ECC – 2300481 Serial: 23bh5vm481

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

ENVIRONMENTAL CLEARANCE CERTIFICATE

ISSUED

In accordance with Section 37(2) of the Environmental

Management Act (Act No. 7 of 2007)

TO

NAMIBIA WATER CORPORATION
PRIVATE BAG 13389, WINDHOEK,

.....

TO UNDERTAKE THE FOLLOWING LISTED ACTIVITY

UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME,OHANGWENA REGION

ENVIRONMENTAL COMMISSIONER

Issued on the date: 2023-06-12

Expires on this date: 2026-06-12

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ECC –

CONDITIONS OF APPROVAL

1. This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office
2. This certificate does not in any way hold the Ministry of Environment, Forestry and Tourism accountable for misleading information, nor any adverse effects that may arise from these activities. Instead, full accountability rests with the proponent and its consultants
3. This Ministry reserves the right to attach further legislative and regulatory conditions during
4. -the operational phase of the project
5. All applicable and required permits are obtained and mitigation measures stipulated in the EMP are applied particularly with respect to management of ecological impacts.
6. Strict compliance with national heritage guidelines and regulations is expected throughout the life-span of the proposed activity, therefore any new archaeological finds must be reported to the National Heritage Council for appropriate handling of such.

REPUBLIC OF NAMIBIA

MINISTRY OF ENVIRONMENT, FORESTRY AND TOURISM

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Cnr Robert Mugabe &
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Windhoek
Namibia

OFFICE OF THE ENVIRONMENTAL COMMISSIONER

NOTIFICATION OF DECISION

REF NUMBER: ECC2300481 **DATE OF ISSUE: 12 June 2023**

DETAILS OF PROPONENT:

NAMIBIA WATER CORPORATION
Private 13389, Windhoek

Dear Sir/ Madam

SUBJECT: NOTIFICATION ON APPLICATION FOR ENVIRONMENTAL CLEARANCE TO UNDERTAKE THE PROPOSED LISTED ACTIVITY: UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME

Notice is herewith given in accordance with section 37(2) of the Environmental Management Act, Act 7 of 2007 and Environmental Impact Assessment Regulations of 2012 (GG 4878): that a decision in respect to your application No. APP 230227001072 for Environmental Clearance Certificate to undertake a listed activity has been reached.

DECISION
An Environmental Clearance Certificate (ECC) to undertake the listed activities specified in the environmental assessment report and draft management plan dated December 2022, is granted (**ECC2300481**). The_applicant / proponent is therefore advised to comply with conditions of approval set out in **Section C** of this notification.

A. **DETAILS OF THE PROPOSED ACTIVITY**

A1: TITLE OF THE PROPOSED ACTIVITY
UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME

A2: DETAILS OF ASSESSMENT PRACTITIONER

"Stop the poaching of our rhinos"

All official correspondence must be addressed to the Executive Director

F. AUPOKOLO (Environmentalist) | +264 61 712 095 (T) +264 61 712 097 (F) | +264 813 253 301 | aupokoloF@namwater.com.na

A3: LOCATION OF PROPOSED ACTIVITY

(Annexure A – proposed site map)

B. RELEVANT LISTED ACTIVITIES

Legislation	Description of Listed Activity	Relevance to Proposed Activity
Regulation 29 of Government Notice No. 29 of 2012	WATER RESOURCE DEVELOPMENTS 8.1 The abstraction of ground or surface water for industrial or commercial purposes. 8.2 The abstraction of groundwater at a volume exceeding the threshold authorised in terms of a law relating to water resources. 8.3 Any water abstraction from a river that forms an international boundary. 8.4 Construction of canals and channels including the diversion of the normal flow of water in a riverbed and water transfer schemes between water catchments and impoundments. 8.5 Construction of dams, reservoirs, levees and weirs. 8.6 Construction of industrial and domestic wastewater treatment plants and related pipeline systems. 8.7 Irrigation schemes for agriculture excluding domestic irrigation. 8.8 Construction and other activities in water courses within flood lines. 8.9 Construction and other activities within a catchment area. 8.10 Reclamation of land from below or above the high-water mark of the sea or associated inland waters. 8.11 Alteration of natural wetland systems. 8.12 The release of brine back into the ocean by desalination plants	UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME

C. CONDITIONS

C1: Conditions of Approval

1. This certificate does not in any way hold the Ministry of Environment, Forestry and Tourism accountable for misleading information, nor any adverse effects that may arise from these activities. Instead, full accountability rests with the proponent and its consultants.

