

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE SWAKOPMUND MUNICIPALITY'S PROPOSED NORTHERN BEACH DEVELOPMENT PROJECT

SWAKOPMUND, ERONGO REGION, NAMIBIA

JUNE 2021

FINAL REPORT



CONSULTANT'S EXPERTISE

I.N.K Enviro Consultants cc is the independent firm of consultants that has been appointed by the Swakopmund Municipality to undertake the environmental impact assessment process.

Immanuel N. Katali, the EIA Lead Practitioner holds a B.Arts (Honors) in Geography, Environmental Studies and Sociology and has over six years of relevant experience in conducting/managing Environmental Impact Assessments (EIAs), Socio-Economic Impact Assessments (SIA) and compiling Environmental Management Plans (EMPs) in Namibia. Immanuel is certified as an environmental practitioner under the Environmental Assessment Professionals Association of Namibia (EAPAN).

DECLARATION OF INDEPENDENCE AND DISCLAIMER

The consultant herewith declare that this report represents an independent, objective assessment of the environmental impacts associated with the activities of the proposed Northern Beach Development Project on the request of the Swakopmund Municipality.

I.N.K has prepared this report based on an agreed scope of work and acts in all professional matters as an independent environmental consultant to the Swakopmund Municipality and exercises all reasonable skill and care in the provision of its professional services in a manner consistent with the level of care and expertise exercised by members of the environmental profession.

The information, statements and commentary contained in this Report have been prepared by I.N.K from information provided by the Swakopmund Municipality and from discussions held with stakeholders. I.N.K does not express an opinion as to the accuracy or completeness of the information provided, the assumptions made by the party that provided the information or any conclusions reached. I.N.K has based this Report on information received or obtained, on the basis that such information is accurate and, where it is represented to I.N.K as such, complete.

I.N.K is not responsible and will not be liable to any other person or organisation for or in relation to any matter dealt within this report, or for any loss or damage suffered by any other person or organisation arising from matters dealt with or conclusions expressed in this report (including without limitation matters arising from any negligent act or omission of I.N.K or for any loss or damage suffered by any other party relying upon the matters dealt with or conclusions expressed in this report). This report must not be altered or added to without the prior written consent of I.N.K.

EXECUTIVE SUMMARY

The Swakopmund Municipality intends to develop the northern beach into a recreational (i.e., parks and recreational facilities) area for the purpose of improving the social, economic and environmental situation of the community at large and to enhance the quality of life for all Swakopmund residents and visitors.

The proposed project is located adjacent to (south) the Platz Am Meer Shopping Mall, in the Vineta residential area, Swakopmund, Namibia.

The proposed site and surrounding area is currently used for unconstrained and unregulated recreational activities. Therefore, the Swakopmund Municipality proposes to provide an improved/comprehensive recreational opportunity for all ages, ability levels, and provides safe, attractive, well maintained, well managed parks and recreation facilities.

The following activities and infrastructure components were identified for the development, enhancement and improvement of the Northern Beach:

- Parking bays;
- Beach Sports facility (volleyball, rugby, soccer, netball);
- Picnic park;
- Beach walkway;
- Ablution facilities;
- Community braai area;
- Fitness park; and
- Play park.

In addition, there is an attempt to establish an overarching framework to effectively develop and manage the entire beach area within the Swakopmund Municipal area. Therefore, an action plan has been compiled, which identifies future land uses along the beach as per the municipality's newly developed structure plan, and to make further recommendations for future management.

It is against this background, that the northern beach has been identified as an area earmarked for the development of parks and recreational facilities, to ensure the above-mentioned structure plan is effectively and successfully carried out.

The challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts.

The public participation process for the proposed project is conducted to ensure that all persons and/or organisations that may be affected by, or interested in the proposed project, were informed of the project and could register their views and concerns. By consulting with relevant authorities and I&APs, the range of environmental issues to be considered in this Scoping Report (including the assessment of impacts) has been given specific context and focus.

TABLE OF CONTENTS

| Execu | tive Su | Immary | 2 |
|------------|---------|---|------|
| List of | Acron | yms, Abbreviations and Units | 6 |
| 1 In | troduc | tion | 7 |
| 1.1 | - | ectives of the Study and Opportunity to Comment | |
| 1.2 | | oduction to the Proposed Project | |
| 1.3 | - | ect Motivation (Need and Desirability) | |
| 1.4 1 | .4.1 | oduction to the Environmental Impact Assessment | |
| | .4.2 | EIA Team | |
| | | IG MEFTHODOLOGY | |
| 2.1 | | rmation collection | |
| 2.2 | | ping Report | |
| 2.3 | | lic Participation Process | |
| 2.4 | The | Northern Beach Development Project I&APs | . 14 |
| 2.5 | | os in the consultation process | |
| 2.6 | | nmary of issues raised | |
| | | nental laws and policy | |
| 3.1 | | licable Laws and Policies | |
| | | Description | |
| 4.1 4.2 | | oductionoduction Phase | |
| | .2.1 | Site preparations for infrastructure | |
| | 2.2 | Beach Sports Facility | |
| | .2.3 | Vehicle Access Parking | |
| | | | |
| | .2.4 | Public Braai Facility | |
| | 2.5 | Play and Picnic Park | |
| | 2.6 | Ablution Facilities | |
| 4. | 2.7 | Outdoor Fitness Park | . 24 |
| 4. | 2.8 | Beach Walkway | . 24 |
| 4. | 2.9 | Upgrading of Beach Warning and Safety Signs | . 25 |
| 4. | 2.10 | Waste Management during construction activities | . 25 |
| 4. | 2.11 | Transport routes/Access | . 25 |
| 3. | 2.2 | Power supply | . 25 |
| 4. | 2.12 | Timetable | . 25 |
| 4. | 2.13 | Construction Workforce | . 26 |

| | 4.2.14 | Sanitation for Construction | 26 |
|----|-----------------|---|----|
| | 4.2.15 | Storage of Equipment and Tools | 26 |
| | 4.2.16 | Rehabilitation of temporary construction sites and laydown area | 26 |
| 4 | 4.3 Op | erational Activities | 26 |
| | 4.3.1 | Power Supply | 26 |
| | 4.3.2 | Waste Management | 26 |
| | 4.3.3 | Access Roads | 26 |
| | 4.3.4 | Personnel | 27 |
| | 4.3.5 | Operational hours | 27 |
| | 4.3.6 | Sanitation during the operations | 27 |
| 5 | Project | Alternatives | 28 |
| 5 | 5.1 Alt | ernative site and infrastructure locations | 28 |
| - | | ernative power supply | |
| | | e "no project" option | |
| 6 | | RIPTION OF THE CURRENT ENVIRONMENT | |
| C | 6.1 Ex 6.1.1 | isting Infrastructure Braai area | |
| | 6.1.2 | | |
| 6 | - | mate | |
| - | | odiversity | |
| | 6.3.1 | Flora | |
| | 6.3.2 | Fauna | 30 |
| 6 | 6.4 Su | rface Water | 31 |
| 6 | 6.5 He | ritage/Archaeology | 31 |
| 6 | | Quality | |
| _ | | ise | |
| | | sual | |
| | | cio-Economic and Land-Use | |
| 7 | | FICATION OF ENVIRONMENTAL ASPECTS AND POTENTIAL IMPACTS | |
| 8 | | ONMENTAL IMPACT ASSESSMENT | |
| - | | sessment Approach and Methodology | |
| 8 | | ue/Impact: Noise pollution impact on the biophysical and social environment . | |
| | | ue/Impact: Visual and Sense of Place | |
| 8 | | ue/Impact: Waste Management | |
| 9 | | sions | |
| 10 | • | prward | |
| 11 | Referer | nces | 47 |

