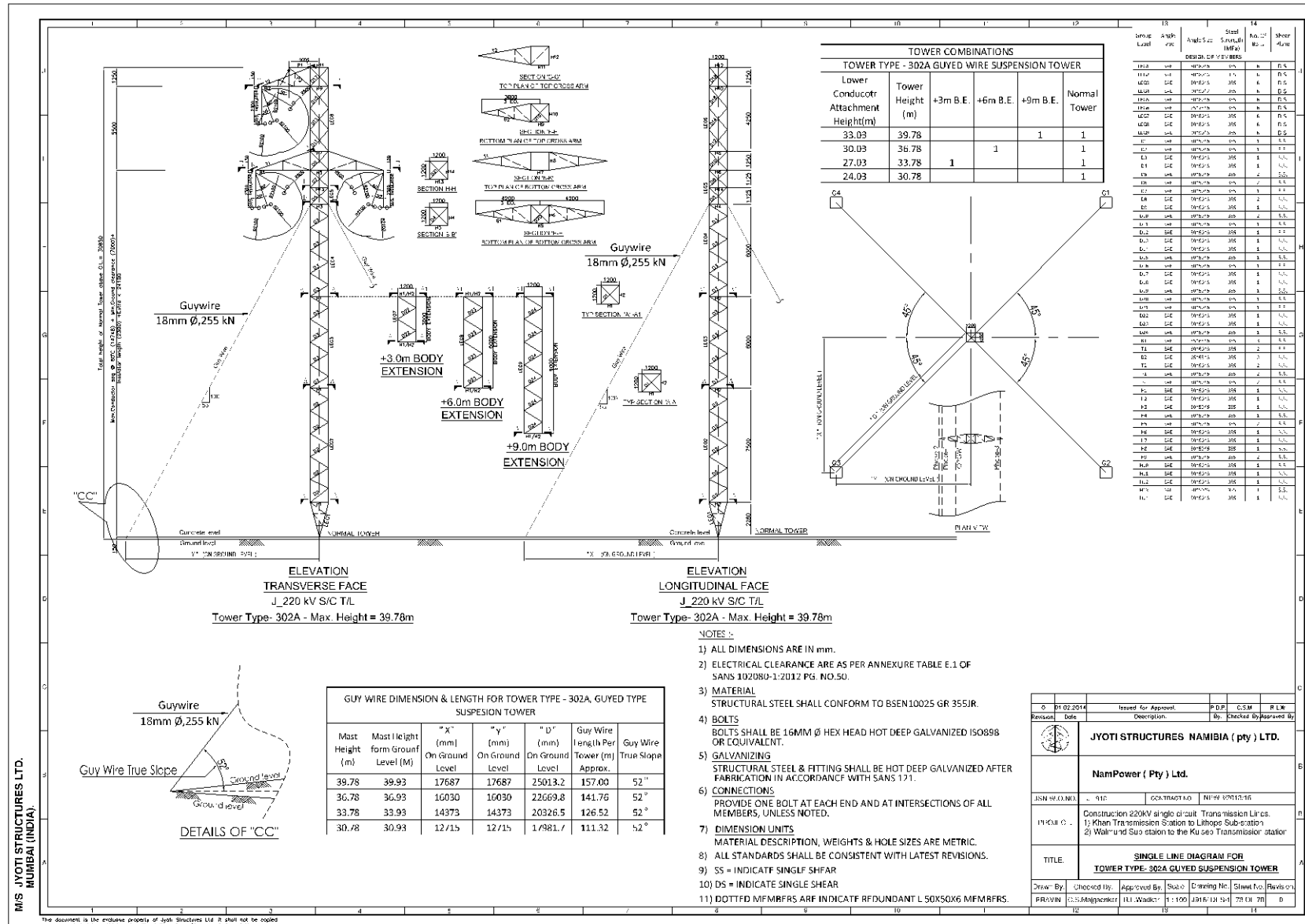
1	2	3	4	A	B	C	D	E	F																																																																																								
<p>DESIGN CRITERIA:</p> <p>ALL STEEL GRADE 300W ALL BOLTS GRADE 8.8 BOLTS POLES AND CROSS ARMS TO BE SUPPLIED WITH FIXING BOLTS</p>																																																																																																	
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APPENDIX F – TECHNICAL DESIGN FOR THE 220 kV POWER LINE

CONSTRUCTION OF POWER LINE
B2GOLD (Pty) Ltd NAMIBIA





M/S. JYOTI STRUCTURES LTD. MUMBAI (INDIA)

The document is the exclusive property of Jyoti Structures Ltd. It shall not be copied or disseminated to a third party without the prior written permission of the company.

