



ECC
ENVIRONMENTAL
COMPLIANCE CONSULTANCY



ECC-096-239-REP-03-D

ENVIRONMENTAL SCOPING & ENVIRONMENTAL IMPACT ASSESSMENT REPORT

NAKAMBALE ADVENTURE LODGE, OSHIKOTO REGION

PREPARED FOR



AUGUST 2019

TITLE AND APPROVAL PAGE

Project Name:	Development of the Nakambale Adventure Lodge
Project Number	ECC-096-239-REP-03-D
Client Name:	Southern Cross Adventure Lodges (Pty) Ltd
Ministry Reference:	N/A
Competent Authority:	MET
Status of Report:	Final Submission to Government
Date of issue:	August 2019
Review Period	NA

Environmental Compliance Consultancy Contact Details:

We welcome any enquiries regarding this document and its content: please contact:

Stephan Bezuidenhout

Environmental Consultant & Practitioner
Tel: +264 81 699 7608
Email: stephan@eccenvironmental.com
www.eccenvironmental.com

Jessica Mooney

Environmental Consultant & Practitioner
Tel: +264 81 699 7608
Email: jessica@eccenvironmental.com
www.eccenvironmental.com

Confidentiality

Environmental Compliance Consultancy Notice: This document is confidential. If you are not the intended recipient, you must not disclose or use the information contained in it. If you have received this document in error, please notify us immediately by return email and delete the document and any attachments. Any personal views or opinions expressed by the writer may not necessarily reflect the views or opinions of Environmental Compliance Consultancy.

Please note at ECC we care out lessening our footprint on the environment, therefore all documents are printed double sided.

EXECUTIVE SUMMARY

Southern Cross Adventure Lodges (Pty) Ltd propose to undertake construction activities for the development of Nakambale Adventure Lodge in Oshikoto Region. The proposed development comprises a 15 en-suite, 5 self-catering units and 5 camping units lodge. The area has significant sustainable tourism potential which will expose tourists to the cultural experience in north central Namibia which is currently underutilised. The proposed development will also generate income for the indigenous community and open-up economic opportunities within the region. Agreements have been signed, finances are in place and contractors have been appointed for the lodge construction. The newly formed venture is designed to further spread financial, social and environmental benefits that eco-tourism can bring to previously marginalized communities.

The planned project triggers Listed Activities in terms of the Environmental Management Act, 2007 (Act No. 7 of 2007) and Regulations (2011), therefore, an Environmental Clearance Certificate is required. As part of the Environmental Clearance Certificate application, an environmental impact assessment has been undertaken which satisfies the requirements of the Environmental Management Act, 2007. This Environmental Scoping Report and Environmental Management Plan shall be submitted as part of the application for the Environmental Clearance.

The assessment has been carried out for the construction and operations of the Nakambale Adventure Lodge. The proposed development comprises of powerline, water pipeline, water storage tanks, guest accommodation and entertainment areas (swimming pool).

The planned development is located in an area that has a fairly sparse vegetation cover, dominated by *Colophospermum mopane* (Mopane trees) on higher ground, and sparsely open grassy drainage depressions lined by scattered *Hyphaene petersiana* (Makalani Palm tree).

The site and extent of the lodge infrastructure were selected so as to minimise the environmental footprint, minimise the distance to sources of water and electricity and use existing infrastructure as far as possible.

This environmental impact assessment (EIA) has been undertaken in terms of the requirements of the Environmental Management Act 7 of 2007 and the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2011) gazetted under the Environmental Management Act, 2007 (referred to herein as the EIA Regulations). The EIA was undertaken using a methodology developed by Environmental Compliance Consultancy which is based on the International Finance Corporation (IFC) standard for impact assessments. Through the scoping process, a review of the site and surrounding environment was completed by undertaking desktop reviews and verification of site data.

Due to the nature and scale of the project no significant impacts were identified during the scoping phase. Measures to mitigate and manage potential impacts on the environment during the construction and operational phases are outlined in the Environmental Management Plan (EMP).

This assessment has assessed, potential, likely and identified impacts, through the process it was determined that the likely effects were not deemed significant due to the magnitude of change from the baseline environment, the duration of potential impacts and the reversibility of effects. 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.

TABLE OF CONTENTS

1	INTRODUCTION	8
1.1	PURPOSE OF THIS REPORT	8
1.2	BACKGROUND OF THE PROPOSED PROJECT	8
1.3	ENVIRONMENTAL REQUIREMENTS	10
1.4	THE PROPONENT OF THE PROPOSED PROJECT	10
1.5	ENVIRONMENTAL CONSULTANCY	11
1.6	REPORT STRUCTURE	11
2	REGULATORY FRAMEWORK.....	13
2.1	NATIONAL POLICIES.....	14
2.2	ENVIRONMENTAL POLICY	15
2.3	PERMITS.....	15
	Permit dependent	15
3	METHODOLOGY AND APPROACH TO THE EIA.....	16
3.1	PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT.....	16
3.2	THE ASSESSMENT PROCESS.....	16
3.1	METHODOLOGY FOR THE IMPACT ASSESSMENT.....	18
3.2	SCREENING OF THE PROPOSED PROJECT	18
3.3	SCOPING OF THE ENVIRONMENTAL ASSESSMENT.....	18
3.4	BASELINE STUDIES	18
3.5	IMPACT PREDICATION AND EVALUATION.....	18
3.6	EIA DETERMINATION OF SIGNIFICANCE.....	19
3.7	EIA CONSULTATION.....	23
3.7.1	Newspaper Advertisements	23
3.7.2	Non-Technical Summary.....	23
3.7.3	Site notices	23
3.7.4	Consultation Feedback	23
4	PROJECT DESCRIPTION	24
4.1	NEED FOR THE PROPOSED PROJECT.....	24
4.2	ALTERNATIVES	24
4.2.1	Alternatives considered.....	24
4.2.2	No-go alternative.....	24
4.3	THE PROJECT SITE AND LOCATION	24
4.4	SITE AND SURROUNDING ENVIRONMENT	26
4.5	PROPOSED DEVELOPMENT ACTIVITIES	29

4.5.1	Design and Building Material.....	29
4.5.2	Planned project schedule	29
4.5.3	Workers and accommodation	29
4.5.4	Resource and waste management	29
5	ENVIRONMENTAL AND SOCIAL BASELINE	30
5.1	INTRODUCTION	30
5.2	BASELINE OF THE BUILT ENVIRONMENT AND LAND-USE	30
5.3	CLIMATE AND RAINFALL.....	30
5.4	SOIL AND VEGETATION	32
5.5	BIODIVERSITY - FAUNA SPECIES	35
5.6	SITE GEOLOGY	35
5.7	HYDROLOGY AND TOPOGRAPHY	37
5.8	SOCIO-ECONOMIC ENVIRONMENT	39
5.8.1	Demographic Profile	39
5.8.2	HIV/AIDS in Namibia	39
5.8.3	Employment	39
5.8.4	Heritage	39
6	ENVIRONMENTAL ASSESSMENT OF FINDINGS AND MITIGATION.....	40
6.1	SCOPING ASSESSMENT FINDINGS	40
7	ENVIRONMENTAL MANAGEMENT PLAN	51
8	CONCLUSION	52
	APPENDIX A- EMP	54
	APPENDIX B - NON-TECHNICAL SUMMARY	55
	APPENDIX C - EVIDENCE OF PUBLIC CONSULTATION.....	61
	APPENDIX D -ECC CVS	63
	APPENDIX E - LIST OF PLANT SPECIES	71

TABLES

TABLE 1 - LISTED ACTIVITIES AND RELEVANCE TO THE PROPOSED DEVELOPMENT.....	10
TABLE 2 - PROPONENT DETAILS	10
TABLE 3 - STRUCTURE OF THE REPORT	11
TABLE 4 - LEGAL COMPLIANCE	13
TABLE 5 – NATIONAL POLICIES AND APPLICABILITY TO THE PROJECT	14
TABLE 6 - PERMITS AND LICENSES.....	15
TABLE 7 - SENSITIVITY AND VALUE OF RECEPTOR.....	19
TABLE 8 - NATURE OF IMPACT	19
TABLE 9 - MAGNITUDE OF CHANGE	20

AUGUST 2019

TABLE 10– LEVEL OF CERTAINTY	21
TABLE 11 — GUIDE TO SIGNIFICANCE RATINGS	21
TABLE 12– SIGNIFICANCE DESCRIPTION.....	22
TABLE 13 - SUMMARY OF LIMITATION, UNCERTAINTIES AND ASSUMPTION OF THE EIA PROCESS	41
TABLE 14 - SUMMARY OF POTENTIAL IMPACTS	42

FIGURES

FIGURE 1 - LOCALITY MAP OF NAKAMBALE ADVENTURE LODGE	9
FIGURE 2 - ECC SCOPING PROCESS.....	17
FIGURE 3 - PROJECT LOCATION	25
FIGURE 4 - NAKAMBALE ADVENTURE LODGE SITE AND SURROUNDING	27
FIGURE 5 - ROADS AND ACCESS ROUTES TO THE PROPOSED LODGE SITE	28
FIGURE 6 - WIND DIRECTION OF SPEED IN ONDANGWA, OSHANA REGION	31
FIGURE 7 - SOIL IN THE AREA.....	33
FIGURE 8 - VEGETATION IN THE AREA.....	34
FIGURE 9 - GEOLOGICAL MAP OF THE AREA	36
FIGURE 10 –HYDROLOGY AND ELEVATION MAP.....	38

DEFINITIONS AND ABBREVIATIONS

ALARP	As Low As Reasonably Practicable
DEA	Directorate of Environmental Affairs
ECC	Environmental Compliance Consultancy
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMP	Environmental Management Plan
ELCIN	Evangelical Lutheran Church in Namibia
IFC	International Finance Corporation
MET	Ministry of Environment and Tourism

1 INTRODUCTION

1.1 PURPOSE OF THIS REPORT

The purpose of this report is to present the findings of the Environmental Impact Assessment (EIA) for the proposed project. The proposed project is to undertake development activities for the Nakambale Adventure Lodge, which is described in detail throughout the report. This EIA has been undertaken in terms of the requirements of the Environmental Management Act, 2007 and the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2011) gazetted under the Environmental Management Act, 2007 (referred to herein as the EIA Regulations). This scoping report plus impact assessment and appendices will be submitted to the Directorate of Environmental Affairs (DEA) at the Ministry of Environment and Tourism (MET) for review as part of the applications for environmental clearance certificate.

This report has been prepared by Environmental Compliance Consultancy (ECC). ECC's terms of reference for the assessment is strictly to address potential effects, whether positive or negative and their relative significance, explore alternatives for technical recommendations and identify appropriate mitigation measures for the proposed project.

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

- Provide a description of the proposed activity and the site on which the activity is to be undertaken, and the location of the activity on the site
- Provide a description of the environment that may be affected by the activity
- Identify the laws and guidelines that have been considered in the assessment and preparation of this report
- Provide details of the public consultation process
- Describe the need and desirability of the activity
- Provide a high level of environmental and social impact assessment on feasible alternatives that were considered, and
- Report the assessment findings, identifying the significance of effects.

An Environmental Management Plan (EMP) (Appendix A) has been developed to mitigate and manage potential impacts identified during the environmental assessment process. An EMP provides the management framework for planning and implementation of exploration activities. It provides operational standards and operating arrangements to ensure that the potential impacts of exploration activities are mitigated, prevented and minimised as far as reasonably practicable, furthermore the EMP ensures that statutory requirements and legal obligations are fulfilled.

1.2 BACKGROUND OF THE PROPOSED PROJECT

Southern Cross Adventure Lodges (Pty) Ltd propose to undertake construction activities for the development of Nakambale Adventure Lodge in Oshikoto Region. The proposed development is a 15 en-suite, 5 self-catering units and 5 camping units lodge. The area has significant sustainable tourism potential and expose tourists to the cultural experience in northern-central Namibia (see Figure 1).

The proposed development will also generate income for the indigenous community. Agreements have been signed, finances are in place and contractors have been appointed for the lodge construction. The newly formed venture is designed to further spread financial, social and environmental benefits that eco-tourism can bring to previously marginalized communities.

Activities of the lodge will include; hiking/nature walks, lodging, cultural interactions with communities, swimming pool, and camping.

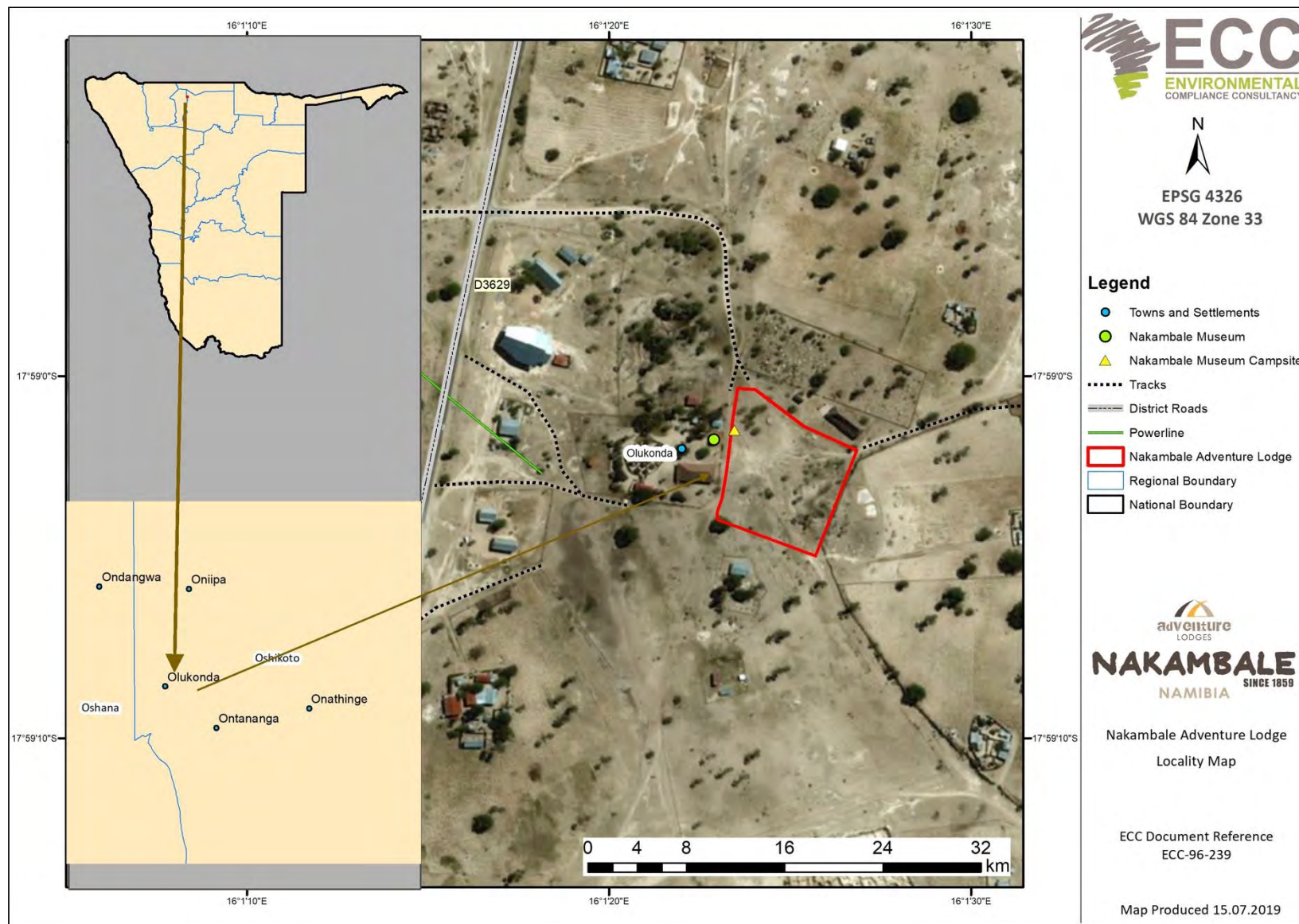


FIGURE 1 - LOCALITY MAP OF NAKAMBALE ADVENTURE LODGE

1.3 ENVIRONMENTAL 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. As such an environmental impact assessment (EIA) of the proposed project is required, and subsequent assessment report (this document) submitted as part of the Environmental Clearance Certificate application. Listed activities triggered by the proposed project in terms of the Environmental Management Act, 2007 and its regulations are as follows:

TABLE 1 - LISTED ACTIVITIES AND RELEVANCE TO THE PROPOSED DEVELOPMENT

LISTED ACTIVITY	EIA SCREENING FINDING
ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES 1 (b) The transmission and supply of electricity	A NamPower line will be installed to provide electricity at the lodge site.
WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES (2.1) The construction of facilities for waste sites, treatment of waste and disposal of waste. (2.3) The import, processing, use and recycling, temporary storage, transit or export of waste	Household waste shall be generated during, construction and operations, which shall be collected and removed from the site for reused, recycling or final disposal at an appropriate facility.
TOURISM DEVELOPMENT ACTIVITIES (6) The construction of resorts, lodges, hotels or other tourism and hospitality facilities	The planned project is the construction of a lodge for tourism purpose.
WATER RESOURCE DEVELOPMENTS 8.6) Construction of industrial and domestic waste water treatment plants and related pipeline systems	Whilst the proposed project is not a dedicated facility for waste management, treatment or disposal, sewerage waste shall be produced on site and will require treatment prior to discharge. A sewerage treatment facility shall be installed.
MINING AND QUARRYING ACTIVITIES (3.2) Other forms of mining or extraction of any natural resources whether regulated by law or not.	Minimal sand removal is required for construction activities. The sand will be sourced from an approved existing borrow pit.
FORESTRY ACTIVITIES (4) The clearance of forest areas, deforestation, forestation, timber harvesting or any other related activity that requires authorisation in term of the Forest Act, 2001 (Act No. 12 of 2001) or any other law.	Minimal vegetation clearance is required in order to allow the construction of the proposed project. Specially protected plant species will not be cleared without approval from the competent authority.