List of Figures and Tables

| Figure 1: Site Layout | 9 |
|---|----|
| Figure 2: Example of the Proposed Temporary Beach Sports Facilities | 22 |
| Figure 3: Example of the Proposed Vehicle Access Parking | 22 |
| Figure 4: Example of the Proposed Public Braai Facility | 23 |
| Figure 5: Example of the Proposed Play and Picnic Park | |
| Figure 6: Example of the existing toilet facility | 24 |
| Figure 7: Example of the Proposed Outdoor Fitness Park | |
| Figure 8: Example of the Proposed Beach Walkway | 25 |
| Figure 9: Existing temporary braai facility | |
| Figure 10: Existing "OK Parking" temporary toilet facility | |

| Table 1: EIA Dragge | 10 |
|---|----|
| Table 1: EIA Process | 10 |
| Table 2: Scoping report Requirements stipulated in the EIA regulations | 12 |
| Table 3: The Beach Development Project Stakeholders | 14 |
| Table 4: Consultation process with I&APs and Authorities | 14 |
| Table 5: RELEVANT LEGISLATION AND POLICIES | 19 |
| Table 6: Environmental aspects and potential impacts associated with the northern beach | |
| development project | 34 |
| Table 7: Assessment Methodology and Criteria | 39 |
| Table 8: Summary of the assessed impact: Noise pollution impact on the biophysical and social | |
| environment | 41 |
| Table 9: Summary of Cumulative Physical Impacts on Visual Environment | 43 |
| Table 10: Summary of the assessed impact: Waste Management Impact on the biophysical and | |
| social environment | 44 |
| | |

LIST OF ACRONYMS, ABBREVIATIONS AND UNITS

| Acronym / Abbreviation | Definition |
|------------------------|---|
| EAPAN | Environmental Assessment Professionals of Namibia |
| ECC | Environmental Clearance Certificate |
| EIA | Environmental Impact Assessment |
| EMP | Environmental Management Plan |
| IAPS | Interested and Affected Parties |
| MEFT | Ministry of Environment, Forestry and Tourism |
| MFMR | Ministry of Fisheries and Marine Resources |
| РРР | Public Participation Process |
| SIA | Socio-Economic Impact Assessment |



1 INTRODUCTION

This section discusses the aims and objectives of the study and provides a brief introduction on the proposed Northern Beach Development Project.

1.1 Objectives of the Study and Opportunity to Comment

This Environmental Impact Assessment (EIA) Scoping (including impact assessment) Report has been compiled and was distributed for a two-week (14 days) review and comment as part of the EIA process that is being undertaken for the proposed Northern Beach Development Project.

This report summarises the EIA process being followed and provides an overview of the affected environment. It includes an assessment of the environmental impacts that the proposed activities are likely to have and sets out the consultants' recommendations. The proposed management and mitigation measures relating to the proposed activities are documented in an Environmental Management Plan (EMP), see Appendix F.

Registered Interested and Affected Parties (IAPs) are provided with the opportunity to comment on this Scoping (including impacts assessment) Report (see Section 2). Once the comment period closes, the Report will be updated to a final report with due consideration of the comments received, and it will be submitted to the Ministry of Environment, Forestry and Tourism (MEFT) for decision-making.

1.2 Introduction to the Proposed Project

The Swakopmund Municipality intends to develop the northern beach into a recreational (i.e., parks and recreational facilities) area for the purpose of improving the social, economic and environmental situation of the community at large and to enhance the quality of life for all Swakopmund residents and visitors.

The proposed project is located adjacent to (south) the Platz Am Meer Shopping Mall, in the Vineta residential area, Swakopmund, Namibia.

The proposed site and surrounding area is currently used for unconstrained and unregulated recreational activities. Therefore, the Swakopmund Municipality proposes to provide an improved/comprehensive recreational opportunity for all ages, ability levels, and provides safe, attractive, well maintained, well managed parks and recreation facilities. The following activities and infrastructure components were identified for the development, enhancement and improvement of the Northern Beach (Please refer to Figure 1):

- Parking bays;
- Beach Sports facility (volleyball, rugby, soccer, netball);
- Picnic park;
- Beach walkway;
- Ablution facilities;
- Community braai area;

- Fitness park; and
- Play park.

Prior to commencement of any construction activities relating to the proposed project, an Environmental Clearance Certificate (ECC) is required on the basis of an approved Environmental Impact Assessment (EIA) and Environmental Management Plan (EMP). It is with this background that, I.N.K Enviro Consultants cc (I.N.K), an independent firm of consultants, was appointed to undertake the Environmental Impact Assessment process for this project. More details regarding the EIA process that was followed are presented in Section 1.4.



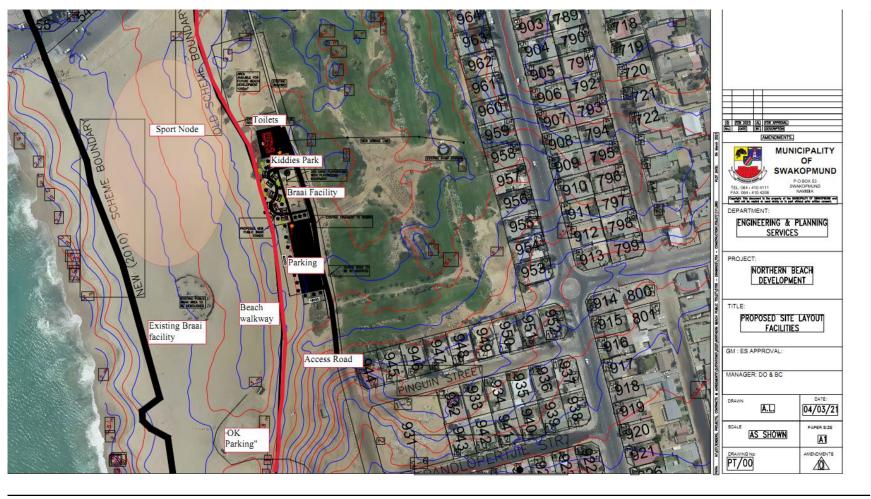


Figure 1: Site Layout

1.3 Project Motivation (Need and Desirability)

As mentioned in section 1.2 above, the Swakopmund Municipality strives to continuously improve the social, economic and environmental situation of the Swakopmund community at large, to enhance the quality of life for all Swakopmund residents and visitors. This can be achieved by providing a comprehensive program of recreational opportunities for all ages, ability levels, and provides safe, attractive, well maintained, well managed parks and recreation facilities.

In addition, there is an attempt to establish an overarching framework to effectively develop and manage the entire beach area within the Swakopmund Municipal area. Therefore, an action plan has been compiled, which identifies future land uses along the beach as per the municipality's newly developed structure plan, and to make further recommendations for future management.

It is against this background, that the northern beach has been identified as an area earmarked for the development of parks and recreational facilities, to ensure the above-mentioned structure plan is effectively and successfully carried out.

The challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts.

1.4 Introduction to the Environmental Impact Assessment

Environmental Impact Assessments are regulated by the Ministry of Environment, Forestry and Tourism (MEFT) in terms of the Environmental Management Act, 7 of 2007. This Act was gazetted on 27 December 2007 (Government Gazette No. 3966) and enacted on 6 January 2012. The Environmental Impact Assessment Regulations: Environmental Management Act, 2007 (Government Gazette No. 4878) were promulgated on 6 January 2012.

1.4.1 EIA Process

The EIA process that has been followed is summarized in the table below:

Table 1: EIA Process

| Objectives | Corresponding activities | | | |
|---|--|--|--|--|
| Project initiation and Screening phase (January - February 2021) | | | | |
| Initiate the screening process Initiate the environmental impact assessment process. | Site Visit Identify Key Stakeholders Early identification of environmental aspects and potential impacts associated with the proposed project. | | | |
| EIA Phase (Scoping) (February – March 2021) | | | | |
| Notify the decision-making authority of the proposed project Identify interested and/or affected | Registration of the project on the MEFT portal. Notify government authorities and IAPs of the project and EIA process (telephone calls, e-mails, faxes, newspaper | | | |

| parties (IAPs) and involve them in the scoping process through information sharing. Identify potential environmental issues associated with the proposed project. Consider alternatives. Identify any fatal flaws. Determine the terms of reference for additional assessment work. | advertisements and site notices). | | |
|---|---|--|--|
| Assessment and EMP Compilation Reports (March 2021 – April 2021) | | | |
| Provide a description of the potentially affected environment. Assessment of potential environmental impacts. Design requirements and management and mitigation measures. Review by IAPs and relevant Authorities Receive feedback on application. | Investigations by technical project team Compilation of draft EIA and EMP reports. Distribute draft EIA and EMP reports to authorities and IAPs for review. Forward the final EIA and EMP reports and IAPs comments to MEFT for review. MEFT review and Record of Decision. | | |

Within this framework, the required components of the EIA report are discussed in more detail as part of the EIA Methodology in Section 8.

EIAs are influenced by national legislation and a range of guidelines. The legislation applicable to this project and the EIA process is discussed further in Section 3 below.

1.4.2 EIA Team

I.N.K Enviro Consultants cc is the independent firm of consultants that has been appointed by the Swakopmund Municipality to undertake the environmental impact assessment and related processes.