APPENDIX G – ECC CVS



Stephan Bezuidenhout

ENVIRONMENTAL ASSESSMENT
PRACTITIONER

Hello! :)



ABOUT ME

Name

Jacobus Stephan Bezuidenhout
- But you can call me Stephan -

Born

11 April 1989

Phone

+264 81 262 7872

Email

stephan@eccenvironmental.com

Website

www.eccenvironmental.com

Contact me!

How to reach me!

kid.bezuidenhout 

+264812627872

Stephan
Bezuidenhout



University of Pretoria
South Africa
2012

University of Stellenbosch
South Africa
2008

Additional Qualifications:

Education & Qualifications

Postgraduate Degree in Environmental Management & Analysis

Bachelors in Applied Science

- Snake Bite and Snake Handling
- Level 1 & 2 First Aid
- Industrial Environmental Compliance

N.S., et al., Some ecological side-effects of chemical and physical bush clearing in a southern African rangeland ecosystem, Southern African Journal of Botany (2015), <http://dx.doi.org/10.1016/j.sajb.2015.07.012>

Publications:

The FSC National Forest Stewardship Standard of Namibia (Draft V 4). Co-authored by S Bezuidenhout, P Cunningham, A Ashby, F Detering, W Enslin & D Honsbein

Experience & Work History



Managing Director

Current

Since 2012, Stephan has been working as an environmental assessment practitioner. Stephan has a strong ecological background and has gained more than seven years experience in the environmental industry. As a lead practitioner, Stephan has successfully driven environmental impact assessments and compliance assessments within Southern Africa. His hands on and practical experience and knowledge of international standards, such as IFC and World Bank standards allows Stephan to advise his clients and teams constructively and effectively.

ENVIRONMENTAL CONSULTANT & PRACTITIONER

Stephan manages a dynamic team of environmental practitioners and graduates at Environmental Compliance Consultancy. The firms' core objective is to improve the national standard of environmental compliance by developing local capacity. To date Stephan and his team have successfully completed over 30 projects for various industries, including mining, energy, infrastructure, conservation and tourism.



Stephan Bezuidenhout

Managing Director
+264 81 262 7872

References

Feel free to ask the boss :)

SALOME BEESLAAR

Environmental Practitioner
Pr.Sci.Nat: 400385/14

ESCA COETZEE

Environmental Scientist
Sasol Technology

PHIL BARKER

Pipeline Construction Superintendent
Worley Parsons

Or ask those who have worked for me?

Michael Moreland

Environmental Scientist
CSP Solar Energy Projects

Professional Associations

- South African Institute of Ecologists and Environmental Scientists (SAIE&ES)
- Environmental Assessment Practitioners Association of Namibia (EAPAN#172).
- Member of FSC Environmental Chamber
- Executive Committee Member of Namibian Chamber of Environment

Fun Facts:

- Keen fisherman
- Passionate Hunter & Conservationist
- 21ft vessel certified skipper
- Summated Kilimanjaro
- Have survived scorpion stings and snakebites!
- Did I mention I love camping?

▪ Words I live by:

‘Do what makes you happy
the rest will follow’

Experience & Work History

Over the past two years he has mentored over eight interns (of which most still work closely with him) building their careers in environmental management, conservation and rangeland management.

Examples of projects successfully completed include:

- **Abengoa Solar SA Paulputs CSP (Pty) Ltd. 150 MW CSP Tower** Environmental Assessment Practitioner during EIA Process
Northern Cape Province, South Africa
- **Abengoa Solar SA, Xina Solar One (200 MW) CSP Trough** Environmental Control Officer during construction phase. Northern Cape Province, South Africa
- **Abengoa Solar SA, Khi Solar One (50 MW) CSP Tower.** Environmental Control Officer during commissioning and rehabilitation phases. Northern Cape Province, South Africa for Abengoa Solar
- **Isondlo Project Support (IPS) (Pty) Ltd.** Soil Remediation and commissioning report of NGALA Camp. Gauteng, South Africa
- **Berekisanang Empowerment Farm.** Annual external Water Use Licence audit and 70 hectare agricultural development. Northern Cape, South Africa.