The potential environmental and social effects are anticipated to be of minor significance, and those that may occur shall be contained on the proposed lodge site and they will be managed as per the environmental management plan of this project.

1.4 THE PROPONENT OF THE PROPOSED PROJECT

The proponent of the project is Southern Cross Adventure Lodges (Pty) Ltd are set out in Table 1 below.

TABLE 2 - PROPONENT DETAILS

CONTACT	POSTAL ADDRESS	EMAIL ADDRESS	TELEPHONE	WEBSITE
Jochen Beckert	P O Box 5633 Windhoek	jochen@absoluttours.com	+264 61 308 675	www.absoluttours.com

1.5 ENVIRONMENTAL CONSULTANCY

ECC, a Namibian consultancy (registration number Close Corporation 2013/11401), has prepared this scoping report and impact assessment on behalf of the proponent. ECC operates exclusively in the environmental, social, health and safety fields for clients across Southern Africa, in both the public and private sectors. ECC is independent of the proponent and has no vested or financial interest in the proposed project, except for fair remuneration for professional services rendered. The CVs of the authors of this report are contained in Appendix E.

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

Environmental Compliance Consultancy

PO BOX 91193

Klein Windhoek, Namibia

Tel: +264 81 669 7608

Email: info@eccenvironmental.com

1.6 REPORT STRUCTURE

The scoping report plus impact assessment is structured as per the contents set out in Table 2.

TABLE 3 - STRUCTURE OF THE REPORT

SECTION	TITLE	CONTENT
-	Executive Summary	Executive summary of the EIA
-	Acronyms	A list of acronyms used throughout the report
1	Introduction	This chapter introduces the EIA and provides background information on the proponent
2	Regulatory Framework	This chapter describes the Namibian, international and relevant environmental regulatory framework applicable to the project
3	Methodology and approach to the EIA	Provides the assessment methodology applied to the EIA
4	Project Description	Technical description of the project This chapter considers alternative options for the project that allow the objectives of the project to be met detailing the reasons for the selection and rejection of options
5	Description of the environmental and social baseline	This chapter describes the existing environment through the analysis of the baseline data regarding the existing natural and socio-economic environment
6	Assessment of findings and Mitigation	This chapter predicts the potential environmental and social impacts arising from the project, the assessment of impacts including residual impact 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" (ALARP) this informs the EMP
7	Environmental Management Plan	This chapter provides a short description of the EMP used to take proactive action by addressing potential problems before they occur and outline mitigation measures for each impact

SECTION	TITLE	CONTENT
8	Conclusions	Details the next steps for the EIA
	References	A list of reference used for this report
	Appendix	– Appendix A: Environmental Management Plan – Appendix B: Non-Technical Summary – Appendix C: List of plant species – Appendix D: Evidence of Public Consultation, Site notice, Newspaper adverts – Appendix E: ECC CVs

2 REGULATORY FRAMEWORK

The Constitution of the Republic of Namibia, 1990 clearly defines the nation's position in relation to sustainable development and environmental management. The Constitution says that the State shall actively promote and maintain the welfare of the people by adopting policies aimed at the following:

"Maintenance of ecosystems, essential ecological processes and biological diversity of Namibia and utilization of living natural resources on a sustainable basis for the benefit of all Namibians, both present and future;"

The Constitution of the Republic of Namibia Article 95 (I)

This chapter outlines the regulatory framework applicable to the proposed project. TABLE 4 - LEGAL COMPLIANCE provides a list of applicable legislation and the relevance to the project.

TABLE 4 - LEGAL COMPLIANCE

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
Environmental Management Act, 2007 (Act No. 7 of 2007) and its regulations, including the Environmental Impact Assessment Regulation, 2007 (No. 30 of 2011)	The Act aim to promote sustainable management of the environment and the use of natural resources by establishing principles for decision-making on matters affecting the environment. 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. The MET is responsible for the protection and management of Namibia's natural environment. The Department of Environmental Affairs under the MET is responsible for the administration of the EIA process.	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 under the Act and its regulations.
Water Act, 1956	This Act provides for "the control, conservation and use of water for domestic, agricultural, urban and industrial purposes; to make provision for the control, in certain respect and for the control of certain activities on or in water in certain areas". The Ministry of Agriculture Water and Forestry Department of Water Affairs is responsible for the administration of the Water Act.	The Act stipulates obligations to prevent pollution of water. The EMP sets out measures to avoid polluting the water environment. Measures to minimise potential groundwater and surface water pollution are contained in the EMP. Should the project abstract of water from surface and or underground water sources, an application should be submitted to the Minister of Agriculture Water and Forestry.

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	The Minister may issue a Permit in terms of the regulations 5 and 9 of the government notice R1278 of 23 July 1971 as promulgated under section 30 (2) of the Water Act no. 54 of 1956, as amended.	
Soil Conservation Act No.76 of 1969	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.	Whilst minimum vegetation disturbance will occur on site during construction, there is potential to remove some and disturb soil. The construction methods and final design have been considered in the design of the planned project to be undertaken within site boundaries. Measures in the EMP set out methods to avoid soil erosion.
National Heritage Act, No. 27 of 2004.	The Act provides provision of the protection and conservation of places and objects with heritage significance. Section 55 compels companies to report any archaeological findings to the National Heritage Council after which a heritage permit needs to be issued	There is potential for heritage objects to be found on site, therefore the stipulations in the Act have been taken into consideration and are incorporated into the EMP. Section 55 compels companies to report any archaeological findings to the National Heritage Council after which a permit needs to be issued before the find can be disturbed.

2.1 NATIONAL POLICIES

TABLE 5 – NATIONAL POLICIES AND APPLICABILITY TO THE PROJECT

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
Vision 2030	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. Vision 2030 states that the overall goal of the vision is to improve the quality of life of the Namibian people to a level in line with the developed world.	The planned project shall meet the objectives of Vision 2030 and shall contribute to the overall development of the country while building capacity in the local communities.
Fifth National Development Plan (NDP5)	The 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. The NDP5 is structure on five pillars: economic progression, social transformation, environmental sustainability and good governance. Under the	The planned project supports meeting the objectives of the NDP5 through creating opportunities for ecotourism.

NATIONAL REGULATORY REGIME	SUMMARY	APPLICABILITY TO THE PROJECT
	social transformation pillar is the goal of improved education. A desired outcome of NDP5 is to have a diversified and competitive tourism sector with increased number of tourists from 1.4 million in 2015 to 1.8 million.	
The Environmental Assessment Policy	Approved by Cabinet in 1994, the Policy obliges Namibia to place a high priority on maintaining ecosystems and related ecological processes, and to uphold maximum biological diversity. The Policy recognises that environmental assessments are a key tool towards implementing integrated environmental management. The policy has also gained legislative support by the EMA.	Part of the planned projects vision is to maintain the ecosystems found on the planned site in order to integrate the facilities into the natural environment. An environmental assessment has also been undertaken as required under the EMA. The findings of which are presented in this report.

2.2 ENVIRONMENTAL POLICY

Southern Cross Adventures Lodges personnel are committed to environmental management principles and to conduct all construction activities in such a way as to minimize the adversely impact upon the natural environment, to ensure the compliance with all applicable laws and to aim for continuous improvements. This will be achieved through the understanding by all personnel of the Southern Cross Adventure Lodges' Environmental Management System (EMS) and their role in it, coupled with effective monitoring and control systems.

The EMS will be audited on a regular basis to assess compliance. The target will be reviewed and updated where necessary in order to align to the requirements of the International Environmental Management Standard ISO 14001.

2.3 PERMITS

Environmental permits may be needed in order to carry out operations of the lodge. Eco awards Namibia is an alliance of private sector and government organisation that runs a sustainable tourism certification programme. It is a mark of distinction for accommodation establishments that are planned and managed according to eco-friendly principles. The Self-assessment is included in Appendix F. Details of the permits and awards are included in TABLE 6.

TABLE 6 - PERMITS AND LICENSES

PERMIT	RELEVANT AUTHORITY	VALIDITY/DURATION
Waste Treatment Plant	Ministry of Water, Agriculture and Forestry	Permit dependent
Water Abstraction Permit	Ministry of Water, Agriculture and Forestry	Permit dependent
Eco Awards	Namibia Tourism Board	Application Dependent

3 METHODOLOGY AND APPROACH TO THE EIA

3.1 PURPOSE OF THE ENVIRONMENTAL IMPACT ASSESSMENT

The EIA process in Namibia is governed and controlled by the Environmental Management, 2007 and the EIA Regulations 30 of 2012, which is administered by the Office of the Environmental Commissioner through the Department of Environmental Affairs (DEA) of the MET.

An EIA is a process of identifying, predicting, evaluating and mitigating the potential impacts of a proposed project on the natural and human environment. The aim of the scoping assessment and EIA process and subsequent report are to apply the principles of environmental management to proposed activities, reduce the negative and increase the positive impacts arising from a proposed project, provide an opportunity for the public to consider the environmental impacts of a proposed project through meaningful consultation, and to provide a vehicle to present the findings of the assessment process to competent authorities for decision making.

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. The process followed through the basic assessment is illustrated in FIGURE 2 - ECC SCOPING PROCESS and detailed further in the following sections.

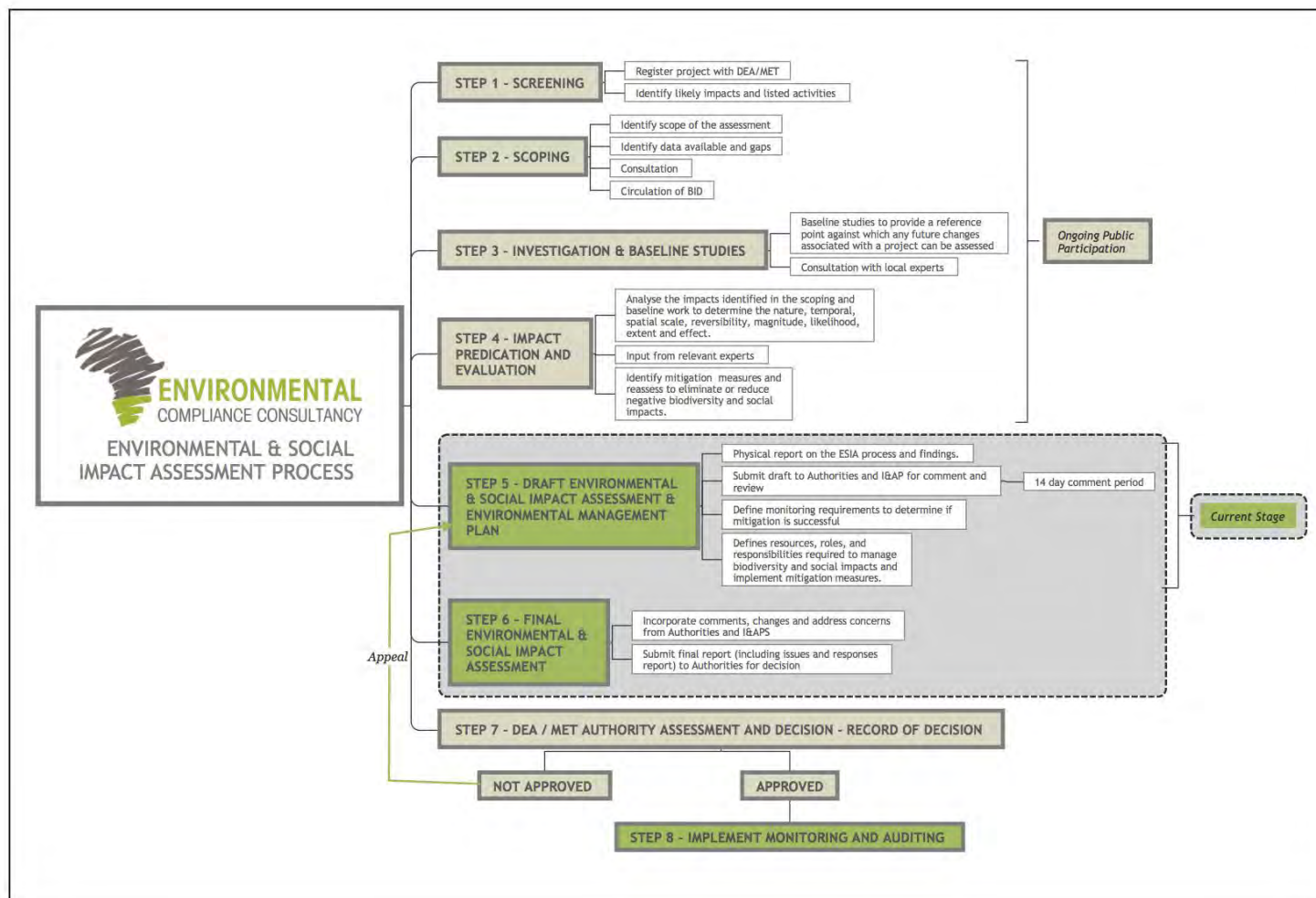


FIGURE 2 - ECC SCOPING PROCESS

3.1 METHODOLOGY FOR THE IMPACT ASSESSMENT

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) principal 1 'Assessment and management of environmental and social risks and impacts. Furthermore, this impact assessment was undertaken for Nakambale Adventure Lodge in accordance with Namibian legal requirements.

This impact assessment is a formal process in which the effects of certain types of development on the biophysical, social and economic environments are identified, assessed and reported, so that the effects can be taken into account when considering whether to grant development consent or to provide financial support.

Desktop studies on the national database are undertaken as part of the scoping stage to get information of 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.

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.

3.2 SCREENING OF THE PROPOSED PROJECT

The first stages of the EIA process are to register the project with the Competent Authority and undertake a screening exercise. The screening exercise determines whether the proposed project is considered as a Listed Activity in terms of the Environmental Management Act, 2007 and associated Regulations, and if significant impacts may arise. During this process, the location, scale and duration of project activities are considered against the receiving environment to determine the approach to the EIA.

3.3 SCOPING OF THE ENVIRONMENTAL ASSESSMENT

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

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

3.4 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 which changes that occur as a result of the proposed project can be measured.

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 baseline studies are presented in Section 4.

3.5 IMPACT PREDICATION AND EVALUATION

Impact prediction and evaluation involves predicting the possible changes to the environment as a result of the development/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 findings of the assessment are presented in section 6.

3.6 EIA DETERMINATION OF SIGNIFICANCE

The evaluation and prediction 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. The magnitude of change (the impact) is the identifiable changes to the existing environment which may be direct or indirect; temporary/short term, long-term or permanent; and either beneficial or adverse. These are described as follows and thresholds are provided in Table 7, 8, and 9

- The **sensitivity and value of a receptor** is determined by identifying how sensitive and vulnerable a receptor is to change, and the importance of the receptor (internationally, nationally, regionally and locally).
- The **nature and characteristics of the impact** is determined through consideration of the frequency, duration, reversibility and probability of the impact occurring.
- The **magnitude of change** measures the scale or extent of the change from the baseline condition, irrespective of the value. The magnitude of change may alter over time, therefore temporal variation is considered (short- term, medium-term; long-term, reversible, irreversible or permanent).

TABLE 7 - SENSITIVITY AND VALUE OF RECEPTOR

SENSITIVITY AND VALUE	DESCRIPTION
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.
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.
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.