Immanuel N. Katali, the EIA Lead Practitioner holds a B.Arts (Honors) in Geography, Environmental Studies and Sociology and has over six years of relevant experience in conducting/managing Environmental Impact Assessments (EIAs), Socio-Economic Impact Assessments (SIA) and compiling Environmental Management Plans (EMPs) in Namibia. Immanuel is certified as an environmental practitioner under the Environmental Assessment Professionals Association of Namibia (EAPAN).

2 SCOPING MEFTHODOLOGY

This section discusses and describes the structure of the report and the Methodology and approach used to notify and inform the stakeholders about the EIA process being followed and an opportunity to provide their comments.

2.1 Information collection

I.N.K used various information sources to identify and assess the issues associated with the proposed project. These include:

- Site visits by I.N.K;
- Consultation with Project Technical Team (Swakopmund Municipality) and relevant information shared by the Swakopmund Municipality;
- Consultation with MEFT via online application system;
- Consultation with I&APs;
- Atlas of Namibia;
- Google Earth; and
- Internet sources.

2.2 Scoping Report

The main purpose of this Scoping Report is to indicate which environmental aspects relating to the proposed project might have an impact on the environment, to assess them and to provide management and mitigation measures to avoid or minimise these impacts.

Table 2 outlines the Scoping Report requirements as set out in Section 8 of the Environmental Impact Assessment Regulations that were promulgated in January 2012 in terms of the Environmental Management Act, 7 of 2007.

Table 2: Scoping report Requirements stipulated in the EIA regulations

| Requirements for a Scoping Report in terms of the February 2012 regulations | Reference in report | |
|---|---------------------|--|
| (a) the curriculum vitae of the EAPs who prepared the report; | Section 1.4.2 and | |
| (a) the current mac of the EATS who prepared the report, | Appendix A | |
| (b) a description of the proposed activity; | Section 4 | |
| (c) a description of the site on which the activity is to be undertaken | Sections 4 & 6 | |
| and the location of the activity on the site; | Sections 4 & 0 | |
| (d) a description of the environment that may be affected by the | | |
| proposed activity and the manner in which the geographical, physical, | Sections 6, 7 and 8 | |
| biological, social, economic and cultural aspects of the environment | | |
| may be affected by the proposed listed activity; | | |
| (e) an identification of laws and guidelines that have been considered in | Section 3 | |

| the preparation of the Scoping Report; | |
|--|--|
| (f) details of the public consultation process conducted in terms of regulation 7(1) in connection with the application, including - (i) the steps that were taken to notify potentially interested and affected parties of the proposed application; (ii) proof that notice boards, advertisements and notices notifying potentially interested and affected parties of the proposed application have been displayed, placed or given; (iii) a list of all persons, organisations and organs of state that were registered in terms of regulation 22 as interested and affected parties in relation to the application; and (iv) a summary of the issues raised by interested and affected parties, the date of receipt of and the response of the EAP to those issues; | Sections 2.3, 2.4, 2.5 and Appendix B & E |
| (g) a description of the need and desirability of the proposed listed activity and any identified alternatives to the proposed activity that are feasible and reasonable, including the advantages and disadvantages that the proposed activity or alternatives have on the environment and on the community that may be affected by the activity; | Sections 1.3 and 5 |
| (h) a description and assessment of the significance of any significant effects, including cumulative effects, that may occur as a result of the undertaking of the activity or identified alternatives or as a result of any construction, erection or decommissioning associated with the undertaking of the proposed listed activity; | Sections 7 and 8 |
| (i) terms of reference for the detailed assessment; and | Section 7 & 8 |
| (j) a management plan, which includes - | |
| (i) information on any proposed management, mitigation, protection or remedial measures to be undertaken to address the effects on the environment that have been identified including objectives in respect of the rehabilitation of the environment and closure; (ii) as far as is reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the activity or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principle of sustainable development; and (iii) a description of the manner in which the applicant intends to modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation remedy the cause of pollutants. | Appendix F |

2.3 Public Participation Process

The public participation process for the proposed project is conducted to ensure that all persons and/or organisations that may be affected by, or interested in the proposed project, were informed of the project and could register their views and concerns. By consulting with relevant authorities and I&APs, the range of environmental issues to be considered in this Scoping Report (including the assessment of impacts) has been given specific context and focus.

Included below is a summary of the I&APs consulted, the process that was followed and the issues that were identified.

2.4 The Northern Beach Development Project I&APs

The following table (Table 3) provides a broad list of persons, group of persons or organisations that were informed about the project and were requested to register as I&APs should they be interested and/or affected.

| IAP Grouping | Organisation |
|-------------------------------|--|
| Government Ministries | Ministry of Environment and Tourism (MEFT); |
| | Department of Environmental Affairs (DEA). |
| | Ministry of Fisheries and Marine Resources |
| Residents | Swakopmund Residents (most specifically, the immediate and |
| | direct residents to the proposed activities) |
| Media | Newspaper adverts: Die Republikein, The Namibian Sun and |
| | Allgemeine Zeitung. |
| | Website: The Swakopmund Municipality |
| Other interested and affected | Any other people with an interest in the proposed project or who |
| parties | may be affected by the proposed project. |
| | |

Table 3: The Beach Development Project Stakeholders

The full stakeholder database for the EIA process is included in Appendix B of the report.

2.5 Steps in the consultation process

Table 4 sets out the steps that were followed as part of the consultation process:

Table 4: Consultation process with I&APs and Authorities

| ТАЅК | DESCRIPTION | DATE | | |
|--|-------------|------|--|--|
| Notification - regulatory authorities and IAPs | | | | |

| TASK | DESCRIPTION | DATE |
|--|--|--|
| Notification to MEFT | I.N.K submitted the Application Form (online system) as a form of project registration and notification to MEFT. | 27 January 2021 |
| IAP identification | A stakeholder database was developed for the proposed project and EIA process. Additional I&APs will be updated during the EIA process as required. A copy of the IAP database is attached in Appendix B. | 18 January - throughout the process |
| Distribution of | BIDs were made available to all I&APs on the project's stakeholder database and were available at the scoping meetings. Copies of the BID were available on request to I.N.K. | |
| background information document (BID), flyers and | Flyers and stakeholder meeting invitation were distributed to the immediate and direct residents (door-to-door approach). | February 2021– throughout the process |
| stakeholders meeting invitation letters | The purpose of the BID was to inform I&APs and authorities about the proposed project, the EIA process, possible environmental impacts and means of providing input into the EIA process. Attached to the BID was a registration and response form, which provided I&APs with an opportunity | process |
| | to submit their names, contact details and comments on the project. A copy of the BID is attached in Appendix C. | |
| Site notices | A site notice was placed at the entry to the site. Refer Appendix D for a copy of the site notice. | February 2021 |
| Email and Telephone calls | Key Stakeholders were notified about the EIA process via emails and telephone calls. | February 2021 – throughout the process |
| Newspaper Advertisements | Block advertisements were placed as follows: Die Republikein (12 and 19 March 2021) The Namibian Sun (12 and 19 March 2021) Allgemeine Zeitung (12 and 19 March 2021) Refer to Appendix D. | March 2021 |
| Public meeting and | Focus Group meetings and submission of comments | |
| Scoping Meetings | Several consultations were made with I&APs. This included meetings, email and telephonic conversations. | February 2021 |
| | Focus group meeting was held with key stakeholders | |

| TASK | DESCRIPTION | DATE |
|--|--|------------|
| | (nearby/immediate residents) as follows: Swakopmund Municipal Council Chambers on 17 February 2021 | |
| | A public meeting for the larger general public was not held as a health precautionary measure relating to the Global Covid-19 pandemic. However, the project was advertised in the above-mentioned newspapers, site notice and website advertisement to provide an opportunity for the general public to submit their comments. | |
| | The initial due date to register as an I&AP and submit comments was 5 March 2021. However, this date was further extended to 26 March 2021 upon request by the residents. | |
| | A copy of the presentation is attached in Appendix C. | |
| Comments and Responses | Minutes of the meeting is attached in Appendix D. A Summary Issues and Response Report is attached in Appendix E. | April 2020 |
| Review of draft Sco | oping Report | |
| IAPs and authorities (excluding MEFT:DEA) review of Scoping Report and updated EMP | The Scoping Report (Main Report excluding Appendices) was sent via email to all parties who registered or showed an interest in this EIA process. Electronic copies of the full report (including appendices) was made available on request to I.N.K. A Hard copy was made available at the Swakopmund Municipality for public review. | April 2020 |
| | Authorities and IAPs had 14-working days to review the Scoping Report and submit comments in writing to I.N.K. The closing date for comments was 15 May 2020. | |
| MEFT review of Scoping Report and EMP | A copy of the final Scoping Report, including authority and I&AP review comments, has been submitted to MEFT on completion of the public review process via the online application system. | March 2021 |

2.6 Summary of issues raised

All issues that have been raised to date by authorities and IAPs are provided in Appendix E to the Scoping Report. Below is a summary of the key issues raised:

- Noise Pollution;
- Visual Impact; and
- Impacts relating to land-use;

However, most of the above issues raised relate mainly to the existing uncontrolled and unregulated recreational activities (braai, loud music from parked cars, illegal car racing and late-night operational hours) at the existing (informal)site, commonly known as "OK Parking".