Environmental Coordinator

ROMPCO PIPELINE – Worley Parsons
Mozambique and South Africa

Stephan was employed by the Procurement, Management and Construction (PMC) consultant, Worley Parsons to manage the environmental aspects of the proposed linear development. Stephan managed a team of 12 positions for the duration of the project ensuring compliance of National and best practice such as IFC standards.



Jessica Mooney

Environment & Safety Specialist

Hello! :)



ABOUT ME

Name

Jessica Mooney

Born

24 October 1984

Phone

+264 81 653 1214

Email

Jessica@eccenvironmental.com

Website

www.eccenvironmental.com

Contact me!

How to reach me!

+264 81 653 1214 

Jessica.mooney7 

+264 81 653 1214 

Jessica Mooney 



Education & Qualifications

Federation University
Australia
2003-2006

Bachelor of Applied Science -Environmental Management

Additional
Qualifications

Management Systems Leadership
ICAM - Incident Cause Analysis Method
Certificate II in Metalliferous Mining core safety and risk management
Certificate III in Mine Emergency Response & Rescue
Level 3 – HLTF402B Apply Advanced first Aid
Emergency Rope Rescue
Level 2 - 21593VIC First Aid level 2
Bonded Asbestos Removal >10m2
Leading and Managing People –
Brisbane North Institute of TAFE



Experience & Work History

Current

Environment and Safety Specialist

Environmental Compliance Consultancy
Providing professional consulting services to clients in Namibia with particular focus on approvals, ECCs, reporting and compliance.

- ECC Approvals
- Mine Closure Plans
- Rehabilitation
- Pipeline projects
- Cultural Change programmes
- IMS (ISO14001 and 18001)

Group HSE Manager

Weatherly Mining Namibia
An exciting role covering the breadth of two operational underground mines (Otjihase and Matchless) and the construction of a new open pit mine (Tschudi) working for Weatherly Mining in Namibia, Africa.

- Managed company's SHEQ portfolio
- Full scale construction of new greenfield mine into operational copper mine
- Reduced LTIFR by 90% from 23.1 to 2.4 in 22 months!
- Implemented integrated management system
- Approvals, ECC renewals and EMPs
- Established the first mining environmental forums in Namibia
- Implemented SAFE COPPER cultural change programme



Jessica Mooney

Environment & Safety Specialist

References

Feel free to ask the boss :)

MR CRAIG THOMAS

Managing Director
Weatherly Mining

MR COLIN BULLEN

Managing Director
Imerys (client)

Group Manager Lihir Gold

MR NICK CURREY

Director at Sustainable Mining Strategies

Or ask those who have worked for me?

Ms Asteria Salmon

Worked as Control Room Operator
WMN

Mr. Hermanus Lamprecht

Paramedic Safety Officer

Professional Associations

- Chamber of Mines Namibia
- Women on Boards
- The Chamber of Minerals and Energy of Western Australia Industry Member – Mining, Minerals and Resources

Fun Facts:

- I can deadlift 135kg
- To keep fit I Olympic weight lift
- I run ultra Marathons & the longest run yet the fish river Canyon 65km
- I am one of 6 children - do you think that means 4 of us suffer middle child syndrome?

Words I live by:

‘The journey will bring you
happiest, not the
destination’



Experience & Work History

Environmental Consultant

Ensolve Pty Ltd - Australia

In February 2013 an opportunity came about to launch my own business, Blue Wren Environmental Services.

During this time I have worked alongside Ensolve Pty Ltd to deliver several environmental projects including:

- A mine closure project taking an operating mine site into the rehabilitation and closure phase. This project involved the full development of a mine closure plan, facilitation of the government approvals, stakeholder engagement and technical environmental studies to inform the mine closure plan
- Sustainability reporting in accordance with the Global Reporting Initiative
- Rehabilitation of historic exploration sites and obtaining associated government approvals for relinquishment of bonds.

Site Environmental Manager

Panoramic Resources – Australia

- Brought the site into full compliance with the Environmental Licence within 1 year.
- Managed projects relating to the expansions of the current mine tailings dams including obtaining approvals under the Mining Act 1978 and Environmental Protection Act 1986.
- Managed the environmental and community aspects of three operations; Savannah Nickel Mine, Copernicus Nickel Mine (currently in care and maintenance) and the operations at Wyndham Port
- Responsible for the environment, sustainability and social reporting portfolio
- Developed productive working relationships with local government environmental agencies and non-government agencies, which assisted with the approvals process.
- Developed strategies for the recruitment and retention of local Indigenous personnel

Environmental Systems Coordinator

Lihir Gold Limited – Australia

Working on site to provide technical environmental and community advice to ensure all regulatory and licence obligations were met or exceeded

- Regulatory Approvals (State and Federal Government)
- Environment and social aspects of the international cyanide management code
- Operational budgeting and bond management for mine closure
- Compliance with the legislative framework
- Community engagement



Titus Shuuya

SENIOR SCIENTIST ENVIRONMENTAL PRACTITIONER

Hello! :)



ABOUT ME

Name

Titus Shuuya

Born

14 April 1983

Email

titus@eccenvironmental.com

Website

www.eccenvironmental.com

Contact me!