TABLE 8 - NATURE OF IMPACT

NATURE	DESCRIPTION
Positive	An impact that is considered to represent an improvement on the baseline or introduces a positive change.
Negative	An impact that is considered to represent an adverse change from the baseline or introduces a new undesirable factor.
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
Extent / Geographic Scale	
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.
Duration	
Short-term	Impacts that are likely to last for the duration of the activity causing the impact and are recoverable
Medium-term	Impacts that are likely to continue after the activity causing the impact and are recoverable
Long-term	Impacts that are likely to last far beyond the end of the activity causing the damage but are recoverable over time
Reversibility	
Permanent /Irreversible	Impacts which are not reversible and are permanent
Temporary / Reversible	Impacts are reversible and recoverable in the future
Likelihood	
Certain	The impact is likely to occur
Likely	The impact is likely to occur under most circumstances
Unlikely	The impact is unlikely to occur

TABLE 9 - MAGNITUDE OF CHANGE

MAGNITUDE OF CHANGE	DESCRIPTION
Major	Loss of resource, and quality and integrity of resource; severe damage to key characteristics, features or elements; or Large-scale or major improvement of resources quality; extensive restoration or enhancement; major improvement of attribute quality.
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.
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.
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.

The level of certainty has also been applied to the assessment to demonstrate how certain the assessment conclusions are and where there is potential for misinterpretation or a requirement to identify further mitigation measures, thereby adopting a precautionary approach. Where there is a low degree of certainty, monitoring and management measures can be implemented to determine if the impacts are worse than predicted and support the identification of additional mitigation measures through the life time of the proposed project. Table 7 provides the levels of certainty applied to the assessment, as well as a description.

TABLE 10– LEVEL OF CERTAINTY

LEVEL OF CERTAINTY	DESCRIPTION
High	– Likely changes are well understood – Design/information/data used to determine impacts is very comprehensive – Interactions are well understood and documented – Predictions are modelled, and maps based on interpretations are supported by a large volume of data, and – Design/information/data has very comprehensive spatial coverage or resolution.
Medium	– Likely changes are understood – Design/information/data used to determine impacts include a moderate level of detail – Interactions are understood with some documented evidence – Predictions are modelled but not yet validated and/or calibrated, and – Mapped outputs are supported by a moderate spatial coverage or resolution.
Low	– Interactions are currently poorly understood and not documented. – Predictions are not modelled, and the assessment is based on expert interpretation using little or no quantitative data. – Design is not fully developed, or information has poor spatial coverage or resolution.

The significance of impacts has been derived using professional judgment and applying the identified thresholds for receptor sensitivity and magnitude of change (as discussed above) and guided by the matrix presented in Figure 8. The matrix is applicable for impacts that are either positive or negative. The distinction and description of significance and whether the impact is positive, or negative is provided in Table 4.

TABLE 11 -- GUIDE TO SIGNIFICANCE RATINGS

Magnitude of Change				Sensitivity
Negligible	Minor	Moderate	Major	
Minor (3)	Moderate (6)	Major (9)	Major (12)	
Low (2)	Minor (4)	Moderate (6)	Major (8)	
Low (1)	Low (2)	Minor (3)	Moderate (4)	Low

Significance is not defined in the Namibian EIA Regulations, however the Draft Procedure and Guidance for EIA and EMP states that the significance of a predicted impact depends upon its context and intensity. Accordingly, definitions for each level of significance has been provided in TABLE 12. These definitions were used to check the conclusions of the assessment of receptor sensitivity, nature of impact and magnitude of impact was appropriate.

TABLE 12– SIGNIFICANCE DESCRIPTION

SIGNIFICANCE OF IMPACT	DESCRIPTION
Major (negative)	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.
Moderate (negative)	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.
Minor (negative)	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.
Low (negative)	Impacts are considered to be local factors that are unlikely to be critical to decision-making.
Low – Major (Beneficial)	Impacts are considered to be beneficial to the environment and society:

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 9 was also followed when determining the level of significance for a beneficial impact.

The significance of impacts has been derived using professional judgment and applying the identified thresholds for receptor sensitivity and magnitude of change, as well as the definition for significance. In most instances, moderate and major adverse impacts are considered as significant, and however, there may be some instances where impacts are lower than this but are considered to be 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.

3.7 EIA CONSULTATION

Public participation and consultation are a requirement in terms of in section 21 of the Environmental Management Act No.7 of 2007 and its regulations for a project that requires an Environmental Clearance Certificate. Consultation is a compulsory and critical component in the EIA process, aimed at achieving transparent decision-making, and can provide many benefits.

A key aim of the consultation process is to inform stakeholders and interested and affected parties (I&AP) about the proposed project. The methods undertaken for the proposed project are detailed as follows, which are in line with the requirements of the EIA regulations.

3.7.1 NEWSPAPER ADVERTISEMENTS

Notices regarding the proposed project and associated activities were circulated in two newspapers namely the 'Namibian' on the 16th July and 23rd July 2019 and in the 'Informante' on the 18th and 25th of July 2019. The purpose of this was to commence the consultation process and enable I&APs to register an interest with the project. The adverts can be found in Appendix C.

3.7.2 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. The contact details for further enquiries are made available to all registered I&APs and the NTS can be found in Appendix B.

3.7.3 SITE NOTICES

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

3.7.4 CONSULTATION FEEDBACK

No issues or concerns were raised by the I&APs during consultation period.

4 PROJECT DESCRIPTION

4.1 NEED FOR THE PROPOSED PROJECT

Namibia is among the prime tourist destinations in Africa and home to a large number of wildlife species found nowhere else in the world. Nearly 20% of employments in the country are directly or indirectly related to the tourism industry. The sector contributes to about 14.5% of the country's GDP and more than one million tourists flock the country's national parks and other tourist destinations each year. Lodges and hotels have increased to cater to the new emerging interests as well as accommodate tourists from all over the world.

As a renowned ecotourism destination, Namibia's economy is heavily reliant on its extensive tourism industry. Especially with the current environmental issues within the country such as the impact of drought and climate change together with economic crisis, the proposed development has a potential to improve the living standards condition of the community at the local and regional levels.

Consequently, the development of the Nakambale Adventure Lodge will provide a unique cultural tourism in conjunction with the existing museum. As a result, the proposed project will attract tourists to the region thereby presenting opportunities for development and other potential investors, whilst exposing tourists to a full cultural experience of the Ovambo tribes, which is currently underutilised. The need to expand the tourism sector and ensure sustainability in the sector is highlighted in Namibia's 5th National Development Plan.

4.2 ALTERNATIVES

The proposed project has been subject to a process of design evolution, informed by both consultation and an iterative environmental assessment. In terms of the Environmental Management Act, 2007 and its regulations, alternatives considered should be analysed and presented in the scoping assessment and EIA report. This requirement ensures that during the design evolution and decision-making process, potential environmental impacts, costs, and technical feasibility have been considered, which leads to the best option(s) being identified.

4.2.1 ALTERNATIVES CONSIDERED

The environmental assessment has taken a worst-case scenario into consideration which includes a review of all likely construction activities, thus no other technological alternatives are available for consideration at this stage. Once the construction programme is further defined, the best available option for methods shall be identified to ensure the impacts on the environment and society are minimised.

4.2.2 NO-GO ALTERNATIVE

Should construction activities within the Nakambale Adventures Lodge site not take place, the anticipated environmental impacts from developmental activities would not occur, however, the social and economic benefits associated with the project would also not be realised.

There will not be an opportunity to define resources within the project area, a missed opportunity for cultural tourism, accommodation and lodging could benefit the Namibian economy.

In many places the introduction and development of tourism allows local people an opportunity for economic and educational growth that would not otherwise be available. In addition, it allows both the tourist and the local community a chance to experience other cultures, which broadens understanding.

4.3 THE PROJECT SITE AND LOCATION

The Nakambale Adventure Lodge will be located in Olukonda constituency, about 12 km south of Ondangwa town on the D3629 road in Oshikoto region within the central-northern part of Namibia. The lodge boundaries are in close proximity to the Nakambale Museum which is situated in the former Finnish Missionary house and

mainly displays items from the Finnish missionary station, but also some artefacts of the Ovambo (see FIGURE 3
- PROJECT LOCATIO.

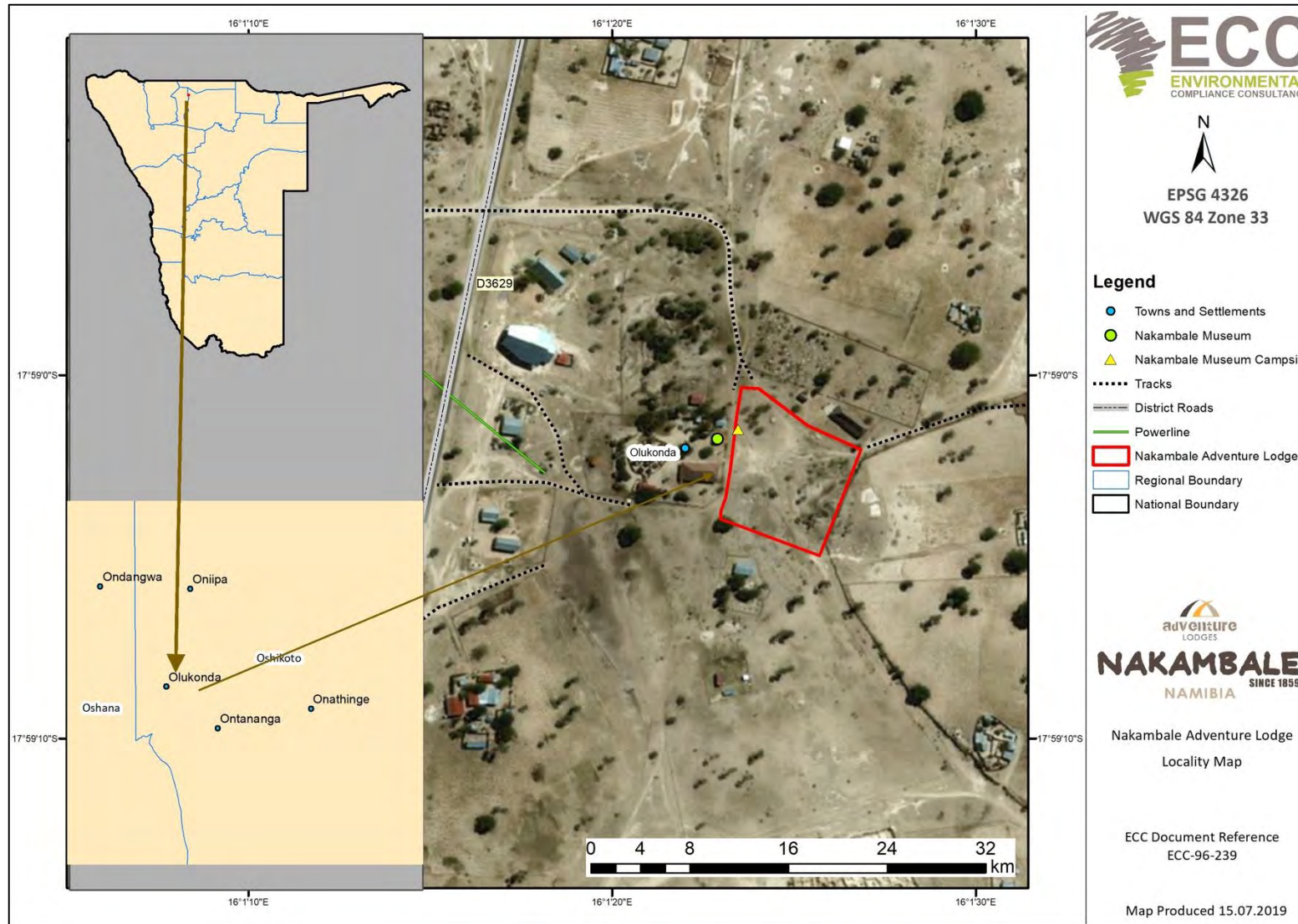


FIGURE 3 - PROJECT LOCATION

4.4 SITE AND SURROUNDING ENVIRONMENT

The proposed development, Nakambale Adventure Lodge is located in the beautiful plains, amidst makalani palms, mahangu fields and homesteads of the Ovambo people in Olukonda village. Olukonda was one of the first Finnish mission stations in Ovamboland and was founded in 1871 during the colonial time of German South West Africa. It became home for Rev Martti Rautanen who often wore a hat which when turned upside down looked like ombale, (a traditional basket) and became locally known as Nakambale and that is where the Museum, in proximity to the proposed lodge, got its name.

Additionally, the Olukonda mission church known as Evangelical Lutheran Church in Namibia (ELCIN) is one of the first church built in Namibia in 1889, close to the lodge and the Ndonga royal family homestead. The area is also surrounded by a graveyard north east of the proposed development site FIGURE 4.

Tourism attractions within the region include the Otjikoto Lake, Guinas Lake, and Tsumeb Museums. The tourist attraction in the region is Etosha National Park, which is the biggest and most famous area which offers opportunities for viewing wildlife, such as elephants, rhinos, lions, impala, leopards, kudus, zebras, giraffes and many others. FIGURE 5 - ROADS AND ACCESS ROUTES TO THE PROPOSED LODGE SITE