The proposed project will be developed and enforced with strict control and management measures to ensure that the facility operates in an acceptable and just manner, with due consideration of creating a safe and conducive social environment for the immediate residents, wider Swakopmund residents and all other visitors.

3 ENVIRONMENTAL LAWS AND POLICY

This section discusses and describes the governing laws, policies and acts that are relevant to the environmental impact assessment for the proposed Northern Beach Development Project.

The Republic of Namibia has five tiers of law and a number of policies relevant to environmental assessment and protection, which includes:

- The Constitution
- Statutory law
- Common law
- Customary law
- International law

Key policies currently in force include:

- The EIA Policy (1995).
- Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation (1994).
- National Solid Waste Management Strategy (2017)

As the main source of legislation, the Constitution of the Republic of Namibia (1990) makes provision for the creation and enforcement of applicable legislation. In this context and in accordance with its constitution, Namibia has passed numerous laws intended to protect the natural environment and mitigate against adverse environmental impacts.

3.1 Applicable Laws and Policies

In the context of the proposed irrigation project, there are several laws and policies currently applicable. They are reflected in Table 5 below.

Table 5: RELEVANT LEGISLATION AND POLICIES

| YEAR | NAME | Natural Resource Use (energy & water) | Emissions to air (fumes, dust & odours) | Emissions to land (non- hazardous & hazardous | Emissions to water (industrial & domestic) | Noise | Visual | Impact on Land use | Impact on biodiversity | Impact on Archaeology | Socio- economic | Safety & Health |
|------|---|---|---|--|--|-------|--------|-----------------------------|---------------------------|--------------------------|--------------------|-----------------------|
| 1990 | The Constitution of the Republic of Namibia of 1990 | x | X | X | X | x | x | × | Х | Х | Х | X |
| 1997 | Namibian Water Corporation Act, 12 of 1997 | X | | | | | | | | | Х | |
| 2013 | Water Resources Management Act 11 of 2013 | x | | | х | | | | | | х | |
| 2004 | National Heritage Act 27 of 2004 | | | | | | | | | x | | Х |
| 2007 | Environmental Management, Act 7 of 2007 | x | X | X | Х | х | х | х | Х | Х | x | Х |
| 2012 | Regulations promulgated in terms of the | | | | | | | | | | | 19 |

| | Environmental Management, Act 7 of 2007 | | | | | | | | | |
|------|--|---|---|---|---|---|-----|---|---|---|
| 1975 | Nature Conservation Ordinance 14 of 1975 | х | | | Х | | | X | Х | |
| 1976 | Atmospheric Pollution Prevention Ordinance 11 of 1976 | | Х | | | | | | | |
| 1995 | Namibia's Environmental Assessment Policy for Sustainable Development and Environmental Conservation | x | X | x | X | X | X X | X | Χ | X |
| 2015 | Public and Environmental Health Act No 1 of 2015 | | x | Х | Х | Х | x | | | Х |
| 1969 | General Health Regulations 121 of 1969 | | X | x | X | x | X | | | Х |

4 Project Description

This section discusses and describes the proposed Northern Beach Development Project and associated activities during the construction and operational phases.

4.1 Introduction

The proposed Northern Beach Development project is located adjacent to the Platz Am Meer Shopping Mall, in the Vineta residential area, Swakopmund, Namibia.

A mentioned in section 1.2, the aim is to develop the northern beach into a recreational (parks and recreational facilities) area for the purpose of improving the social, economic and environmental situation of the community and to enhance the quality of life for all Swakopmund residents and visitors. The following activities were identified for the development, enhancement and improvement of the Northern beach:

- Parking bays;
- Beach Sports facility (volleyball, rugby, soccer, netball);
- Picnic park;
- Beach walkway;
- Ablution facilities;
- Community braai area;
- Fitness park; and
- Play park.

The activities listed are described further in the sections below.

4.2 Construction Phase

The Swakopmund Municipality will make budgetary provisions for the implementation of activities for the Northern Beach Development according to the following phases:

| Phase | Activity |
|--------------------------------------|--|
| Phase 1 Financial year (2020 – 2021) | Upgrade of the existing Ablution facilities Proposed Fitness Park Extension of the existing Beach Walkway Upgrading of Beach warning and Safety signs |
| Phase 2 Financial year (2021 – 2022) | Proposed Sports Activity Node Sufficient Parking Areas Proposed Public Braai facility Proposed Play and Picnic Park |

4.2.1 Site preparations for infrastructure

Site preparation includes the demarcation of the footprint of the proposed northern beach development and the laydown area to be located ±15 m for each of the proposed project component and infrastructure site, for the storage and partial assembly of the project material or equipment to be installed or constructed. The proposed sites for the beach development will require no disturbance i.e., land clearing as the sites are all in relatively open sandy areas.

4.2.2 Beach Sports Facility

The development of a sports activity node (Figure 2) will be to promote beach sports. This includes developing fields for activities such as beach soccer, rugby, volleyball and netball. However, there will not be any permanent structures installed on site for the sport activity nodes. The sports activities will make use of temporary structures that will only be erected on site when there is a sports activity taking place or upon request/application by the general public to the Sports and Recreational Officer to make use of the structures. Thereafter, all structures will be removed and stored at the Swakopmund Municipality offices.

The image displayed in this section as well as, other images (excluding figure 6) in the subsections below represent an indication of the proposed facilities. The final design for the facilities is subject to proposals through a procurement and tender process by the Swakopmund Municipality.



Figure 2: Example of the Proposed Temporary Beach Sports Facilities

4.2.3 Vehicle Access Parking

Paved parking bays (Figure 3) will be provided for people to get access to the beach. The first parking bay will be next to Erf 838 and the second bay will stretch from the existing OK Parking towards the proposed braai area. The entry into the parking bay will be controlled by the use of a boom gate. There will be a security officer at the boom gate to ensure that every vehicle entering the park is searched and any items/substances that are prohibited to enter the park will be removed.



Figure 3: Example of the Proposed Vehicle Access Parking

4.2.4 Public Braai Facility

The temporary "OK Parking" braai facility will be removed and a bigger, regulated, permanent public braai facility will be developed (Figure 4). The braai area will accommodate about 11 to 12 concrete stands, sitting areas and tables.



Figure 4: Example of the Proposed Public Braai Facility

4.2.5 Play and Picnic Park

A kiddies and Picnic Park (Figure 5) will be developed close to Paddocks Garden. It will include several play equipment that will withstand Swakopmund weather conditions will be installed.



Figure 5: Example of the Proposed Play and Picnic Park

4.2.6 Ablution Facilities

There is currently an ablution facility (Figure 6) with two toilets. This facility will be upgraded with additional 9 toilets (4 for females, 4 for males and 1 for people with disabilities), 4 showers (2 for females and 2 for males), a kiosk that will be rented out and a look out centre for sea rescue officials. The ablution facilities will include toilets, kiosks, showers and a lookout tower for sea rescue.



Figure 6: Example of the existing toilet facility

4.2.7 Outdoor Fitness Park

The aim of the outdoor fitness park (Figure 7) is to promote outdoor physical activity for Swakopmund residents and visitors. The fitness equipment will be placed randomly along an existing walkway.



Figure 7: Example of the Proposed Outdoor Fitness Park

4.2.8 Beach Walkway

The current beach walkway extends from the Swakopmund Strand hotel towards the clip Jetty. The existing walkway is about 2 m wide and stretches 3.52 Km long. The extension of the existing walkway will start where the existing walkway end, and it will pass the proposed recreational park and end at the Platz Am Meer parking area.

The proposed extension of the walkway will be approximately ±700 meters in length and 4 meters wide. The walkway will be paved and subdivided to accommodate walking, jogging and cycling.