How to reach me!

+264 85 301 3777 

+264 85 301 3777 

References

JESSICA MOONEY

Environmental and Safety Consultant

DR. GILLIAN MAGGS-KÖLLING

Executive Director
Gobabeb Research and Training Centre

Words I live by:

*'A slow movement of a cheetah
is not a mistake but a
calculated accuracy'*



Education & Qualifications

Namibia University of
Science and Technology,
Namibia
2016

*Master of Science in Natural Resources
Management*

University of Namibia,
Namibia
2013

*Bachelor of Science in Integrated Environmental
Science*



Experience & Work History

Current

Senior Scientist Environmental
Practitioner



- Environmental Compliance Consultancy
- Providing professional consulting services to clients
 - Environmental Assessment activities
 - Participate in environmental requirements of projects, including licences, monitoring and reporting
 - Field work and on-site support
 - Conduct training

Jul 2012 -Jul
2019

Senior Researcher



- Gobabeb Research and Training Centre
- Managing all planning and logistical implementation of field projects, particularly with reference to the Biodiversity Research and Monitoring Program
 - Data analysis and report writing
 - Develop long-term ecological monitoring program for the uranium mines in fulfilment of their EMP requirements

Dec 2015 -
Apr 2016

Ecologist

- Cheetah Conservation Fund of Namibia (CCF)
- Assist in all aspects of CCF's ecology research
 - Write research proposals and scientific publications
 - Coordinate the de-bushing project and harvest and horticulture activities



Emerita Lyapaka Ashipala Environmental Graduate

Hello! :)



ABOUT ME

Name

Emerita Lyapaka Ashipala

Born

15 February 1994

Phone

+264 81 701 6851

Email

emerita@eccenvironmental.com

Website

www.eccenvironmental.com



Education & Qualifications

Glasgow Caledonian
University, UK
2017 - 2018

Master's Degree in Environmental Management (Oil & Gas) (Distinction)

University of Namibia
2013 -2016

Bachelors in Environmental Biology



Experience & Work History

Environmental Graduate

Current

Working with Environmental Compliance Consultancy
Providing professional consulting services to clients in
Namibia with particular focus on:

- Drafting EIA adverts and NTS documents
- Assisting in the development of scoping reports and
- Environmental Management Plans for exploration projects

Intern

Community-Based Natural Resource Management (CBNRM) Project, GIZ Namibia

Roles and Responsibilities:

- Managed a high-volume workload within a deadline-driven environment.
- Responsible for weekly press review.
- Compilation and analyses of data collected from field for baseline study of projects.
- Assists in project management activities.
- Ensure work ethics is compliant with approved codes and standards.
- Even/workshop assistance planner.
- Engaged in clients and stakeholders' meetings.
- Provides overall project management support throughout the entire life cycle of projects.

Team Leader (*Ad hoc Registration Official*)

Electoral Commission of Namibia

Roles and Responsibilities:

- Kit operator
- Printing of registration cards
- Responsible for keeping order and safe guarding of all equipment



Emerita Lyapaka Ashipala Environmental Graduate

References

Feel free to ask the boss :)

JESSICA MOONEY
Environment & Safety Specialist

STEPHAN BEZUIDENHOUT
Managing Director

Or ask those who have worked with me?

Prof Jim Baird
Programme Leader
Glasgow Caledonian University
j.baird@gcu.ac.uk

Fun Facts:

- *I am an adventurous*
- *Passionate on learning more about Oil and Gas*

Words I live by:

“Be willing to go all out, in pursuit of your dream. Ultimately it will pay off. You are more powerful than you think you are.”



Experience & Work History

Undergraduate Internship

South African Science Of Climate Change and Adaptive Land Management (SASCCAL), Namibia
Role and Responsibilities:

- Compilation of news in all regions, for newsletter publication
- Using qGIS to digitise map drawings
- Organising various task research portfolios