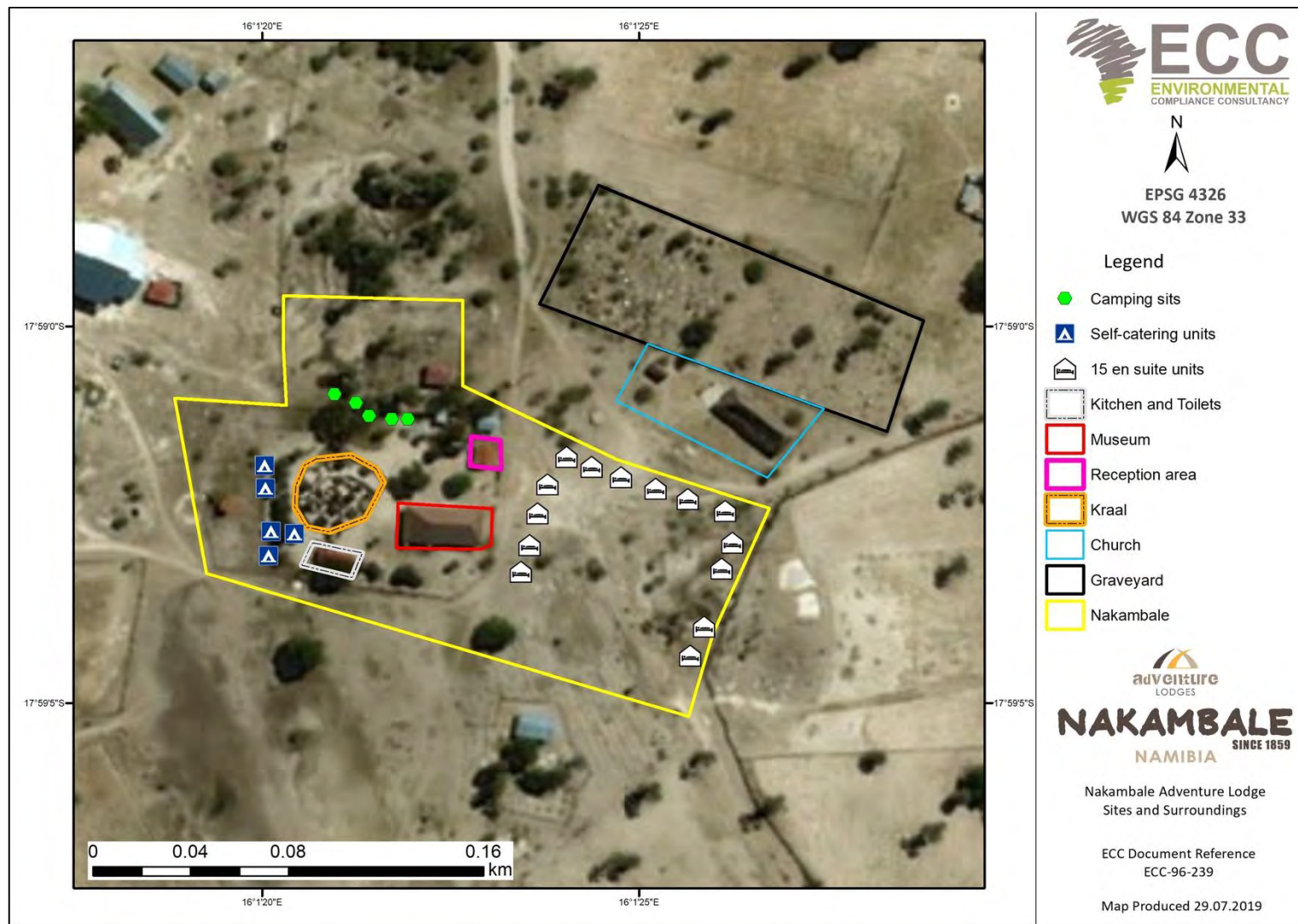


FIGURE 4 - NAKAMBALE ADVENTURE LODGE SITE AND SURROUNDING

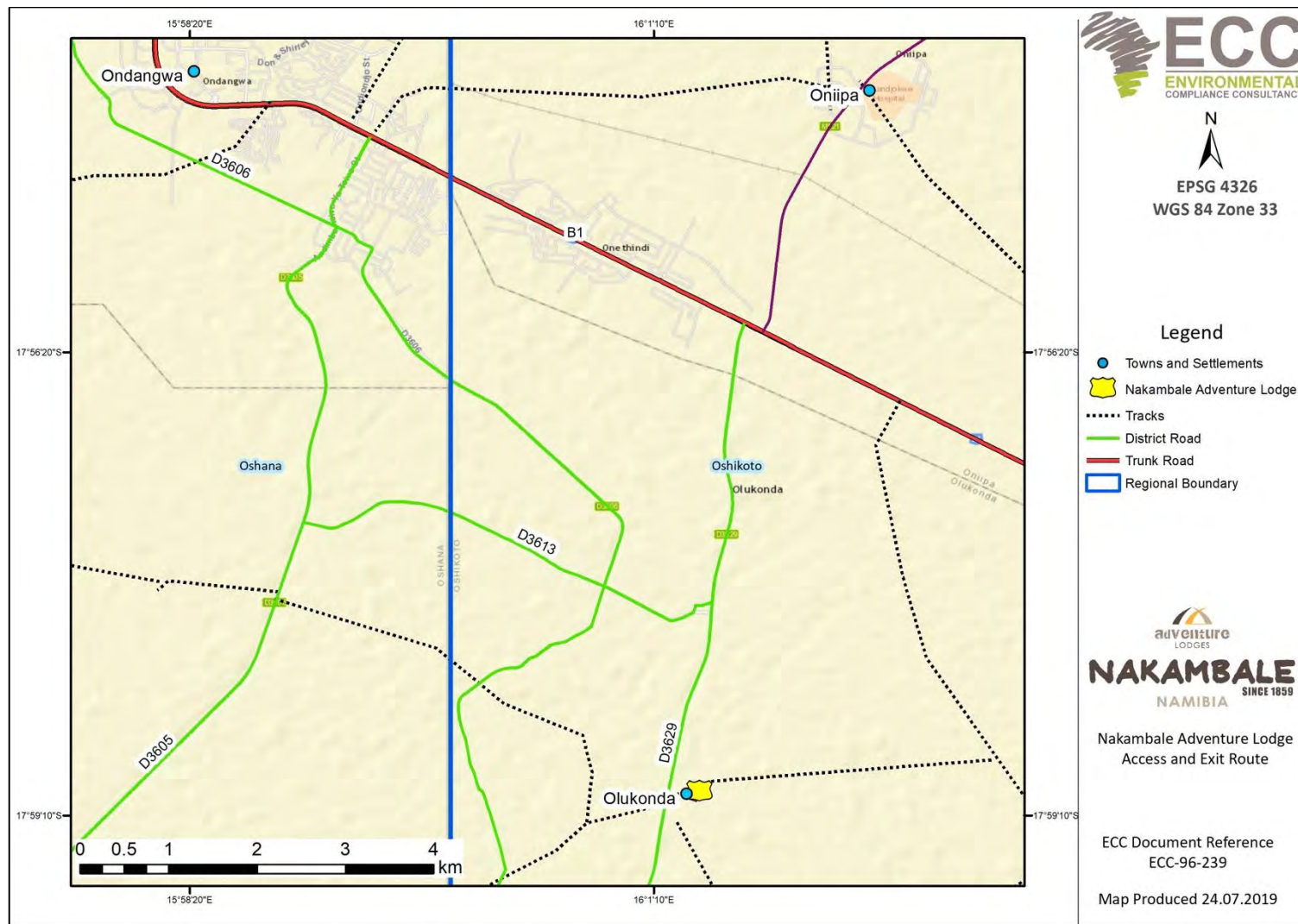


FIGURE 5 - ROADS AND ACCESS ROUTES TO THE PROPOSED LODGE SITE

4.5 PROPOSED DEVELOPMENT ACTIVITIES

The planned development entails the construction of tourist accommodation consisting of the following:

- Accommodation rooms for maximum of 30 guests
- Fifteen (15) en-suite guest rooms
- Five (5) camp sites
- Five (5) self-catering facilities
- Power line to provide electricity
- Water pipelines connections and water storage tanks
- 30 litres Swimming Pool
- Removal of natural resources (sand /soil) for construction if required

4.5.1 DESIGN AND BUILDING MATERIAL

The lodge will be constructed using platforms alleviated from the ground with wooden poles planted to support the structure. The flooring will be made from “everlast” building material which is a recycling product. The walls will be covered with canvas wrapping. All building materials that will be used for the proposed development will be eco-friendly alternative and of low cost compared to other building materials such as bricks. This method of construction is also suitable for flood prone areas and have a non-permanent structure for easier relocation. In addition, the method will have a very low carbon footprint and requires unskilled local labour during the construction phase.

4.5.2 PLANNED PROJECT SCHEDULE

The proposed activities as discussed above are anticipated to be carried out once an environmental clearance certificate is granted by the MET. Construction activities are intended to commence in October 2019 and may last for up to January 2020. The environmental clearance certificate along with all required permits should be in place during the construction and operational phases of the project.

4.5.3 WORKERS AND ACCOMMODATION

During the construction phase, the project expects to avail 10-30 employment opportunities. Housing for staff will be in the existing village and not at the lodge. All workers are expected to commute from homes every day. Once the lodge moves into operation, up to five (5) people will be permanently employed. Employment will be sourced locally as far as practically possible.

4.5.4 RESOURCE AND WASTE MANAGEMENT

Water will be required for various uses including human consumption and for construction activities. The water will be sourced from existing water sources on site, after permission is granted from the relevant authority. In the event that suitable water is not available, water maybe brought to site by truck, alternatively, a borehole will be drilled. In this case the required water borehole permits, and abstraction permit shall be obtained from the Ministry of Agriculture, Water and Forestry.

Waste will be produced on site, which will include sewage and solid waste. All solid waste shall be collected and delivered to the nearest waste management site for disposal. The proponent will ensure waste transport certificates are provided by the contractor. No waste shall be discharged into the environment.

5 ENVIRONMENTAL AND SOCIAL BASELINE

5.1 INTRODUCTION

This section provides an overview of the existing biophysical environment through the analysis of the baseline data regarding the existing natural and socio-economic environment. Desktop studies on the national database are undertaken as part of the scoping stage to get information of 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 section also incorporates consultation and public participation of the proposed project.

5.2 BASELINE OF THE BUILT ENVIRONMENT AND LAND-USE

The Oshikoto region is centrally located north of the Ohangwena region, east of the Kavango west, south and east of Otjozondjupa region and west of Oshana region. The total population of the region is 181,973 and it covers an area of 38,685 km². Approximately 86% of the population speak the oshiwambo language.

The proposed development is located in the area in which land use is predominated by small-scale agricultural crop and livestock farming, making farming one of the main land-use activities, but the area also has a potential tourism business. This involves agro-silvo pastoralism, based primarily on the Pearl Millet (*Pennisetum glaucum*) (locally known as mahangu) as a crop composition, livestock keeping through communal grazing and multipurpose use of indigenous plants (e.g. wood harvesting) (Jurgens, Schmiedel, & Hoffman, 2010).

In terms of tourism attractions within the project area, the culture of the Ovambo people and their exciting history of the liberation struggle as well as some sights such as the Ombalantu Baobab (which is one of the largest Baobabs in Africa), Olukonda Missionary Station and Nakambale Museum are worth the visits. Other attractions in Oshikoto region are the natural springs in King Nehale conservancy.

5.3 CLIMATE AND RAINFALL

Namibia is generally considered to be a hot country however temperatures vary with day, time, and season. The central-northern Namibia is described as semi-arid, with rainfall restricted to the summer months (November to April) when temperatures are also the highest. The annual rainfall varies between 350 – 550 mm. It is estimated that about 83% of all the rainwater evaporates soon after it has fallen while percolation rate is also very high. This is due to the poor water holding capacity of the soils in the area and consequent reduction in the water available for plants (Mendelssohn, 2000).

The Ovambo, of whom many still live of subsistence farming, make use of the water in the *Oshanas*. *Oshanas* are shallow water ways that are filled during the rainy season, with draining waters from the Angolan highlands. During the floods the water eventually travels into the Etosha Pan where it forms a large temporary lake.

The temperatures in the central-northern Namibia varies greatly as it has hot summers and mild winters. In summer, heat is often subdued by the rains, but temperatures may rise well above 37.5 degrees. The highest total radiation values are in the central north Namibia ranging between 6.2-6.4kWh/m²/day. This is where the elevations of the sun are higher on average than in the south (Mendelssohn, 2000). The prevailing wind in the central-northern is dominantly from the north east, with an average speed of approximately 2.3m/s and 4.8% calm days since the beginning of 2019 (FIGURE 6).

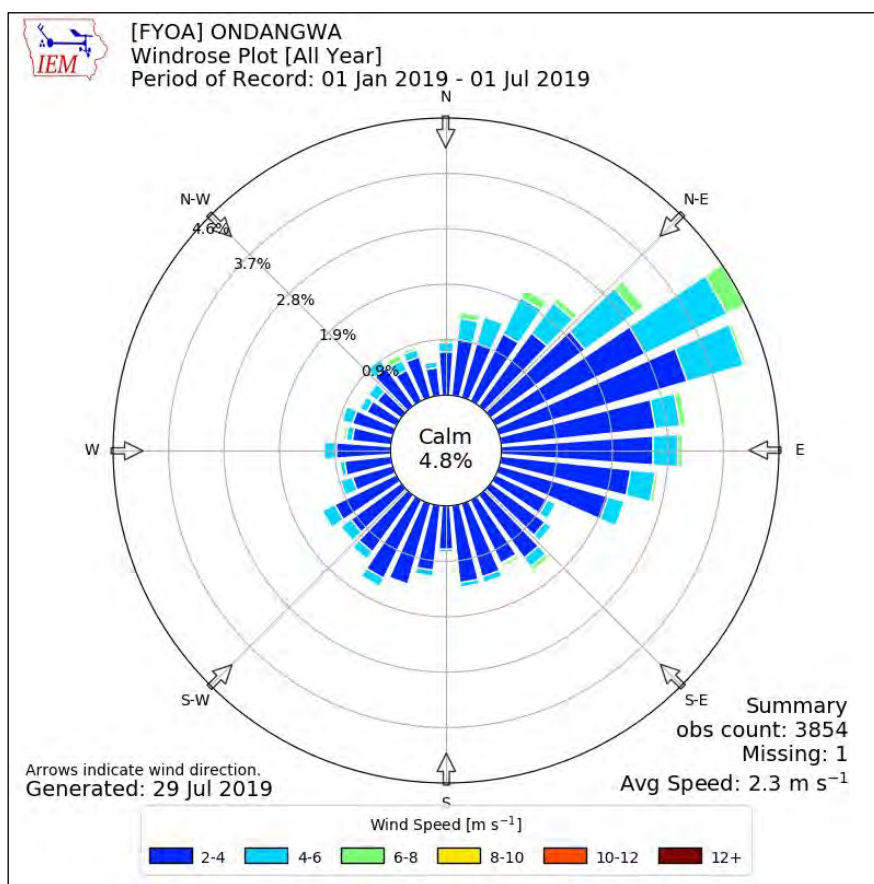


FIGURE 6 - WIND DIRECTION OF SPEED IN ONDANGWA, OSHANA REGION

5.4 SOIL AND VEGETATION

The soils of the central-northern area are mainly deposited by wind and water. The soils are nutrient-poor with relatively low fertility due to minimal organic matter that is returned to the soil. The soils are part of the cambic arenosols group as indicated in FIGURE 7. Generally, rocks do not occur in central-northern Namibia, but precipitated calcareous concretes have been encountered in some areas (Mandelsohn *et al.*, 2000).

The vegetation within Oshikoto is classified into five physiographical regions namely;

- Oshigambo-Niipele Drainage Basin- palm savannah characterized by open grassy drainage depressions lined by Makalani Palms and Mopane trees on higher ground.
- Ekuma Grassveld- seasonally flooded grasslands with patches of Acacia and Mopane species (Southwestern part, north of Etosha).
- Northern Kalahari Sandveld- dry bush savannah with dunes. Acacia species are predominant.
- Kalkveld-Mopane Acacia savannah and bush savannah (east of Etosha Pan) and,
- Karstland-mountain savannah dominated by Mopane and Acacia. Slopes of mountains have trees and shrubs with edible grass species.

Only a sparse vegetation is found in the *Oshanas* during dry season with Mopane trees and Makalani palms growing along their fringes. The proposed site is dominated by sparse shrublands and slight cover of woodland (FIGURE FIGURE 8). The vegetation density in proximity of the lodge site is sparse, dominated by *Colophospermum mopane* (mopane). Nevertheless, every effort will be made to protect the existing trees and shrubs, because it is equally important to ambience and aesthetic appeal of the lodge surroundings. List of species in the area provided by the National Herbarium of Namibia is included in appendix E.