Figure 8: Example of the Proposed Beach Walkway

4.2.9 Upgrading of Beach Warning and Safety Signs

Safety, warning and regulatory signs will be upgraded and strategically placed along the beach area, walkway and garden areas.

The signs will include:

- Warning signs of high and rough currents in various areas
- Safety and Regulatory signs that indicate the prohibited activities at that beach and within the
 recreational park, such as 'no swimming, no alcohol, no loud music, no littering, no driving on the
 beach, and keep dog on lease. Operational hours will also be displayed on signs at the recreational
 park

4.2.10 Waste Management during construction activities

Relatively small quantities of waste is anticipated to be generated during the construction phase. Waste shall be transported to the Swakopmund waste disposal site.

4.2.11 Transport routes/Access

The Northern Beach Development Project is located along paths of an existing service gravel road that will be upgraded as the access road to the parking area and to the upgraded ablution facility.

3.2.2 Power supply

The proposed site is located close to an Erongo Red substation. Electrical connection will be extended from the substation to the site.

4.2.12 Timetable

The construction of the recreational facility is divided into phases, which will take place for a period of 2 years (2021-2022). The construction process is expected to be initiated as soon as the MEFT finalises the review and if an Environmental Clearance Certificate is issued and all other relevant authorisation have been obtained.

4.2.13 Construction Workforce

The construction phase will employ local people throughout the various phases mentioned in section 4.2 above. During the construction phase the Municipality will appoint private construction companies through the procurement process by extending bid invitations to local construction companies.

The construction workforce/contractors will commute to the designated sites each day during the construction phase and will be accommodated in Swakopmund. No accommodation or any permanent structures will be constructed on site.

4.2.14 Sanitation for Construction

During the construction phase, portable toilets with associated septic tanks will be used. The septic tanks will be emptied on a regular basis ensuring no spillages in the proposed sites of infrastructure construction. The effluent shall be disposed of at the Swakopmund Municipal Sewage Treatment Plant.

4.2.15 Storage of Equipment and Tools

Equipment and tools used on a daily basis will be stored in a temporary storage facility on site. No permanent structures will be on site.

4.2.16 Rehabilitation of temporary construction sites and laydown area

The removal of all temporary construction equipment will be undertaken at the end of construction activities. This will be done as per Environmental Management Plan recommendations.

4.3 **Operational Activities**

4.3.1 Power Supply

Power will be supplied using underground electricity cables to the site from the nearest substation.

4.3.2 Waste Management

Relatively large quantities of waste, most specifically from the braai activities, is expected to be generated during the operation phases. All waste generated during the park activities will be removed from site and disposed of at the Swakopmund waste disposal site. Disposal bins, such as recycling bins and non-recycling bins will be placed at the braai facility, along the walkway and at the Paddock Gardens. About two Molok bins will also be placed on site.

The cleansing team from the Swakopmund Municipality will be designated on site to ensure clean ups are conducted. The Municipal waste collectors will be responsible for the collection of all non-recycled waste on a regular basis and dispose the waste at the Swakopmund Municipal dumpsite, whereas all recycled waste will be collected by a registered recycling company.

4.3.3 Access Roads

With reference to section 4.2.11, the proposed project is located along paths of existing service gravel road that will be upgraded as the access road to the parking area and to the upgraded ablution facility. However, entry into the parking will be controlled with the implementation of a security gate.

4.3.4 Personnel

The park will be managed by the Sports and Recreational Officer of the Swakopmund Municipality and associated personnel i.e., maintenance team. However, further input and support will be provided by the Environmental Officer in ensuring that all commitments listed in the EMP will be adhered to during the operations.

4.3.5 Operational hours

Operational hours are from 08:00 until 20:00, as opposed to the current situation whereby visitors are allowed to spend unlimited/unregulated time at the existing "OK parking". Control and management measures will be enforced on site to ensure that the park is not utilized by the public beyond operational hours. As mentioned in section 1.2, the aim is to provide an improved/comprehensive recreational opportunity for all ages, ability levels, and provides safe, attractive, well maintained, well managed parks and recreation facilities.

4.3.6 Sanitation during the operations

The current ablution facility on site, only, has two toilets available. The facility will be upgraded and additional toilets will be constructed, with a small kiosk and lookout centre, where sea rescue officials will be stationed. The sewage system will be upgraded to accommodate the additional sewage waste that will be generated.

The toilet facility will be used for the visitors and commitments relating to housekeeping and sanitation of the facility will be listed in the EMP. Control and management measures will be enforced on site to prevent visitors from urinating in public open spaces i.e., surrounding area of the proposed facility and within the Paddock Garden.

5 PROJECT ALTERNATIVES

This section discusses and identifies alternatives to the proposed developments, considering advantages and disadvantages.

5.1 Alternative site and infrastructure locations

The construction of the proposed permanent infrastructure is located within the approved boundary of the Swakopmund Municipality's jurisdiction and an area zoned as "Public Open Space". The current location where the recreational activities are taking place, is located outside the legal boundaries of the Municipal Council and considered to be on state land. The Municipality however filed an official application with the Surveyor General to adjust the high-water mark and to extend the Municipal boundary from the current boundary towards the ocean.

An alternative is to locate the proposed infrastructure closer to the ocean and away from the residential houses and Paddock Gardens, as an attempt to minimise the possible impacts as outlined in section 8 of this report.

However, a dispute between the owners of the Platz Am Meer Shopping Mall and the State, has not been resolved. The jurisdictional concerns present uncertainty on the extension of the Municipal boundary. Therefore, the Municipality has opted to stay within the legal boundaries of the Swakopmund Council.

5.2 Alternative power supply

The construction of an electrical distribution system will involve clearing routes for underground power lines to connect to the existing power supply grid. Furthermore, the potential for solar panels, using the sun as an infinite renewable energy resource, is another option that could be investigated and taken into consideration to supply electricity to the proposed project.

5.3 The "no project" option

With reference to section 1.2, the Swakopmund Municipality aims to develop the Northern Beach area for the purpose of improving the social, economic and environmental situation of the community and to enhance the quality of life for all Swakopmund residents and visitors.

Therefore, the challenge facing the project proponent is its contribution towards achieving these goals while at the same time preventing and/or mitigating potential negative social and environmental impacts. The proponent will have to ensure that the identified mitigation measures and commitments to address the potential impacts, will appropriately be implemented and adhered to. Considering the potential negative environmental and social impacts which are discussed in Sections 7 & 8 of this report, it can be concluded that proceeding with the proposed activities, will have benefits at the local, regional and national scale, which will result in significant positive social and economic impacts such as employment, investment and procurement of goods and services.

Without the implementation and adherence of the commitments in the EMP, the project will be a "fatal flaw".

Should the project not be implemented, then the potential negative impacts addressed in Section 8 of this report would not take place and the existing impacts from the current "Ok Parking" will continue.

6 DESCRIPTION OF THE CURRENT ENVIRONMENT

This section discusses and describes the receiving and baseline environment from a local, regional and national context to determine potential positive and negative environmental issues/impacts that will require further assessment.

This section was compiled utilising the following sources of information:

- Information shared by the Swakopmund Municipality;
- Visual observations during a site visit by I.N.K;
- Google Earth;
- Atlas of Namibia; and
- Internet sources

6.1 Existing Infrastructure

The site currently has two (2) infrastructure components which consist of the following:

- Temporary Braai facility (Figure 9); and
- Temporary Toilet facility located close to "Ok Parking" (Figure 10).

The activities listed are described further in the sections below.

6.1.1 Braai area

The existing temporary braai facility is located outside the legal boundary of the Municipality to the south of the proposed site. It is a temporary structure that is constructed out of wooden structures, and has concrete braai stands loosely placed on the beach, where visitors can sit and have braai gatherings.

The activities at the exiting braai facility are unconstrained and the noise from the high-pitch dialogue between visitors and loud music from vehicles and potable speakers often creates nuisance to nearby residents. In addition, the braai area is subject to unregulated disposable of waste on the beach.

The existing braai facility is proposed to be removed and a permanent braai facility to be constructed at the proposed site.



Figure 9: Existing temporary braai facility

6.1.2 Toilet/Ablution Facility

The current toilet facility is located to the north east within the site boundary and next to the Paddock Gardens. Provision was made for a temporary ablution facility located closer to "OK Parking". This facility will be removed once the existing toilet facility has been upgraded.