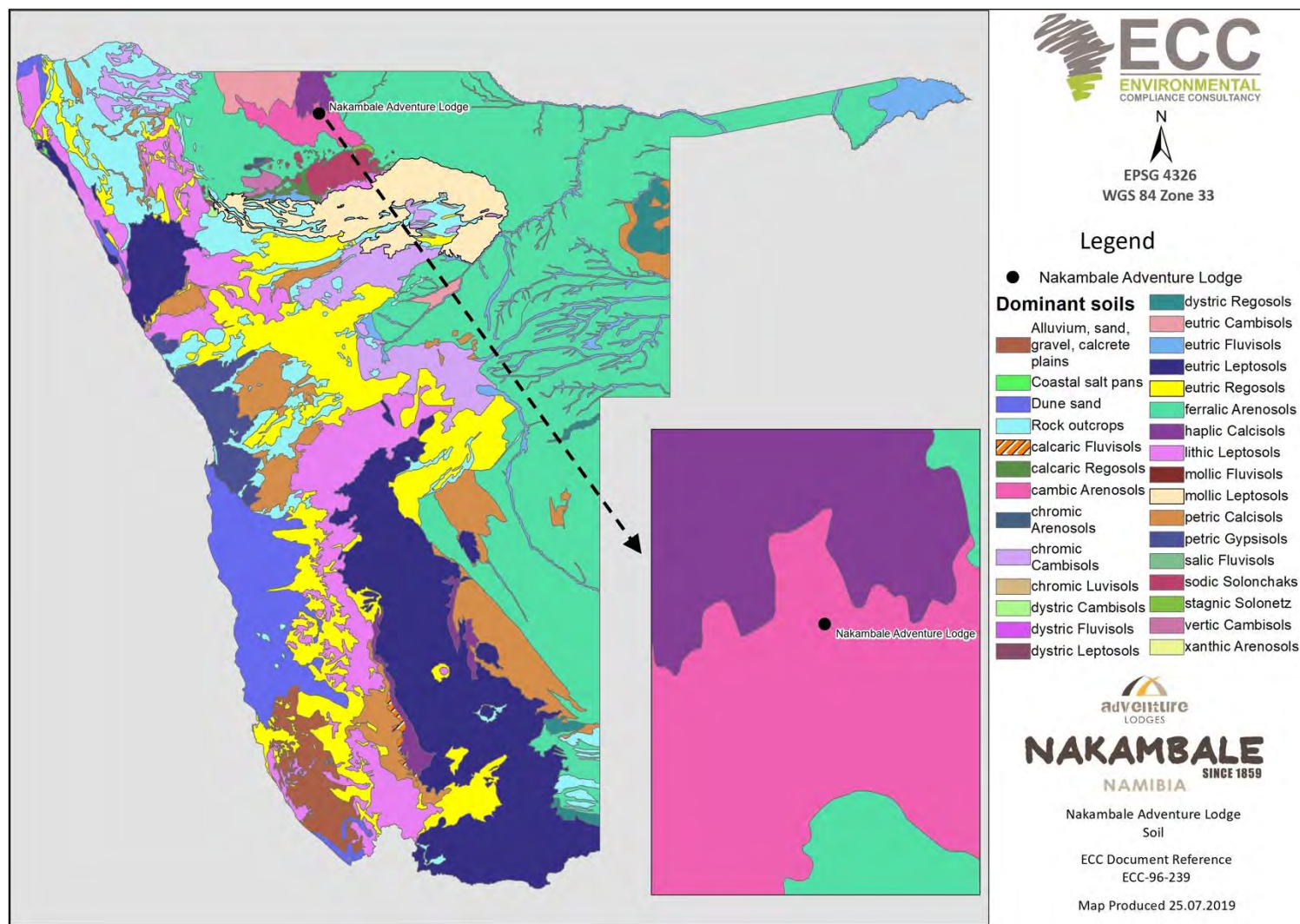


FIGURE 7 - SOIL IN THE AREA

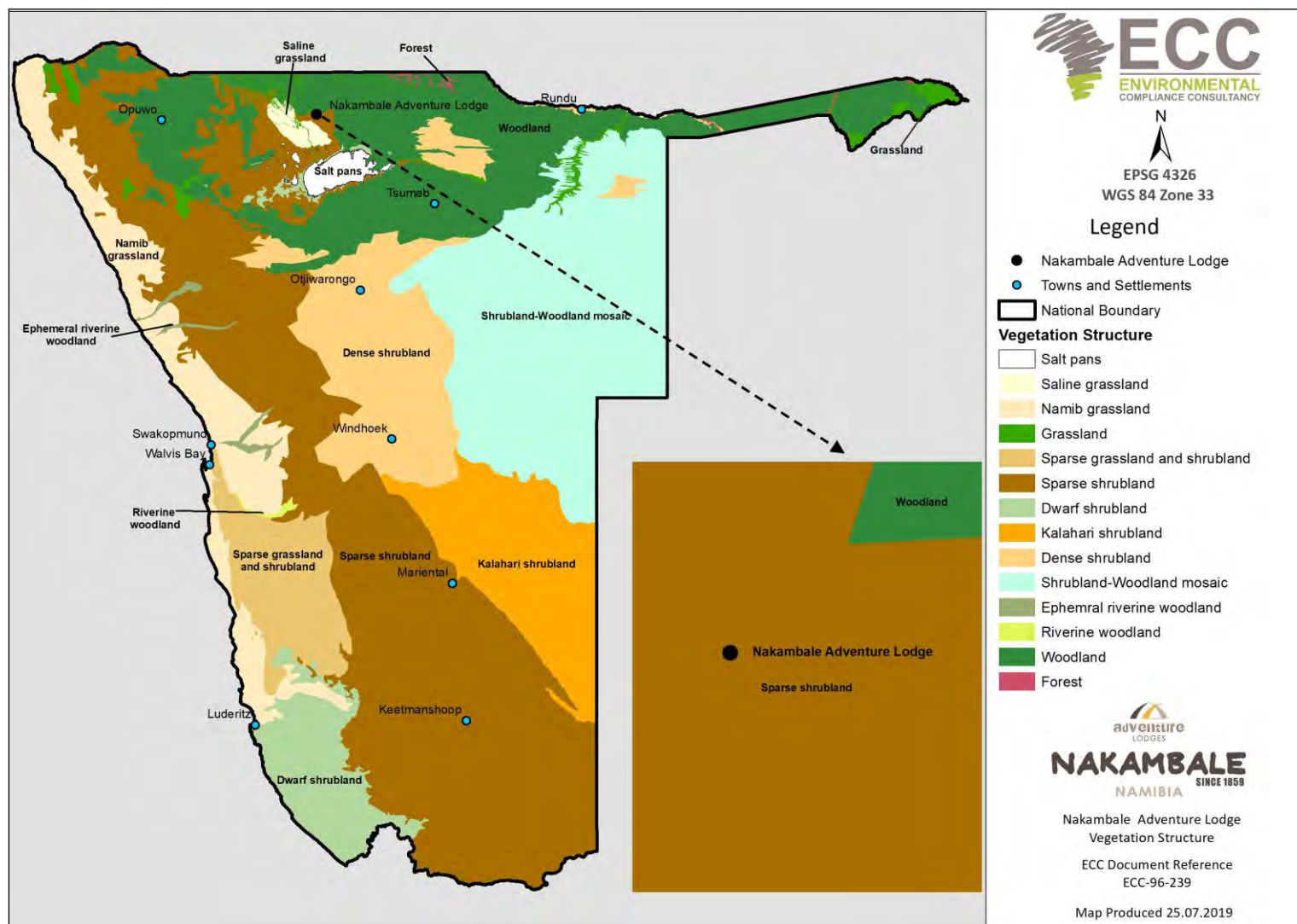


FIGURE 8 - VEGETATION IN THE AREA

5.5 BIODIVERSITY - FAUNA SPECIES

There is a wide variety of wildlife within the region, especially in Etosha National Park, King Nehale conservancy and in some commercial farms which provide a complementary economic opportunity with the proposed project. During the flood, large parts of the central-northern turns into wetlands bird diversity appears consisting of pelicans, storks, flamingos and many other species. The waterways are filled with fish. Apart from that, only very little wildlife is found in the communal area particularly north of the Etosha National Park due to the high population density.

5.6 SITE GEOLOGY

The stratigraphy of the area encompasses the Kalahari and Namib sands basin. These outcrops are surrounded by sediments that accumulated and evolved through fluvio-deltaic, aeolian and groundwater processes. The regional geology within Kalahari group sediments generally include a widespread basal gravel and a fining upwards sequence with sedimentary facies ranging from coarse clastic proximal facies to distal fine-grained mudstones (See FIGURE 10) (Haddon, 2005).

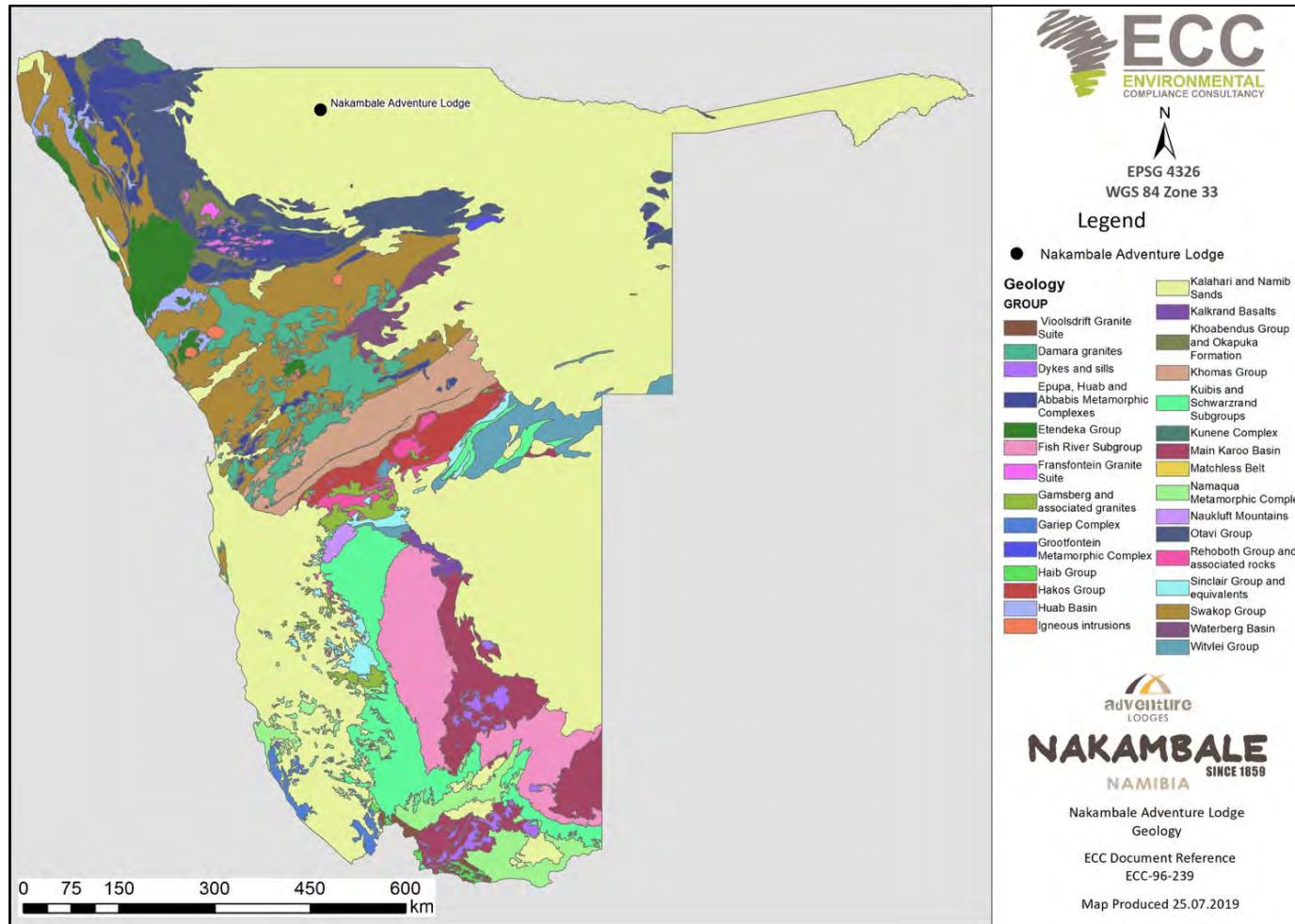


FIGURE 9 - GEOLOGICAL MAP OF THE AREA

5.7 HYDROLOGY AND TOPOGRAPHY

The planned project site is relatively flat with little to no elevated areas as shown in FIGURE 10. The elevation above sea level is 1041m - 1123m. However, there are some pockets of higher ground at the Otavi Mountain Range and the mountain at Halali.

Numerous underground caverns, with high-quality groundwater, are found in limestone. The drainage system is defined by three river systems flowing from east to west and two systems originating in Central Angola draining into the Etosha Pan. The central part of the region is intersected by a network of shallow water courses (*Oshana's*) which comprises the Cuvelai Delta. The *Oshana's* are usually recharged by flood waters that flow from Angola highlands where annual rainfall may exceed 700 mm and become flooded during rainy seasons. After rain, fresh surface water in pans and *Oshanas* is available until June-July. Groundwater retrieved through boreholes ranges from drinkable to highly saline. There are number of existing boreholes around the site and should the project require abstraction of water from surface and or underground sources, an application must be submitted to the Minister of Agriculture, Water and Forestry refer to FIGURE 10.

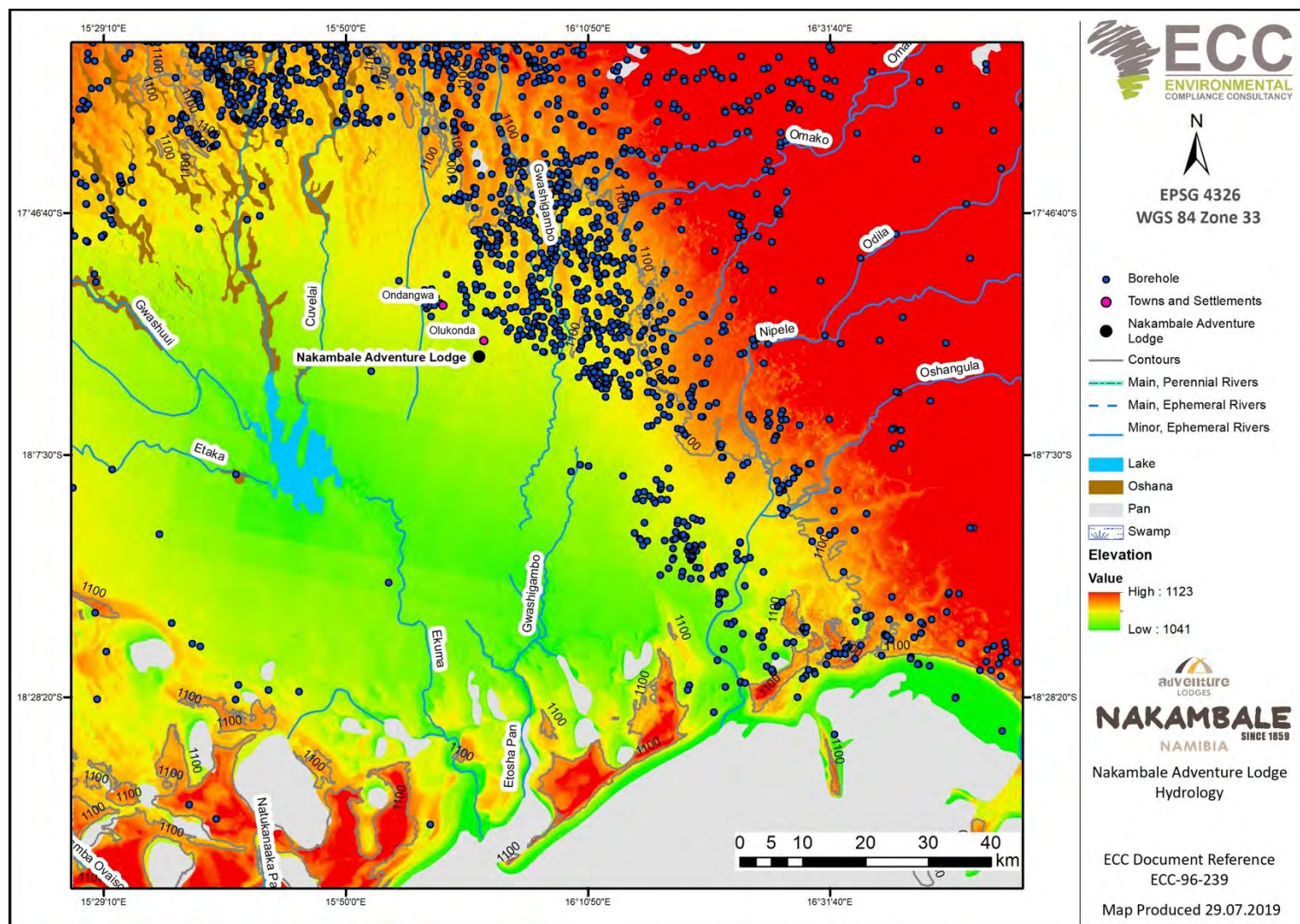


FIGURE 10 –HYDROLOGY AND ELEVATION MAP

5.8 SOCIO-ECONOMIC ENVIRONMENT

Commercial farming area forms part of the highest source of income making up to 33.3% while the remainder of the region consist of government employment, including education, health, and law and order. The majority of the population is employed in the subsistence agriculture sector, agriculture has a significant effect on the economy of the region, and communal farmers do practice crop and animal production in Oshikoto region, mainly mahangu and livestock farming. Mixed subsistence farming is practiced, with Mahangu as a staple crop and extensive livestock (cattle, goats and sheep) production. Some people sell their mahangu or livestock to get income (Oshikoto Region Flood Contingency Plan , 2010). The proposed project will not only provide employment opportunities and income but also encourage community's to open up markets to sell their products to tourist, for example craftwork etc.

5.8.1 DEMOGRAPHIC PROFILE

Namibia is one of the least densely populated countries in the world, with a population of 2.3 million people. Life expectancy is 65 years and expected years of schooling is 11.7 (National Planning Commission, 2017). Namibia's population is expected to increase from an estimated 2.11 million in 2011 to 3.44 million by 2041 (63%). In the 2011 Census, the population of the Oshikoto Region was 181 973 (Namibia Statistics Agency, 2011). Olukanda village of which the proposed lodge is situated has a total population of 9 559 people residing in 1 562 households or homesteads.

5.8.2 HIV/AIDS IN NAMIBIA

HIV/AIDS in Namibia is a critical public health issue and is one of the leading causes of death. Namibia has a generalised HIV epidemic, meaning that there is a high HIV prevalence among the whole population. The epidemic is now starting to stabilise, after a rapid increase from the time that the first case of HIV was reported in 1986 through until a peak in 2002. HIV prevalence in Namibia is not yet measured through a population-based survey, instead, HIV prevalence among pregnant women attending Ante Natal Clinics is used. In 2010, 18.8% of pregnant women were HIV positive, a reduction from the high of 22% in 2002. However, HIV prevalence is unevenly distributed throughout the country, therefore this figure is not a national representation. The overall trend illustrates that HIV prevalence is stabilising rather than increasing (UNICEF, 2011).

5.8.3 EMPLOYMENT

Unemployment rates in Namibia particularly, among the youth are exceedingly high. About 40% of the unemployed population had completed their primary education of which 14% had completed their secondary education and 0.7 percent had completed their tertiary education. Those with no formal education constituted around 16 percent of the unemployed population. The proposed development has a potential to contribute to the reduction in unemployment rate by providing temporal and permanent jobs during construction and operation phase (Namibia Statistics Agency, 2011).

5.8.4 HERITAGE

A review of the National Heritage Council database was conducted, and no known heritage sites were identified in the project area. In cases where heritage sites are discovered, the chance find procedure will be used.

6 ENVIRONMENTAL ASSESSMENT OF FINDINGS AND MITIGATION

6.1 SCOPING ASSESSMENT FINDINGS

When undertaking the scoping exercise, the design of the proposed project and best practice measures were considered to ensure the likely significant effects and any required additional mitigation measures were identified. The following topics were considered during the assessment:

- Surface water and ground water
- Soils and geology
- Landscape (visual impacts, change in landscape, sense of place)
- Socio-economics (employment, demographics, and land-use)
- Noise
- Ecology (fauna and flora)
- Air Quality (including dust), and
- Cultural heritage and palaeontology resources.

The source-pathway-receptor model was used to evaluate the potential impacts of the proposed project and determine if further assessment is required. These include:

- **Source of potential impact** - where does the impact come from? (e.g. the activity, ground excavation, which emits dust)
- **The potential pathway** – how can the pollution / impact travel through the environment? (e.g. wind direction and speed); and
- **The receptor and effect** – what can be affected and how? (E.g. water body, sedimentation, water quality affected).

Table 11 sets out the findings of the assessment. Activities that could be the source of an impact have been listed, followed by receptors that could be affected. The pathway between the source and the receptor has been identified where both are present. Where an activity and/or receptor has not been identified, an impact is unlikely, thus no further assessment or justification is provided. Where the activity, receptor and pathway have been identified, a justification has been provided documenting if further assessment is required or not required.

Due to the nature and localised scale of the exploration activities, and the environmental context of both sites, the potential environmental and social effects are limited and unlikely to be significant. Where effects occur, they will be managed (avoided or reduced) through implementation of best practice mitigation, as detailed in the EMP (contained in Appendix A). All topics were considered during the scoping assessments, which did not identify areas of uncertainty and thus no further investigation was deemed required.

LIMITATIONS, UNCERTAINTIES AND ASSUMPTION

A number of limitations and uncertainties were acknowledged 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 identified during the assessment process.

TABLE 13 - SUMMARY OF LIMITATION, UNCERTAINTIES AND ASSUMPTION OF THE EIA PROCESS

LIMITATION / UNCERTAINTY	ASSUMPTION
The program of construction works is not confirmed	It is assumed that construction work shall take up to 3 months and involve construction lodging facilities, powerlines and water pipeline construction.
Number of employees and area they will come from	It is assumed that most of the workers will come from Olukonda Village and the number of employees will be changing depending on the program.
Access route and creation of new tracks	No new tracks or access roads will be created, public roads will be used to access the site.

TABLE 14 - SUMMARY OF POTENTIAL IMPACTS

RECEPTOR	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
Soil	Fuel handling and storage, lubrication of equipment	Spillages lead to groundwater contamination and soil contamination	Direct On-site Short-term Temporary/reversible Unlikely	Medium	Moderate	Moderate (6)	Safe delivery and handling: - Training employees and toolbox talks - Good housekeeping across the site - Spill kits to be placed at designated areas across the site - Absorption material should be available and at hand. Where saw dust is used it should be cleaned up immediately and not left for long periods as this poses a fire hazard - Any major spill is reported to the project manager and Ministry of Mines and Energy - Equipment to be well maintained and serviced regularly - The use of hydrocarbons under 200 litres can be	Low (2)

RECEPTOR	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
							used for mobile refuelling or servicing Refuelling: - Drip tray to be used during refuelling of any vehicles and must be on impermeable flat surface where possible, and - Funnel should be available and used to avoid spillage during decanting	
Community, socio - economic and environment		- Floods cause extensive destruction of infrastructure which in turn disrupts service provision particularly education and health services.	Direct Local Short-term Reversible Likely	Medium	Moderate	Moderate (6)	- Dissemination of information on flood preparedness - Monitoring preparedness activities - Contact different stakeholders to identify their support - Identify relocation sites - Training and orientation - Identifying and budgeting for resources (resource mobilization)	Minor 3

RECEPTOR	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
							- Reporting on the evolving flood situation	
Terrestrial Ecology and biodiversity	- Vegetation clearance for construction of the lodge - Vehicle movements	- Possible injury or death of animals - Poaching - Habitat fragmentation from clearing - Habitat loss from excessive Clearing - Increased human activity can impact biodiversity security	Direct Local Short-term Temporary/reversible Certain	Medium	Low	Minor (2)	- Use existing tracks where possible - Route new tracks around established and protected trees, and clumps of vegetation - Identify rare, endangered, threatened and protected species and demarcate them and avoid cutting them down. - All workers shall be notified avoid any excluded areas or species - Natural drainage patterns should be restored - Relocation of protected plant species if disturbance cannot be avoided.	Low (2)
Community	- Dust creation due	- Impacts of public health and visibility	Direct Local	Low	Minor	Minor (3)	- Avoid off-road driving	Low (2)

RECEPTOR	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
	construction activities	- Impact on fauna and flora	Temporary Reversible Unlikely				- Apply dust suppression methods- water sprinkling - Communication with farmers/landowners/neighbours.	
Community and environment	- Light may cause disturbance/disorientation of animals at night	- Disruption to neighbour and nearby settlements - Disturbance of local wildlife	Direct Local Temporary Reversible Unlikely	Low	Negligible	Low (2)	- No construction activities to be conducted (between dusk and dawn, on Sundays and on public holidays	Low (1)
Community and environment	- Noise and lights may act as a distraction/attraction to different species.	Construction noise impacting neighbouring residents	Direct Local Temporary Reversible Likely	Low	Negligible	Low (2)	- No construction activities to be conducted (between dusk and dawn, on Sundays and on public holidays	Low (1)
Neighbours /Landowners/ Tourists	- Visual impact because of new building	- Changes to aesthetics-disturbed	Direct Local Short-term	Low	Minor	Minor (3)	- Maintain good housekeeping on site - Building material is low rise and made of natural material therefore, it is	Low (2)

RECEPTOR	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
	g in the area	view from the road (tourists and local community)	Reversible Likely				unlikely that the lodge will have any impact of the landscape of the local community.	
Topography and landscape	- Creation of new tracks and roads	- Environmental disturbance - Loss of flora and fauna - Disturbance of migratory animals in the area	Direct Local Short-term Reversible Likely	Medium	Moderate	Moderate (6)	- Make use of existing tracks if available - When developing a new track off an existing roadway ensure the junction is discreet and safe - Monitor the condition of the track before, during, and after use - Do not needlessly remove vegetation from either side of the roadway.	Low (2)
Heritage	- Potential to unearth archaeological remains - Direct and indirect impacts to	- Impact on viewshed/landscape surrounding heritage features	Direct On site Long-term Irreversible	High	Major	Major (9)	If discovery of unearthed archaeological remains to be uncovered, the following measures (chance find procedure) shall be applied: - Works to cease, area to be demarcated with	Minor (4)

RECEPTOR	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
	cultural resources		Likely				appropriate tape by the site supervisor, and the Site Manager to be informed – Site Manager to visit the site and determine whether work can proceed without damage to findings, mark exclusions boundary – If work cannot proceed without damage to findings, Site Manager is to inform the Environmental Manager who will get in touch with an archaeologist for advice – Archaeological specialist is to evaluate the significance of the remains and identify appropriate action, for example, record and remove; relocate or leave in situ (depending on the nature and value of the remains)	

RECEPTOR	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
							– Inform the police if the remains are human, and – Obtain appropriate clearance or approval from the competent authority, if required, and recover and remove the remains to the National Museum or National Forensic Laboratory as appropriate.	
Social Economic	– Job creation due to activities	– Employment creation and skills development – Opportunities during the phase (Approx. 10-20 jobs) – Knowledge and technology skills transfer to workers during the	Direct Regional Long-term Reversible Certain	Medium	Minor	Minor (4)	– Maximise local employment and local business opportunities to promote and improve the local economy – Enhance the use of local labour and local skills as far as reasonably possible. Where the required skills do not occur locally, and where appropriate and applicable, ensure that relevant local individuals are trained, and	Low major beneficial

RECEPTOR	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
		operational phase and training of local employees					– Ensure that goods and services are sourced from the local and regional economy as far as reasonably possible	
Community	– Increased people in the area	– Potential risk for social interactions and transmission of infectious diseases	Direct Local Short-term Irreversible/Reversible Likely	Moderate	Low	Minor (3)	– Public awareness Ensure distribution of protection (condoms) at the lodge	Low (2)
Community & Environment	– Generation of waste due to activities	– Nuisances (odours and visual), and – Litter (nuisance and ecological risk) – Increased pollution such as plastic etc.	Direct On-site Short-term Reversible Likely	Moderate	Low	Minor (3)	– Training and toolbox talk to workers shall be provided – Ensure good housekeeping across site – Implement the waste management hierarchy across the site: avoid, reuse, and recycle – Waste shall be collected and shall be removed on a regular basis to avoid bad odours	Low (2)

RECEPTOR	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
							– It is unlikely that hazardous material and wastes will be produced, however in the event that they do, they shall be managed in a safe and responsible manner so as to prevent contamination of soils, pollution of water and/or harm to people or animals as a result of the use of these materials, and – Hazardous and non-hazardous waste shall always be stored separately.	

7 ENVIRONMENTAL MANAGEMENT PLAN

The EMP for the proposed project is presented in Appendix A. It provides management options to ensure the impacts of the proposed project are minimised. 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, although additional mitigation measures might be included if necessary.

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

The objectives of the EMP are:

- To include all components of the development and operations 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 CONCLUSION

The environmental assessment that was undertaken for the proposed project, followed ECC's EIA methodology to identify if there is potential for significant effects to occur as a result of the proposed project.

All other social and environmental receptors were scoped out as requiring further assessment as it was unlikely that there would be significant effects. Through further analysis and identification of mitigation and management methods, the assessment concludes that the likely significance of effects on visual amenity is expected to be minor. Various best practice and mitigation measures have been identified to avoid and reduce effects as far as reasonably practicable, as well as to ensure the environment is protected and unforeseen effects are avoided.

On this basis, it is of 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.

REFERENCES

- BDO Namibia. (2019). Retrieved from <https://www.bdo.com.na/en-gb/industries/natural-resources/mining-in-namibia>
- Haddon, I. G. (2005). THE SUB-KALAHARI GEOLOGY AND TECTONIC EVOLUTION OF THE KALAHARI BASIN, SOUTHERN AFRICA. Johannesburg: University of the Witwatersrand.
- High Commission of the Republic of Namibia. (n.d.). Retrieved from <http://www.namibiahc.org.uk/economy.php>
- International Finance Corporation. (2012). IFC Performance Standards on Environmental and Social Sustainability. The World Bank.
- International Finance Corporation. (2017). A Guide to Biodiversity for the Private Sector. The Social and Environmental Impact Assessment Process.
- Iowa State University. (n.d.). Retrieved from https://mesonet.agron.iastate.edu/sites/windrose.phtml?network=NA__ASOS&station=FYWW
- Joint Venture Consultants (Namibia). (n.d). Integrated Water Resources Management: Omaruru-Swakop River Basin. Windhoek.
- Jurgens , N., Schmiedel , U., & Hoffman, T. M. (2010). Biodiversity in Southern Africa. In Biodiversity in Southern Africa (p. 232). Windhoek: Klaus Hess.
- Ministry of Environment and Tourism, Ministry of Mines and Energy. (2018). National Policy on the Prospecting and Mining in Protected Areas . Windhoek: Ministry of Environment and Tourism, Ministry of Mines and Ener.
- Ministry of Mines and Energy. (2018, August). Mineral Rights and Resources Development . Retrieved from Ministry of Mines and Energy: <http://www.mme.gov.na/mines/mrrd/>
- (n.d.). Namibia Labour Force Survey 2018. Windhoek: Namibia Statistics Agency.
- Namibia Statistics Agency. (2011). Namibia 2011 Population and housing census main report. Windhoek.
- National Planning Commission . (2018). STATUS OF THE NAMIBIAN ECONOMY . Windhoek : National Planning Commission .
- Oshikoto Region Flood Contingency Plan . (2010). Retrieved from s3.amazonaws.com/inee.../Oshikoto_regional_contingency_Plan_fin09.doc
- Republic of Namibia. (2008). The Government Gazette of the Republic of Namibia, Draft Procedures and Guidlines for Environmental Impact Assessment and Environmental Management. Windhoek: Republic of Namibia,.

APPENDIX A- EMP

APPENDIX B - NON-TECHNICAL SUMMARY



ECC-096-239-NTS-06-B

NON-TECHNICAL SUMMARY

DEVELOPMENT OF SOUTHERN CROSS ADVENTURE LODGES

PREPARED FOR



JULY 2019

PO BOX 91193 Windhoek Namibia
Environmental Compliance Consultancy CC
CC/2013/11404

NON-TECHNICAL SUMMARY

DEVELOPMENT OF THE SOUTHERN CROSS ADVENTURE LODGES IN ERONGO, OSHANA, AND KAVANGO REGIONS IN NAMIBIA

1 PURPOSE OF THIS DOCUMENT

The purpose of this Non-Technical Summary (NTS) is to provide Interested and Affected Parties (I&APs) a background to the proposed project and to invite I&APs to register as part of the Environmental Impact Assessment (EIA) process. Development of the Erongo Rocks Adventure Lodge, Nakambale Adventure Lodge and Okavango River Adventure Lodge hereby invite I&APs to register as part of the Environmental Impact Assessment (EIA) process. Through registering, all I&APs will be kept informed throughout the EIA process, and a platform for participation will be provided to submit comments/recommendations pertaining to the project.

This NTS includes the following information on:

- The proposed project and location
- The necessity of the project, benefits or adverse impacts anticipated
- The alternatives to the project have been considered and assessed
- How the EIA process works
- The public participation process and how to become involved, and
- Next steps and the way forward.

2 DESCRIPTION OF PROPOSED PROJECT

2.1 BRIEF INTRODUCTION

Environmental Compliance Consultancy (ECC) has been engaged by the proponent (Southern Cross Adventure Lodges) to undertake an Environmental Impact Assessment (EIA) and an Environmental Management Plan (EMP) in terms of the Environmental Management Act, 2007 and its Regulations. An environmental clearance application will be submitted to the relevant competent authorities; the Ministry of Environment and Tourism (MET).

2.2 LOCATION

The project location is illustrated in **Error! Reference source not found.**

2.3 WHAT IS PROPOSED

Southern Cross Adventure Lodges is an Inbound Tour Operator with offices in South Africa, Namibia, Botswana and Zimbabwe.

The proponent organises group tours in South Africa, Namibia, Botswana, Lesotho, Zimbabwe, Zambia, Mozambique and Malawi since 1991.

Southern Cross Adventure Lodges proposes to develop lodges with up market accommodation units. With the intent to further spread the financial and social benefits of ecotourism to the previously disenfranchised communities.

2.4 OPERATION PHASE

The proposed construction activities are low-impact and non-intrusive. The following are envisaged during the proposed project:

- Potential creation of access tracks, where existing tracks cannot be utilised
- Limited vegetation clearing for the creation of tracks
- Possible construction of drainage infrastructure, power and water supply infrastructure, sewerage treatment facility and associated connections.

2.5 WHY IS THE PROJECT NEEDED

The development of the Southern Cross Adventure Lodges will aid development in the region whilst offering tourists a higher valued service which will cater for medium to upper market tourists seeking a reasonably priced lodge. The new development will expose tourists to a cultural experience in the west and north central Namibia. This area has large tourism potential and will generate income for the indigenous community.

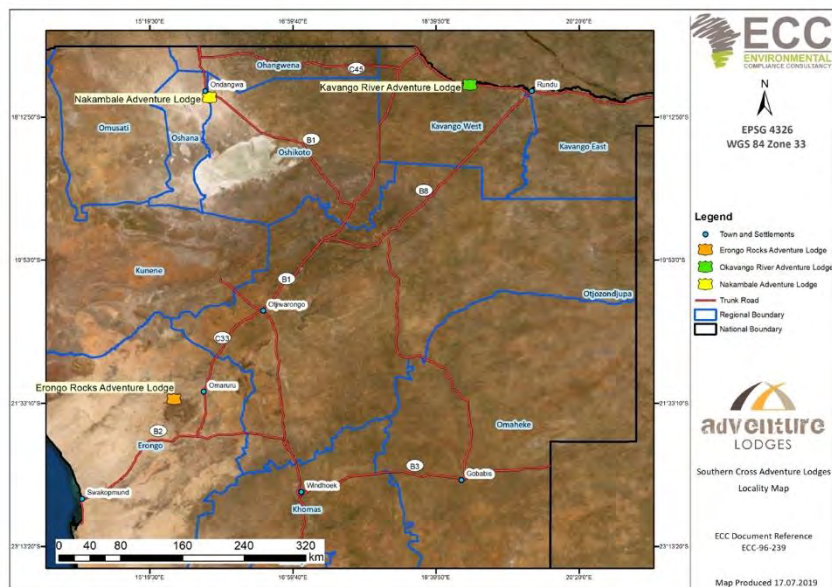


FIGURE 1 – LOCATION MAP OF THE PROPOSED PROJECTS

2.6 POTENTIAL IMPACTS OF THE PROJECT

2.6.1 SOCIO-ECONOMIC

The potential social impacts are anticipated to be of low significance, and those that may transpire shall be confined within the proposed project sites, these potential impacts may include the following:

- Potential to unearth, damage or destroy undiscovered heritage remains
- Minor disruption to the residents of the farms within the site, including some increase in noise levels and dust arising from construction activities and vehicular movements
- Some jobs will be created as a result of the project, and
- Potential economic benefits due to increased income in the Namibian tourism sector.