Figure 10: Existing "OK Parking" temporary toilet facility

6.2 Climate

The weather at the coast is significantly different from that to the inland. There is little to no rain at the coast, the average temperatures are much lower, radiation and sunshine is less and frost is absent. Yet, the winds are stronger and humidity is higher due to frequent fog. However, the coastal weather is occasional and can experience days of very warm weather. The climate of the area is mainly influenced by the Benguela Current and the South Atlantic Anticyclone. The mean annual precipitation (MAP) at the coast is very low, with much of the precipitation being associated with fog) and only occasional rainfall events. The average annual temperature is less than 16°C. The Swakopmund area experiences over 125 days of fog per year. February, which is the most humid month in Swakopmund, can reach over 90% humidity whereas June is 60-70% humid. Average annual air temperature increases from the coast (15°C) to the escarpment (22°C) without strong seasonal variation. On a daily basis, air temperature fluctuates only little at the coast (6°C), with extreme fluctuations of 17°C further inland, declining slightly near the escarpment. The maximum daily surface temperatures in mid-afternoon do change with season from 60°C in summer to 48°C in winter.

6.3 Biodiversity

6.3.1 Flora

There is no flora present on site. However, the Paddock Gardens located outside the eastern boundary of the site is well vegetated and provides a green and nature related feel to the area.

6.3.2 Fauna

The site does not provide a natural habitat for any fauna. The only animals that can be found on site from time to time, are dogs that usually accompany their owners during jogs and exercise sessions.

6.4 Surface Water

There are no drainage lines on and near the site. The site is relatively close to the Atlantic Ocean, which is the only surface water that can be found near the site.

6.5 Heritage/Archaeology

It is unlikely that any heritage artefacts can be found on site, due to the fact that the site has already been disturbed to a certain extent.

6.6 Air Quality

The only source of dust in the area is generated by the vehicles on the access gravel road to the site. However, the dust emission is minimal, as the gravel road is a short distance (less than 150 m) from the main road to the "OK Parking" area.

6.7 Noise

Existing noise sources within and around the area include:

- natural sounds from the sea, winds and birds;
- activities at the Platz Am Meer Mall; and
- vehicle movement on the public road network;

No noise monitoring is currently taking place and the emissions listed above cannot be quantified. Potential receptors of noise are the residents and the tourists that visit the various attractions in the surrounding area.

6.8 Visual

The project area lies in a public open area with the presence of few infrastructure, i.e existing temporary braai and toilet facilities. The residents are currently situated at a high elevation and the proposed development is at the lowest point, therefore the view of the Atlantic Ocean will not be blocked by the proposed activities. However, the beach development activities and infrastructure will change the visual aspect/scenery of the beach. In addition, the paddock Gardens to the east of the project area provides a nature related "feel" due to the green garden vegetation that is present.

However, the presence of the Platz Am Meer Shopping Mall and existing temporary braai and toilet facilities on site already provides a visual impact to the residents.

6.9 Traffic

The current traffic numbers on the public road near the site fluctuates, and only high during holiday seasons. This is due to the road frequently being used by people visiting the mall, people driving between the southern and northern residential areas in Swakopmund, etc. However, no traffic counts were taken to support this observation.

The current traffic at the "OK parking" is also only high during holiday seasons and at times on weekends.

6.10 Socio-Economic and Land-Use

The nearby community consists of a classification of an upper/high class residential area that has a view overlooking the Atlantic Ocean and the Paddock Gardens. The Platz Am Meer Shopping Mall is located north of the proposed site, which is the nearest infrastructure to the sea. The Paddock Gardens is located east of

the proposed site. The Paddocks Gardens were created through a partnership between the Municipality and the Paddocks Gardens Trust that consist of a few residents located close to the site. The garden is often used for picnics, ball games and fitness sessions.



7 IDENTIFICATION OF ENVIRONMENTAL ASPECTS AND POTENTIAL IMPACTS

This section discusses the environmental aspects of project activities and the resultant potential environmental impacts.

The consultation process with key stakeholders that included government authorities and I&APs allowed the opportunity to raise the issues associated with the project development. It was identified that; the following aspects will need to be further assessed:

- o Noise Pollution
- Visual Impact and Sense of Place
- o Waste Management

The relevance of the potential impacts ("screening") are also presented in the tables below to determine aspects to be assessed in further detail (Section 8 of this report).

In case of people related impacts, the assessment focused on third parties and did not assess health and safety impacts on workers because the assumption was made that these aspects are separately regulated by health and safety legislation, policies and standards.

| ACTIVITY / FACILITY | ASPECT | POTENTIAL ENVIRONMENTAL IMPACT | RELEVANCE (SCREENING) OF POTENTIAL IMPACT | Ref |
|------------------------|---|--|---|-----|
| Construction Phase | Soil stripping (earthmoving equipment) | Potential impact on biodiversity (physical impacts and general disturbance) Loss of habitat Loss of biodiversity | With reference to section 6.3.1, There is no flora present on site. However, the Paddock Gardens located outside the eastern boundary of the site is well vegetated and provides a green and nature related feel to the area. The related management and mitigation measures are stipulated in the EMP (refer to Appendix F) and no further assessment is required. | R01 |
| | | Potentialimpactonarchaeological sites•Destructionandlossofarchaeological sites | With reference to section 6.5, it is unlikely that any heritage artefacts can be found on site, due to the fact that the site has already been disturbed to a certain extent. The related management and mitigation measures are stipulated in the EMP (refer to Appendix F) and no further assessment is required. | R02 |
| | Oil and diesel spillages from vehicles and other equipment | Impact on surface water and groundwater water quality. | The proposed project may pose the risk of contamination of soil and the sea, mainly through accidental spills of oil and diesel etc. Due to the nature of the project, there is a low risk of big hydrocarbon spillages. The related management and mitigation measures are stipulated in the EMP (refer to Appendix F) and no further assessment is required. | R03 |
| | | | | |

Table 6: Environmental aspects and potential impacts associated with the northern beach development project

| ACTIVITY / FACILITY | ASPECT | POTENTIAL ENVIRONMENTAL IMPACT | RELEVANCE (SCREENING) OF POTENTIAL IMPACT | Ref |
|------------------------|--|--|---|-----|
| | Dust | Impact on 3 rd party health and safety | The immediate surroundings of the project site has communities inhabited in the area, therefore impact of air pollution on communities is identified. | |
| | | | Refer to Section 8 for the assessment of the potential impacts on Air Quality. Related management and mitigation measures are however stipulated in the updated EMP (refer to Appendix F). | |
| General Operations | Vehicle movement to the recreational facility | Injury to people and animals and 3 rd party health and safety impacts | The increased traffic on the roads and the intersection to the access road can cause accidents that may lead to death and/or injury to people and animals. The related management and mitigation measures are stimulated in the EMD (refer to Amendiu E) and as further | R04 |
| | | | stipulated in the EMP (refer to Appendix F) and no further assessment is required. | |
| | Noise generated from the recreational facility | Increase in disturbing noise levels (nuisance impact to third parties) | The proposed braai area will move closer to the residential area and the noise impacts would change. Therefore, an assessment is required. the activities at the existing braai area is unconstrained, therefore, it creates high and uncontrolled noise levels. | R05 |
| | | | Refer to Section 8 for the assessment of the potential impacts on Noise. Related management and mitigation measures are however stipulated in the updated EMP (refer to Appendix F). | |

| ACTIVITY / FACILITY | ASPECT | POTENTIAL ENVIRONMENTAL IMPACT | RELEVANCE (SCREENING) OF POTENTIAL IMPACT | Ref |
|--|-----------------------------------|--|--|-----|
| Waste disposal Sewerage management | | Emissions to land, impact on biodiversity, environmental degradation and nuisance impacts and contamination of surface water and groundwater | Waste will be separated at source and stored in a manner that there can be no discharge of contamination to the | |
| | | | impacts on Waste Management. Related management and mitigation measures are however stipulated in the updated EMP (refer to Appendix F). | |
| | Visual Impacts and sense of place | Changes in visual conditions | The proposed project will also be located near the beach and adjacent to the Platz Am Meer Shopping Mall. Additional infrastructure will be constructed west of the Paddocks, which could alter the view and the sense of place for the nearby and immediate community. | R07 |
| | | | Refer to Section 8 for the assessment of the potential impacts on Visual. Related management and mitigation measures are however stipulated in the updated EMP (refer to Appendix F). | |
| General operations and employment | Economic impacts | Impacts on local economy Increased employment opportunities | With reference to section 4.2.13, the construction phase will employ local people throughout the various phases. During the construction phase the Municipality will appoint private construction companies through the procurement process by extending bid invitations to local construction | R08 |

| ACTIVITY / FACILITY | ASPECT | POTENTIAL IMPACT | ENVIRONMENTAL | RELEVANCE (SCREENING) OF POTENTIAL IMPACT | Ref |
|------------------------|--------|---------------------|---------------|--|-----|
| | | | | companies. However, it is likely that the majority of the project's workforce during construction will come from Swakopmund. It is unlikely that job-seekers will come to the area in search of opportunities due to the nature and small scale of the project. The nature and scale of the project will not provide a significant change in the overall socio-economic context at a local, regional and national level. Therefore, socio- economic has not been further assessed. The related management and mitigation measures are stipulated in the EMP (refer to Appendix F) and no further assessment is required. | |

8 ENVIRONMENTAL IMPACT ASSESSMENT

This section discusses, provides ratings and gives recommendation on the positive and negative potential issues/impacts identified.