2.6.2 ENVIRONMENTAL

The potential environmental impacts are anticipated to be of minor significance, and those that may occur shall be contained within the site, these potential impacts may include the following:

- Some potential biodiversity loss due to possible tracks creation and excavations
- Potential use of resources, including surface and groundwater, and
- Potential creation of noise and dust due to construction activities.

3 CONSIDERATION OF ALTERNATIVES

Best practice environmental assessment methodology calls for consideration and assessment of alternatives to a proposed project.

In a project such as this one, it is difficult to identify alternatives to satisfy the need of the proposed project; the activities shall be specific to the sites.

During the assessment, alternatives will take the form of a consideration of optimisation and efficiency to reduce potential effects.

4 THE ENVIRONMENTAL ASSESSMENT PROCESS

This EIA, conducted by ECC, is undertaken in terms of the Environmental Management Act, 2007 and its regulations.

The process followed in this EIA is set out in the flowchart in

FIGURE 2 below.

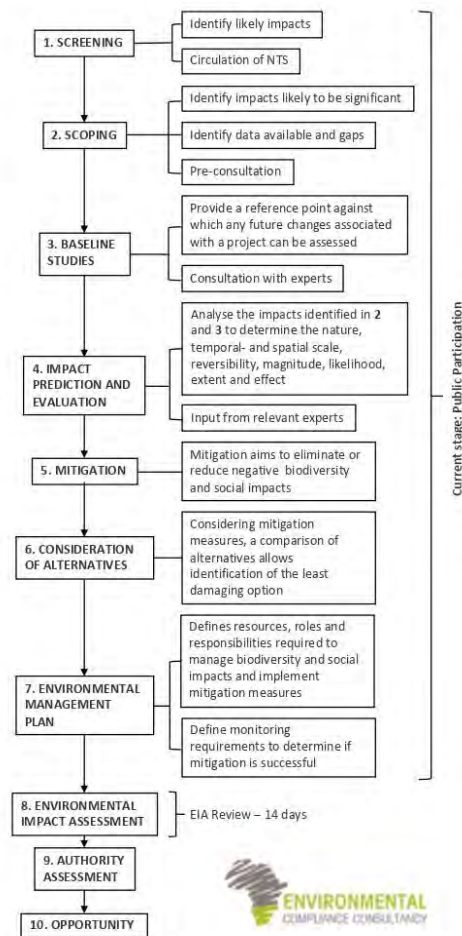


FIGURE 2 - FLOWCHART OF THE ENVIRONMENTAL ASSESSMENT PROCESS



NON-TECHNICAL SUMMARY
SOUTHERN CROSS ADVENTURE LODGES

4.1 SCREENING

A review of the proposed project screening findings against the listed activities was conducted; the findings of which are summarised below:

TOURISM DEVELOPMENT ACTIVITIES

6. The construction of resorts, lodges, hotels or other tourism and hospitality facilities

WATER RESOURCE DEVELOPMENTS

8.1 The abstraction of groundwater and surface water industrial or commercial purposes

8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline system

WASTE MANAGEMENT, TREATMENT, HANDLING, AND DISPOSAL ACTIVITIES

2.1 The construction of waste sites, treatment of waste and disposal of waste

2.3 The import, processing, use and recycling, temporary storage, transit or export of waste

The potential environmental and social effects are anticipated to be of minor significance, and those that may occur shall be contained on the proposed lodge sites.

4.2 SCOPING

Due to the nature of the proposed project, and the implementation of industry best practice mitigation measures during the development phase of the project, the effects on the environment and society are expected to be minimal and localised.

4.3 BASELINE STUDIES

For the proposed project, baseline information was obtained through a desk-based study and site verification processes through focusing on the environmental receptors that could be affected by the proposed project. ECC will also engage with stakeholders, I&APs and the proponents to seek input into the assessment.

4.4 IMPACT ASSESSMENT

Impacts will be assessed using the ECC EIA methodology. The EIA will be conducted in terms of the Environmental Management Act, 2007 and its regulations. ECCs methodology for impact assessments

was developed using IFC standards in particular Performance Standard 1 'Assessment and management of environmental and social risks and impacts' (International Finance Corporation, 2017), (International Finance Corporation, 2012) and Namibian Draft Procedures and Guidance for EIA and EMP (Republic of Namibia, 2008) including international and national best practice with over 25 years of combined EIA experience.

4.5 ENVIRONMENTAL MANAGEMENT PLAN

An EMP shall be developed for the proposed project setting out auditable management actions for Southern Cross Adventure Lodges to ensure careful and sustainable management measures are implemented for their activities in respect of the surrounding environment and community.

4.6 PUBLIC PARTICIPATION AND ADVERTISING

Public participation is an important part of the EIA process; it allows the public and other stakeholders to raise concerns or provide valuable local environmental knowledge that can benefit the assessment, in addition it can aid the design process. This project is currently at the scoping phase and public participation phase.

At this phase ECC will perform the following:

- Identify key stakeholders, authorities, municipalities, environmental groups and interested or affected members of the public, hereafter referred to as I&APs
- Distribute the NTS for the proposed project (this document)
- Advertise the environmental application in two national newspapers
- Place notices on-site at or near the boundary
- If required host a public meeting to encourage stakeholder participation and engagement, and provide details of issues identified by the environmental practitioner, stakeholders and I&APs
- Record all comments of I&APs and present such comments, as well as responses provided by ECC, in the comments and responses report, which will be included in the scoping report that shall be submitted with the application, and
- Circulate I&AP comments to the project team for consideration of project design.

NON-TECHNICAL SUMMARY
SOUTHERN CROSS ADVENTURE LODGES

Comments must be submitted in writing and can be emailed using the details in the contact us section below.

CONTACT US

We welcome any enquiries regarding this document and its content. Please contact:

Environmental Compliance Consultancy (ECC)

info@eccenvironmental.com

Tel: +264 816 697 608

www.eccenvironmental.com

At ECC we make sure all information is easily accessible to the public.

Follow us online to be kept up to date:



APPENDIX C - EVIDENCE OF PUBLIC CONSULTATION

22 TUESDAY 16 JULY 2019
THE NAMIBIAN



NOTICE OF ENVIRONMENTAL ASSESSMENT & PUBLIC PARTICIPATION PROCESS

DEVELOPMENT OF THE ABSOLUT TOURS SAFARIS LODGES IN ERONGO, OSHANA, AND KAVANGO REGIONS, NAMIBIA

Environmental Compliance Consultancy (ECC) hereby gives notice to the public that an application for an Environmental Clearance Certificate in terms of the Environmental Management Act, 2007 will be made as per the following:

Applicant: Absolut Tours Safaris cc
Environmental Assessment Practitioner (EAP): Environmental Compliance Consultancy
Location: Erongo, Oshana, and Kavango Regions, Namibia

Project: Proposed development of the Erongo Rocks Adventure Lodge in the Erongo Region, Nakambale Adventure Lodge in the Oshana Region and Okavango River Adventure Lodge in the Kavango Region, Namibia.

Proposed Activity: The proposed project includes the development of:
 - Erongo Rocks Adventure Lodge with 15 en-suite units, south of Omaruru on Farm Omandumba
 - Nakambale Adventure Lodge situated in Ondangwa, with 15 en-suite, 5 up market camping units and 5 camping sites, and
 - Okavango River Adventure Lodge situated in the Kavango Region, with 15 en-suite units.

Application for Environmental Clearance Certificate: In terms of the Environmental Management Act, No. 7 of 2007, ECC on behalf of Absolut Tours Safaris is required to apply for environmental clearance to the Ministry of Environment and Tourism for the above-mentioned projects.

Purpose of the Review and Comment Period: The purpose of the review and comment period is to present the proposed project and to afford (BAPs) an opportunity to comment on the project to ensure that all issues and concerns are captured and considered in the assessment.

Review Period: The review and comment period is effective from 16th of July 2019 – 6th August 2019.

How you can participate: ECC is undertaking the required environmental assessment and public participation process in terms of the Act. Interested and affected parties (BAPs) and Stakeholders are required to register for the project at: <http://ecc.environmental.com/projects/>

Environmental Compliance Consultancy
Registration Number: CC/2013/L1408
Members: Mr. IS Boudierhewer / Mrs. I. Mwanje
PO Box 11190, Namibia
Tel: +264 81 959 7608
Email: info@eccenvironmental.com
Website: <http://www.eccenvironmental.com>
Project ID: ECC-096-239-AD-T-2-0





Nampengo Investment CC
We mean business

JULY JACKPOT SPECIALS
Price NS 85 000.00
Get a Free Tracking Device

Cigarette Vending Machine NS 5,000.00

Made in Germany for the Namibian People.

Find our showroom at Dorado Valley Complex next to Shoprite U-Save, Call: 081 035 8326
c/o Ara & Bach Street, Windhoek West
Visit our website: www.nampengo.com



In Memoriam

Dine "Dee" Nashilongo

Sunrise: 11 April 2005 | Sunset: 16 July 2018

Elms Stevel, Our Beloved Daughter
Today marks one year since that sad day
In life we loved you dearly
In death we do the same
It broke our hearts to lose you By the almighty's grace
We have the assurance that you now rest
In peace and comfort in the blessed savior's arms.
May your Soul continue resting in peace until we meet again.

Dearly missed by:
Masokula, Mommy, your Little Brother and the entire family.



Be committed in 2019

As a sign of our appreciation, you will receive a complimentary picnic blanket after your 4th donation.

Tuesday, 16 July 2019

Centre Tal Street (Windhoek)	07:00-16:00
United House Centre (Windhoek)	08:30-16:00
Namibian Institute of Mining and Technology (Keetmanshoop)	09:00:16:00
Valombola Vocational Training Centre(Ongwediva)	09:00-15:00
Walvis Bay Town (Behind Welwitschia Medi-park)	10:00-18:00

Wednesday, 17 July 2019

Centre Tal Street (Windhoek)	07:00-16:00
United House Centre (Windhoek)	08:30-16:00
Keetmanshoop Town (NG Church Hall)	11:00-18:00
Oshana Regional Council (Oshakati)	09:00-15:00
Embwinda Fishing (Walvis Bay)	09:00-16:00

Thursday, 18 July 2019

Centre Tal Street (Windhoek)	07:00-18:00
United House Centre (Windhoek)	08:30-16:00
Oshakati Centre (Hospital Grounds)	10:00-18:00
Logistic Support Service (Walvis Bay)	10:00-15:00

Friday, 19 July 2019

Centre Tal Street (Windhoek)	07:00-16:00
United House Centre (Windhoek)	08:30-16:00
Bank Windhoek (Oshakati)	09:00-14:30
Abenteur Afrika (Swakopmund)	10:00-15:00

The Namibian Foundation for the Advancement of Science, Education and Technology
Tel: 081 036 303 | info@nambts.com | www.nambts.com





HARDAP REGIONAL COUNCIL
DIRECTORATE OF EDUCATION ARTS AND CULTURE

VACANCIES

DIVISION: Programme Quality Assurance (PQA)

Post Designation : Principal Grade 5
10 x Post : Groendraai PS
 : Usib PS
 : Pioneer JSS (Schlip)
 : Witkrans Primary School
 : PJ Tsaisib Junior Secondary School (Hoachanas)
 : Klein-Aub Resource School
 : Samuel Veldskoen Primary School
 : Mukorob Primary School (Amperbo)
 : DD Guibeb Primary School
 : Pally Carstens Primary School

Salary Scale : NS 400 001 -478 220 per annum

Transport allowance : NS7680 per annum
Housing Allowance : NS 13080 per annum

Minimum Requirements : A Recognised 3 – year Tertiary Teaching Qualification on NQF Level 6 (or equivalent) plus 7 years teaching experience.

Additional Requirements: Probation should be confirmed on Grade 6 post.

Post Designation : Head of Department Grade 6
2 x Posts : Vooruitsig Secondary School

Salary Scale : NS 400 001 per annum
Housing Allowance : NS 13080 per annum
Transport allowance : NS7680 per annum

Minimum requirements : A recognized 3-year teaching qualification on NQF Level 6 plus 6 years teaching experience.

Additional Requirement : Areas of specialization 1 x Post: Grade 4 -9 English and or Khoe-Khoegowab

1 x Post : Khoe-Khoegowab Junior Primary Phase
 Confirmation of probation to be attached

Enquiries: Ms. JJF Rukamba, Acting Director Tel No: 063 245700, Mr. G.G. Campbell: Chief Human Resource Practitioner, Tel No: 063 245738

In terms of Affirmative Action, qualifying women and people with disabilities, who meet the advertised requirements, are encouraged to apply.

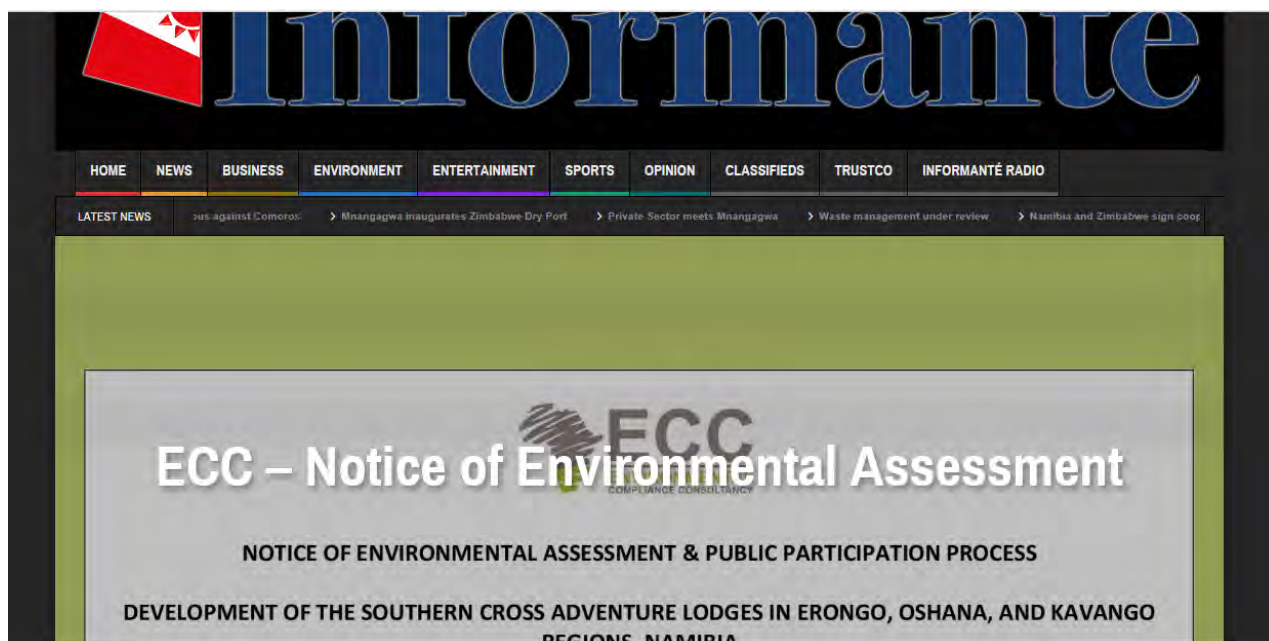
NB!! All applications must be done on application form 156043 and 156094. All foreign qualifications must be evaluated by the Namibia Qualifications Authority (NQA) and proof of evaluation of qualification should be attached. Applicants who only partially complete and / or do not sign application forms, or who do not attach letters of confirmation of their probations in their current positions or who submit uncertified photocopies will not be considered. Curriculum Vitae and certified copies of education qualifications must be address to:

The Acting Chief Regional Officer
 Hardap Regional Council
 Hardap Directorate of Education,
 Arts and Culture
 Private Bag 2122
 Mariental

Attention: Human Resources

Closing Date: 18 August 2019

The following was advertised in the Informante on the 18th July and 25th July 2019, (online newspaper).



SITE NOTICES



APPENDIX D -ECC CVS



ENVIRONMENTAL
COMPLIANCE CONSULTANCY

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*



Current

Experience & Work History

Managing Director

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.co
m

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 – HLTFA402B 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



Current

Experience & Work History

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



Emerita Lyapaka Ashipala Environmental Graduate

Hello! :)



ABOUT ME

Name

Emerita Lyapaka Ashipala

Born

15 February 1994

Phone

+264 81 701 6851

Email

emerita@eccenvironmental.co
m

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



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

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."