8.1 Assessment Approach and Methodology

Both the criteria used to assess the impacts and the Method of determining the significance of the impacts is outlined in Table 7. This Method complies with the EIA Regulations: EMA, 2007 (Government Gazette No. 4878) EIA regulations.

Part A provides the approach for determining impact consequence (combining severity, spatial scale and duration) and impact significance (the overall rating of the impact). Impact consequence and significance are determined from Part B and C. The interpretation of the impact significance is given in Part D.

Both mitigated and unmitigated scenarios are considered for each impact in the EIA results.



Table 7: Assessment Methodology and Criteria

| | | PART A: DEFINITION AND CRITERIA |
|----------------------------------|----|--|
| Definition of SIGNIFICANCE | | Significance = consequence x probability |
| Definition of CONSEQUENCE | | Consequence is a function of severity, spatial extent and duration |
| Criteria for ranking of the | н | Substantial deterioration (death, illness or injury). Recommended level will often be violated. |
| SEVERITY/NATURE of | | Vigorous community action. Irreplaceable loss of resources. |
| environmental impacts | М | Moderate/ measurable deterioration (discomfort). Recommended level will occasionally be |
| | | violated. Widespread complaints. Noticeable loss of resources. |
| | L | Minor deterioration (nuisance or minor deterioration). Change not measurable/ will remain in the |
| | | current range. Recommended level will never be violated. Sporadic complaints. Limited loss of |
| | | resources. |
| | L+ | Minor improvement. Change not measurable/ will remain in the current range. Recommended |
| | | level will never be violated. Sporadic complaints. |
| | M+ | Moderate improvement. Will be within or better than the recommended level. No observed |
| | | reaction. |
| | H+ | Substantial improvement. Will be within or better than the recommended level. Favourable |
| | | publicity. |
| Criteria for ranking the | L | Quickly reversible. Less than the project life. Short term |
| DURATION of impacts | М | Reversible over time. Life of the project. Medium term |
| | н | Permanent. Beyond closure. Long term. |
| Criteria for ranking the SPATIAL | L | Localised - Within the site boundary. |
| SCALE of impacts | м | Fairly widespread – Beyond the site boundary. Within 20 km of the site boundary. |
| | н | Widespread – Far beyond site boundary. Regional/ national |
| | | PART B: DETERMINING CONSEQUENCE |

| | | | SEVERITY = L | | | | |
|--------------|-------------|---|--------------|--------|--------|--|--|
| DURATION | Long term | Н | Medium | Medium | Medium | | |
| | Medium term | м | Low | Low | Medium | | |
| | Short term | L | Low | Low | Medium | | |
| SEVERITY = M | | | | | | | |
| | | | | | | | |

| DURATION | Long term | H | Medium | High | High | |
|--------------|-------------|---|--------|--------|--------|--|
| | Medium term | м | Medium | Medium | High | |
| | Short term | L | Low | Medium | Medium | |
| SEVERITY = H | | | | | | |

| DURATION | Long term | н | High | High | High | |
|----------------------------------|-------------|---|----------------------|----------------------|--------------------|--|
| | Medium term | М | Medium | Medium | High | |
| | Short term | L | Medium | Medium | High | |
| | | | L | М | н | |
| | | | Localised | Fairly widespread | Widespread | |
| | | | Within site boundary | Beyond site boundary | Far beyond site | |
| | | | Site | Local | boundary | |
| | | | | | Regional/ national | |
| SPATIAL SCALE | | | | | | |
| PART C: DETERMINING SIGNIFICANCE | | | | | | |

| PROBABILITY | Definite/ Continuous | н | Medium | Medium | High |
|-----------------|----------------------|---|--------|--------|--------|
| (of exposure to | Possible/ frequent | м | Medium | Medium | High |
| impacts) | Unlikely/ seldom | L | Low | Low | Medium |
| | | | L | м | н |

| | | | CONSEQUENCE | | | |
|--|---------------------|--|-------------|--|--|--|
| PART D: INTERPRETATION OF SIGNIFICANCE | | | | | | |
| Significance | Decision guidelin | Decision guideline | | | | |
| High | It would influence | It would influence the decision regardless of any possible mitigation. | | | | |
| Medium | It should have an | It should have an influence on the decision unless it is mitigated. | | | | |
| Low | It will not have ar | It will not have an influence on the decision. | | | | |

8.2 Issue/Impact: Noise pollution impact on the biophysical and social environment

Introduction

With reference to section 6.1.1, the activities at the existing braai area is unconstrained, therefore, it creates high and uncontrolled noise levels, which is often generated by the high pitch dialogue between visitors and music from vehicles and potable speakers. The sensitivity of noise receptors usually increases at night when conditions are still, and ambient noise levels are at their lowest. With reference to section 1.2, The proposed site and surrounding area is currently used for unconstrained and unregulated recreational activities. Therefore, the Swakopmund Municipality proposes to provide an improved/comprehensive recreational opportunity for all ages, ability levels, and provides safe, attractive, well maintained, well managed parks and recreation facilities.

However, no operational activities are anticipated at night time.

Assessment of impact

Severity

The existing noise levels from the "OK Parking" braai area has a negative noise impact on the immediate residents to the proposed project. The municipality proposes to enforce strict control measures and regulations on the proposed recreation park. However, the fact that the braai facility will now move even closer to the residents, results in a medium-high severity rating in the unmitigated scenario. However, the busy road behind the houses, the Platz Am Meer Mall with its associated activities and the natural noise (sea), all contribute to the baseline noise. Therefore, the severity of this impact would be medium-high rating in the unmitigated scenario and low in the mitigated scenario.

Duration

The noise impact is for the life of the project, therefore the duration in the unmitigated scenario is medium but can be reduced to low through mitigation measures.

Spatial Scale

The noise pollution impacts would extend beyond the site boundaries as it could cause nuisance impacts to nearby receptors. However, with mitigation, the noise could be kept low and not cause nuisance impacts. The spatial scale is therefore medium in the unmitigated scenario and low in the mitigated scenario.

Consequence

The consequence of this impact is medium in the unmitigated scenario and low in the mitigated scenario.

Probability

The probability of the noise pollution impact occurring is medium in the unmitigated scenario, due to the existing noise levels and the fact that the facilities will move even closer to the residents, but with mitigation measures, the impact would be reduced to low.

Significance

One of the main reasons of noise pollution at the current "OK Parking" is the unregulated open boot parties taking place. The activities would be closer to the residents, however, with proposed strict control measures; therefore, the significance of noise pollution impacts is medium-high in the unmitigated scenario and medium in the mitigated scenario.

Table 8: Summary of the assessed impact: Noise pollution impact on the biophysical and social environment

| Mitigation | Severity | Duration | Spatial Scale | Consequence | Probability | Significance |
|-------------|----------|----------|---------------|-------------|-------------|--------------|
| Unmitigated | M-H | М | М | Μ | М | M-H |
| Mitigated | L-M | L | L | L | L | L-M |

Recommendations and mitigation measures

Objective

To minimize the impacts of noise pollution emitted from the site during construction and operation on the residents,

Swakopmund Municipality will:

- Ensure general construction and operational activities follow good engineering practice including:
 - Enclosure of major sources of noise.
 - Following of good design philosophies for vibrating structures that are known to be noisy.
- Noise-generating activities such as the braai area, will be limited to daytime hours (between 08h00-20h00) since noise impacts are most significant during the night.
- Ensure Beach Warning and Safety signs include "No Loud Noise Allowed" instructions;
- Ensure control measures are enforced on site to regulate the visitors from creating excessive noise that could be a nuisance to the residents
- Minimise individual vehicle engine, transmission and body noise or vibration through the implementation of an equipment maintenance programme and minimise the need for trucks or equipment to reverse during construction.
- Swakopmund Municipality will maintain good relations with the residents and have clear points of contact to enable a speedy response to complaints.
- When complaints are received of excessive noise, a noise monitoring campaign needs to be conducted to investigate and develop further mitigation, as required.

• 24/7 hours security personal must be placed on site to prevent any car boot parties from happening.

8.3 Issue/Impact: Visual and Sense of Place

Introduction

With reference to section 6.8, The project area lies in a public open area with the presence of few infrastructure, i.e existing temporary braai and toilet facilities (proposed to be moved). The residents are currently situated at a high elevation and the proposed development is at the lowest point, therefore the view of the Atlantic Ocean will not be blocked by the proposed activities. However, the beach development activities and infrastructure will change the visual aspect/scenery of the beach. In addition, the paddock Gardens to the east of the project area provides a nature related "feel" due to the green garden vegetation that is present.

However, the presence of the Platz Am Meer Shopping Mall and existing temporary braai and toilet facilities on site already provides an existing visual impact to the residents.

Severity

The severity of visual impacts is determined by assessing the change to the visual landscape as a result of the project for receptors in the area. The beach development activities will have a negative visual impact and cause a change in the sense of place. However, due to the presence of the Platz Am Meer Shopping Mall and the existing braai and toilet facilities, the rating is medium in the unmitigated scenario and is medium. The severity of the impact will therefore be medium in the unmitigated scenario and low in the mitigated scenario.

Duration

The duration of the visual impact, will be for the life of the project and therefore will be medium in the unmitigated due to the sense of place that has already been changed by the Platz Am Meer Shopping Mall and the existing braai and toilet facilities on the beach area. This can however, be reduced to low in the mitigated scenario.

Spatial Scale

The human receptors and change of visible visual landscape will result in a medium spatial scale of visual impact in the unmitigated scenario and low in the mitigated scenario.

Consequence

The Platz Am Meer Shopping Mall and the existing braai and toilet facility already provides a negative visual impact to the beach area. Therefore, the consequence of this impact is medium in the unmitigated scenario due to the change in the sense of place that these activities will bring and low in the mitigated scenario.

Probability

The probability of the visual impact occurring is medium in the unmitigated, as the facilities will not have an impact on the residents' view overlooking the sea, but the scenery of the beach area will be changed, but it can be reduced to low with mitigation measures.

Significance

The significance is medium in the unmitigated scenario due to the presence of the Platz Am Meer Shopping Mall and the existing braai and toilet facilities on the beach area. This can be reduced to low with the implementation of the mitigation measures listed below.

| MITIGATION | SEVERITY | DURATION | SPATIAL SCALE | CONSEQUENCE | PROBABILITY | SIGNIFICANCE |
|-------------|----------|----------|---------------|-------------|-------------|--------------|
| Unmitigated | м | м | М | М | М | М |
| Mitigated | L | L | L | L | L | L |

Recommendations and mitigation measures

Objective

To minimize the impacts of visual of the recreational facility during operation,

Swakopmund Municipality will:

- Ensuring that the operations and facilities are well maintained and kept in good order. Poor maintenance and housekeeping would result in the creation of a negative visual impact.
- Plant trees around the infrastructure in order to beautify the place, as well as a way of screening the negative visual impact of the buildings.
- Limit the heights of the buildings as much as possible
- Ensure the paint of the buildings such as toilets are of a natural colour and not bright colours which are commonly seen as unattractive colours in the natural environment.

8.4 Issue/Impact: Waste Management

Introduction

With reference to section 4.3.2, relatively large quantities of waste, most specifically from the braai activities, is expected to be generated during the operation phases. Considering that the braai area will be moved much closer to the well-maintained Paddock Gardens, the waste from the braai area could be blown by the strong winds as far as the garden, which would have an impact on the attractiveness of the gardens. The sea could as well be subjected to waste pollution as it is in very close proximity to the proposed activities.

Assessment of impact

Severity

The potential for waste to reach as far as the Paddock Gardens exists, due to the strong coastal winds and the fact that the proposed activities will be developed near these gardens. In addition, there is potential for waste to reach as far as the sea and pose a contamination risk. However, the current waste issue as a result of the existing braai facility poses a risk on the contamination of the sea and the paddock gardens. Therefore, the severity of the impact is medium in the unmitigated scenario and low in the mitigated scenario.

Duration

The waste management impact is reversible overtime therefore the duration in the unmitigated scenario is medium and low in the mitigated scenario.

Spatial Scale

The waste management impacts are not localised as it can blow beyond the site boundaries into the sea and most especially in the Paddock Gardens, considering that the activities are proposed to be located directly on the boundary of the gardens. Therefore, the spatial scale is rated high in the unmitigated scenario and low in the mitigated scenario.

Consequence

The impact of waste on site could have detrimental/cumulative effects, leading to the possible contamination of the sea and taking out the attractiveness sense and impression of the paddock gardens. Therefore, the consequence of this impact is medium in the unmitigated scenario and low in the mitigated scenario.

Probability

The probability of the waste management impact occurring is medium in the unmitigated scenario and low in the mitigated.

Significance

The Paddock Gardens is used for social activities such as celebratory events, picnics and fitness sessions, amongst all others. The perception of these gardens, in terms of its beauty and its availability for social activities could potentially change in the unmitigated scenario. Therefore, the significance is rated high in the unmitigated scenario and could be reduced to low through mitigation.

Table 10: Summary of the assessed impact: Waste Management Impact on the biophysical and social environment

| Mitigation | Severity | Duration | Spatial Scale | Consequence | Probability | Significance |
|-------------|----------|----------|---------------|-------------|-------------|--------------|
| Unmitigated | М | М | Н | М | М | М |
| Mitigated | L | L | L | L | L | L |

Recommendations and mitigation measures

Objective

To minimize the impacts of waste management on site during construction and operations:

Swakopmund Municipality will:

- Better signage and awareness creation for the visitors of the facility to dispose of their waste in bins and not in the open environment.
- Ensure suitable receptacles with lids for waste disposal is available on site at all times.
- Ensure animals do not have access to waste bins.
- If rubbish containers are used, ensure these can be sealed from animals or strong wind and during transportation.
- Waste shall be transported to the nearest waste disposal site on a weekly basis.
- No disposal of waste on site and no burning of waste.
- Written evidence of safe disposal of waste will be kept.

9 CONCLUSIONS

It was concluded from the qualitative assessment by I.N.K that the development of the project could potentially have negative impacts on the surrounding community in the unmitigated scenario. Construction and operational impacts could have minimal or insignificant impacts on biodiversity, groundwater, surface water and heritage artefacts. However, negative social impacts were identified, such as waste management, noise and visual impacts.

Mitigation measures have been identified and recommended by I.N.K to promote the positive impacts of the project, as well as to avoid / minimise the negative impacts to acceptable levels. An EMP was further developed which identifies potential impacts of the project during the construction and operation phases. The EMP is a legally binding document, which the Swakopmund Municipality and contractors onsite must adhere to.

I.N.K concludes that should the management actions and mitigation measures provided in the EIA and EMP report be implemented, the project would have an acceptably low significant impact on the surrounding biophysical and social environment.

10 WAY FORWARD

The way forward for the EIA scoping phase is as follows:

- IAPs review the reports (closing date for comments is 15 May 2021)
- I.N.K considered comments received and finalised the reports for submission to MEFT

11 REFERENCES

BIWAC (2009): Overview of the sampling campaign conducted in June/July 2009 – SEA of the uranium Province: Water Balance Study of the Swakop and Khan Rivers. Unpublished report by Bittner Water Consult CC issued by the Ministry of Mines and Energy / Republic of Namibia, august 2009, appendices, 14 pages

Mendelsohn, J., Jarvis, A., Roberts, C. and Roberts, T., 2002. Atlas of Namibia: A portrait of the land and its people. David Philip Publishers, Cape Town, RSA

MoS, 2020. Swakopmund Municipality – The Northern Beach Development Action Plan. Swakopmund, Namibia



APPENDIX A

(CVs)



APPENDIX B

(STAKEHOLDER DATABASE)

Will be submitted separately via online system



APPENDIX C

(BID)

Will be submitted separately via online system



APPENDIX D

(SITE NOTICE AND NEWSPAPER ADVERT)



APPENDIX E

(ISSUES AND RESPONSE REPORT)



APPENDIX F

(EMP)