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

APPENDIX E - LIST OF PLANT SPECIES

PLANT SPECIES	PLANT DESCRIPTION	LOCATION NOTES
<i>Acacia arenaria</i> Schinz	-	Oniipa
<i>Adenia repanda</i> (Burch.) Engl.	Climber 1 m high, perennial, herbaceous, ascending, suffrutex. Crushed leaf exude no sap or smell.	Along Onathinghe Okankolo road.
<i>Albuca amboensis</i> (Schinz) Oberm.		Oniipa field.
<i>Aloe zebrina</i> Baker	The plant is 25 cm high. Light green succulent leaves with white spots arranged horizontally. Thorns on the leaf edge.	Major: Ovamboland. Minor: Uukwanyama. Precise: Onekwaya west, 55 km NE of Ondangwa.
<i>Aristida congesta</i> Roem. & Schult. subsp. <i>congesta</i>	Grass.	Ovamboland, Oshigambo.
<i>Aristida stipoides</i> Lam.	Grass.	Ovamboland, forest.
<i>Asparagus cooperi</i> Baker	Perennial shrub, 0.40 m high. Stem ascending, no sap, crushed leaf no smell. Crown diameter 20 cm. Bark green, smooth. Leaves hardened stipules, but no real stipule thorns. Flowers white, about 3 mm in diameter.	About 10 km along Omuthinge Okaukola road, about 500 m behind cuca shop.
<i>Bauhinia petersiana</i> Bolle subsp. <i>macrantha</i> (Oliv.) Brummitt & J.H.Ross		Enani. Onayena, forest.
<i>Boscia foetida</i> Schinz subsp. <i>foetida</i>		Farm Onguma 314.
<i>Brachiaria deflexa</i> (Schumach.) C.E.Hubb. ex Robyns	Erect annual.	Etomba, 20 miles south-east of Oshikango.
<i>Brachiaria humidicola</i> (Rendle) Schweick.	Erect perennial with prostrate base growing in wet places.	Etomba, 20 miles south-east of Oshikango.
<i>Brachystelma schinzii</i> (K.Schum.) N.E.Br.		Oniipa, sandy field.
<i>Bulbostylis hispidula</i> (Vahl) R.W.Haines	Sedge with red- brown spikes which are cylindrical.	Olukonda mission station, next to road at church.
<i>Cenchrus ciliaris</i> L.	Grass.	Ovamboland, Oshigambo.
<i>Cleome gynandra</i> L.	Herb 25 cm high. Only few of the basal leaves left. Small leaves clustered on upper stem. Not aromatic. Fruits are glandular and sticky.	Olukonda mission station.
<i>Commelina subulata</i> Roth		Oniipa, border of pool.
<i>Cyperus compressus</i> L.	Sedge with triangular stem, found in full sun. Flowers have flat spikes that are red- brown with green margin.	Olukonda mission station, next to road at church.
<i>Cyperus fulgens</i> C.B.Clarke var. <i>contractus</i> Kük.		Oniipa: waterpool.
<i>Cyperus longus</i> L. var. <i>longus</i>		Oshigambo river

PLANT SPECIES	PLANT DESCRIPTION	LOCATION NOTES
<i>Cyperus margaritaceus</i> Vahl var. <i>margaritaceus</i>	Perennial sedge, 10 cm high. Triangular stem, seed packets white with thin green margin. Stem ascending. Texture herbaceous.	Along Onathinghe - Okankolo road.
<i>Cyperus procerus</i> Rottb.		Oniipa, water pool.
<i>Cyperus rotundus</i> L. subsp. <i>rotundus</i> var. <i>platystachys</i> C.B. Clarke		Oniipa, pool in water valley.
<i>Cyperus sphaerospermus</i> Schrad.		Oniipa, pool in water valley.
<i>Dactyloctenium aegyptium</i> (L.) Willd.	Grass.	Oniipa.
<i>Digitaria sanguinalis</i> (L.) Scop.	Grass. Erect quite glabrous annual growing in shade of trees.	Etomba, 20 miles south-east of Oshikango.
<i>Dipcadi glaucum</i> (Burch. ex Ker Gawl.) Baker	Perennial geophyte, 30 cm high. Flower colour: green - brown. Stem: ascending (upright). Underground organ: bulb. Texture: herbaceous. Sap: none.	10 km along Omuthinge - Okaukolo road, 500m behind Cuca shop.
<i>Eclipta prostrata</i> (L.) L.		Ondangwa. Oniipa, border of pool. Water pool.
<i>Eragrostis trichophora</i> Coss. & Durieu	Grass.	Oniipa.
<i>Eriospermum rautanenii</i> Schinz	Perennial geophyte, 5 cm high with inflorescence. Leaves: single leaf, then flowering, later 2 leaves. Other: bulb about 10cm below ground. Stem: ascending (upright). Underground organ: tuber, white. Texture: herbaceous.	10 km along Omuthinge - Okankolo road behind Cuca shop.
<i>Erlangea misera</i> (Oliv. & Hiern) S. Moore		Ovamboland, Oshigambo.
<i>Felicia smaragdina</i> (S. Moore) Merxm.		Ovamboland: Oshigambo, field in yard area.
<i>Gardenia ternifolia</i> Schumach. & Thonn. subsp. <i>jovis-tonantis</i> (Welw.) Verdc. var. <i>goetzei</i> (Stapf & H	Tree, ± 4 m high. Flowers yellow, tubular, petals free. Leaves clustered on blunt spines. Old fruit round, fallen off, turned black.	Oshipanda village, along the small tract that leads to Oshigambo ELCIN Church
<i>Geigeria schinzii</i> O. Hoffm. subsp. <i>schinzii</i>	Biennial dwarf shrub, 80 cm high. Leaves: tomentose. Stem: ascending (upright). Bark: reddish (maroon) to red-brown. Texture: suffrutex. Biotic effect: eroded.	About 2 km north-east of Onathinghe.
<i>Hermannia glanduligera</i> K. Schum.		Oshigambo.
<i>Hygrophila auriculata</i> (Schumach.) Heine		Oniipa

PLANT SPECIES	PLANT DESCRIPTION	LOCATION NOTES
<i>Hygrophila gracillima</i> (Schinz) Burkill		Oniipa
<i>Indigofera hochstetteri</i> Baker subsp. <i>streyana</i> (Merxm.) A.Schreib.		Oniipa
<i>Justicia exigua</i> S.Moore		Oniipa
<i>Kyllinga alba</i> Nees	Annual sedge, herbaceous sedge. Spikes white and spherical.	17 km from Ondangwa towards Tsumeb
<i>Lapeirousia littoralis</i> Baker subsp. <i>caudata</i> (Schinz) Goldblatt		Oniipa
<i>Ledebouria revoluta</i> (L.f.) Jessop	Perennial geophyte. Flower colour: grey-purplish. Leaves: grey-green with brown spot. Stem: procumbent (flat on ground). Underground organ: bulb. Texture: herbaceous.	10 km along Omuthinge - Okankolo road, about 1km behind Cuca shop
<i>Leptochloa fusca</i> (L.) Kunth	Grass.	Oniipa, pool
<i>Limeum myosotis</i> H.Walter var. <i>confusum</i> Friedrich	Annual herb, 5-10 cm high. Flowers: small, yellow. Leaves: lanceolate, 5 mm wide, 20 -30 mm long, margins roled downwards. Stem: ascending (upright). Underground organ: roots. Slope: flat. Texture: herbaceous.	10 km along Onathing - Okankolo road, behind cucashop
<i>Limeum viscosum</i> (J.Gay) Fenzl subsp. <i>viscosum</i> var. <i>dubium</i> Friedrich		Oniipa
<i>Maerua schinzii</i> Pax	Plant 4 m high.	Olukonda. At the grave of M. Rautanen
<i>Mariscus hamulosus</i> (M.Bieb.) S.S.Hooper	Erect and annual.	Shallow pan near Onayena Mission Station, 28.96 km south-east of Ondangwa.
<i>Marsdenia macrantha</i> (Klotzsch) Schltr.	Decumbent, perennial suffrutex shrub, 1.5 m high. Branches lax with a climbing habit. Flowers light yellow - green, about 12 - 15 mm in diameter, hairy. Sap white latex. Crushed leafs no smell. Bark smooth with gland - like knobs.	10 km along Onathing - Okankola, about 500 m behind cuca shop
<i>Marsilea nubica</i> A.Braun var. <i>gymnocarpa</i> (Lepr. ex A.Braun) Launert	Fern with black sporocarps and stolons. Few plants in dry mud of dried pool.	Olukonda mission station, next to road at church
<i>Megaloprotachne albescens</i> C.E.Hubb.	Grass.	Ovamboland: Oshigambo
<i>Monandrus longicarpus</i> vorster ms.	Annual. Spikelets dark chestnut brown.	Shallow pan near Oneina Mission Station, 28.96 km south-east of Ondangwa
<i>Monandrus squarrosus</i> (L.) vorster s	Erect annual.	Shallow pan near Oneina Mission Station, 28.96 km south-east of Ondangwa

PLANT SPECIES	PLANT DESCRIPTION	LOCATION NOTES
<i>Nicolasia costata</i> (Klatt) Thell.	Decumbent herb, no sap, biennial, herbaceous, crushed leaf no smell. Leaves: densely packed, scale-like, lanceolate.	Outside Omuthinge
<i>Nymphaea nouchali</i> Burm.f. var. <i>caerulea</i> (Savigny) Verdc.		Oniipa, temporary pool in water valley
<i>Ochna pulchra</i> Hook.f.	Perennial 8 m high. Leaves: margin entire, slightly toothed. Stems: pale grey, peeling. Fruits: none yet. Roots: underground.	Omwindi west
<i>Ophioglossum polyphyllum</i> A.Braun		Oniipa, ridge of erosion field
<i>Oxygonum alatum</i> Burch. var. <i>longisquamatum</i> Germish.		Ovamboland, Oshigambo, sandy fields
<i>Oxygonum dregeanum</i> Meisn. subsp. <i>canescens</i> (Sond.) Germish. var. <i>dissectum</i> Germish.	Annual, prostrate herb, 0.05 m high. Flowers white. Leaves with whitish hairs.	Olukonda mission station, next to road at church
<i>Ozoroa schinzii</i> (Engl.) R.Fern. & A.Fern.		Farm Onguma 314
<i>Panicum trichonode</i> Launert & Renvoize	Grass.	Oniipa. border of water valley
<i>Petalidium coccineum</i> S.Moore	Shrub 30 inches high. Flowers red - slightly unpleasant smell, 4 filaments. Leaves rigid, petiole pubescent with 3 mm long hairs.	Western Owamboland, 5 miles south of Ruacana on road to Otjekua
<i>Phyllanthus fraternus</i> G.L.Webster	Woodland, soil sandy white. Erect, pale green annual with small greenish white flowers.	Etomba, 20 miles south-east of Oshikango
<i>Pogonarthria fleckii</i> (Hack.) Hack.	Grass.	
<i>Polygala schinziana</i> Chodat	Biennial herb, 10 cm high. Flowers: deep purple. Leaves: oblong, obovate, mucronate apex, folded. Stem habit: procumbent.	Along road Omathinghe - Okankolo
<i>Portulaca oleracea</i> L.		
<i>Pycreus chrysanthus</i> (Boeck.) C.B.Clarke	Annual, herbaceous sedge up to 70 cm in height. Stems triangular. Spikes yellow-brown, flat.	17 km from Ondangwa towards Tsumeb
<i>Pycreus pumilus</i> (L.) Domin	Sedge with flat spiked flowers which are red- brown. Also has round stems.	Olukonda mission station, next to road at church
<i>Pycreus unioloides</i> (R.Br.) Urb.		Oniipa, pool in water valley.
<i>Requienia pseudosphaerosperma</i> (Schinz) Brummitt		Ovamboland, Oshigambo, forest
<i>Rhigozum brevispinosum</i> Kuntze	Shrub, 3 m high, 2 m in diameter. Yellow flowers, scentless. No fruit.	Ovambo district, Ondangwa Oshigambo - Oshanga road

PLANT SPECIES	PLANT DESCRIPTION	LOCATION NOTES
<i>Schinziophyton rautanenii</i> (Schinz) Radcl.-Sm.	Height: 15 - 20 m. Perennial. Leaves: digitately compound with 5 - 7 leaflets. Bark: dark grey to light golden brown peeling, stem erect. Fruits: absent, edible, single and ground nut test with too much oil, egg - shaped.	Omwindi west
<i>Schmidtia pappophoroides</i> Steud.	Grass	Owambo: Oshigambo.
<i>Schoenoplectus corymbosus</i> (Roth ex Roem. & Schult.) J.Raynal	–	Oniipa, pool in water valley
<i>Sesamum triphyllum</i> Welw. ex Asch. var. <i>triphyllum</i>	–	Oshigambo
<i>Sesbania pachycarpa</i> DC. subsp. <i>dinterana</i> J.B.Gillett	Herbaceous, ascending, indigenous shrub. Flowers yellow with purple specks on back of standard. Base of standard with two short knobs on inside.	11 km south-east of Ondangwa next to tar road to Tsumeb
<i>Sesuvium sesuvioides</i> (Fenzl) Verdc. var. <i>angustifolium</i> (Schinz) Gonç.	–	Oniipa
<i>Setaria sagittifolia</i> (A.Rich.) Walp.	Graminoid. Small annual in shade of trees	Etomba, 20 miles south-east of Oshikango
<i>Solanum multiglandulosum</i> Bitter		Central Owamboland, Oshigambo
<i>Sporobolus ioclados</i> (Trin.) Nees	Perennial grass, 35 cm high forms circular colonies. Leaves broad, short	Road to Olukonda, about 1 km west of main road into Ondangwa
<i>Stipagrostis uniplumis</i> (Licht.) De Winter var. <i>uniplumis</i>	Grass	Oshigambo, sandy yard area
<i>Striga hermonthica</i> (Delile) Benth.	Onayena, Onheleina and Ohigambo	Eenhana
<i>Terminalia prunioides</i> M.A.Lawson		Ovambo: Onayena; Onankali, sandy soil in open forest. Eenhana
<i>Trachyandra arvensis</i> (Schinz) Oberm.	Perennial geophyte, 20cm high, crown diameter 10cm. Inflorescence: about 20cm high. Flower colour: light yellow. Leaves: short, slightly curly with sticky glandular hairs; rather short at this stage only 5-10cm. Stem: ascending (upright). Underground organ: roots.	10 km along Omuthinge - Okankole road, behind Cuca shop

PLANT SPECIES	PLANT DESCRIPTION	LOCATION NOTES
<i>Tragus berteronianus</i> Schult.	Grass. Erect annual	20 km south-east of Oshikango
<i>Tragus racemosus</i> (L.) All.	Semi-decumbent annual grass	20 km south-east of Oshikango
<i>Triumfetta pentandra</i> A.Rich. var. <i>homoistricha</i> Chiov.		Oshigambo. Sandy soil in forest
<i>Urochloa brachyura</i> (Hack.) Stapf	Grass	Eehana. Owambo: Ondangua, Oniipa, yard area
<i>Vahlia capensis</i> (L.f.) Thunb. subsp. <i>ellipticifolia</i> Bridson		Oshigambo
<i>Willkommia sarmentosa</i> Hack.	Grass	Oniipa
<i>Withania somnifera</i> (L.) Dunal		Oniipa

APPENDIX F – ASSESSMENT FORM

The full application is available on their website

Eco Awards Namibia

Tel: +264 (0)61 306450
Fax: +264 (0)61 306290
Email: admin@ecoawards-namibia.org
Web site: www.ecoawards-namibia.org



Assessment Form:

Establishment details:

Name:	_____	No of beds:	_____
NTB Registration category	_____	Telephone:	_____
And number:	_____	Fax:	_____
Physical address:	_____	email:	_____
Postal address:	_____		

Contact person:		
Name:	_____	Telephone:
Position:	_____	Fax:
Cell-phone:	_____	email:

	CRITERIA SUBSECTION	TOTAL SCORE POSSIBLE	TOTAL SCORE APPLICABLE	OWN SCORE	ASSESSORS SCORE	AWARDED SCORE
1.	Management	23	23			
2.	Conservation	17	17			
3.	Energy	16	16			
4.	Water	20	20			
5.	Waste, pollution, sewer	24	24			
6.	Building & landscaping	18	18			
7.	Staff & Health	36	36			
8.	Guiding	6	6			
9.	Social responsibility	13	13			
10.	Legal/NTB Compliance	16	16			
	SUBTOTAL	189	189			
	PERCENTAGE	100%	100%			
	<i>To calculate the percentage: divide total own score by total APPLICABLE score (i.e. exclude items not applicable to your establishment specifically and exclude bonus points), multiply the answer by 100.</i>					
11.	Bonus points	10%	10%			
	TOTAL FINAL SCORE	110%	110%			
	TOTAL FINAL SCORE					

Number of Flowers applied for: (Circle applicable category):

40% or more = One Flower	55% or more = Two Flowers	70% or more = Three Flowers	80% or more = Four Flowers	90% or more = Five Flowers
-----------------------------	------------------------------	--------------------------------	-------------------------------	-------------------------------

Date: _____
Name of Assessor: _____
Signature: _____
Date of MC approval: _____
Signature of MC Chair: _____