2. This Ministry reserves the right to attach further legislative and regulatory conditions during the operational phase of the project.

3. Regular environmental monitoring and evaluations on environmental performance should be conducted. Targets for improvements should be established and monitored throughout this process.

C2: Clearance Certificate Validity

1. This environmental clearance is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

2. On expiry of the ECC, the proponent is required to submit within a period not exceeding one month, and in the prescribed form and manner an application to the Office of the Environmental Commissioner for the renewal of the ECC.
3. Failure to renew an expired environmental clearance certificate shall result in permanent termination of the environmental clearance certificate.

C3: Compliance with authorization under other laws

4. All other applicable and required permits or authorization from relevant competent authorities must be obtained prior to commencing the proposed activities and accordingly adhered to.

C4: Implementation and Monitoring

5. The granting of the Environmental Clearance Certificate (ECC) constitute, an approval for the implementation of mitigation measures proposed in your approved Environmental Management Plan (EMP), hence making the approved EMP legally binding document.

6. The proponent shall appoint a suitably experienced environmental control officer, or site agent where appropriate, before the commencement of any listed activities to ensure compliance with the conditions of approval and mitigation stipulated in the approved EMP

7. A copy of the Environmental Clearance Certificate (ECC), EMP, Environmental Audit and monitoring reports must be kept at the site of the authorized activity and readily available for inspection by officials of the Ministry and registered Interested and affected Parties (I&APs) on request.

8. Should any heritage remains be exposed during excavations or any other actions on the site, these must immediately be reported to the National Heritage Council of Namibia. Heritage remains uncovered or

disturbed during earthworks must not be further disturbed until the necessary approval has been obtained from National Heritage Council.

9. Using the best and affordable methodology, the Proponent must ensure that all listed activity's operations footprints are thoroughly rehabilitated prior to closure of the operation. Wherever possible, the Proponent must proceed with the rehabilitation process concurrently with the progression of the project rather than wait until the damage is far beyond the available means of management.

10. The general standard for all rehabilitation processes must at all costs aim at restoring the natural character of the environment to the satisfaction of the Ministry of Environment, Forestry and Tourism. Such rehabilitation processes shall be inspected and certified satisfactory or unsatisfactory by the Ministry of Environment, Forestry and Tourism. Where a certificate of unsatisfactory is issued, the Proponent shall be advised to carry-out certain tasks to meet the requirements. Failure to meet the basic rehabilitation requirements shall be regarded by this Ministry as a breach of this contract and of which serious consequences shall follow.

11. Officials of the environmental commissioner's office may from time-to-time conduct spot-inspection (non-auditing) without prior notice and or Auditing Inspection (dates to be agreed prior to arrival to the site), hence access to the site and the aforementioned documentation must be granted to any authorized official representing the Office of the Environmental Commissioner and Registered Interested and Affected Parties (I&APs)

12. Any changes to, or deviations from the scope of the alternative described in section B above must be accepted or approved, in writing, by the Office of the Environmental Commissioner before such changes or deviations may be implemented. In assessing whether to grant such acceptance/ approval or not, the Competent Authority may request information in order to evaluate the significance and impacts of such changes or deviations, and it may be necessary for the holder to apply for further authorisation in terms of the applicable legislation.

13. Officials representing the Office of the Environmental Commissioner must be, in possession and or by request and for the purpose of inspection referred to in C4(11) present their staff identification card in order to gain entry to the premises

14. The proponent is required, from the date of commencing implementation of project activities, to compile and submit environmental monitoring reports (on project progress and the environmental management profile) on a bi-annual basis to Office of Environmental Commissioner

15. Any changes to, or deviations from the scope of project activities approved in respect to the assessment received and reviewed for the purpose or granting this ECC Number (**ECC2300481**) are subject to an amendment application and approval by the Environmental Commissioner prior to adopting / implementing any such changes / deviations.

16. For the purpose of amending and or transferring the ECC, the proponent submit in the prescribed form and manner an application to the Office of the Environmental Commissioner, clearly indicating the need for amendment and or transfer of the ECC

17. Non-compliance with a condition of this Environmental Clearance Certificate or EMP may render the Proponent liable to criminal prosecution.

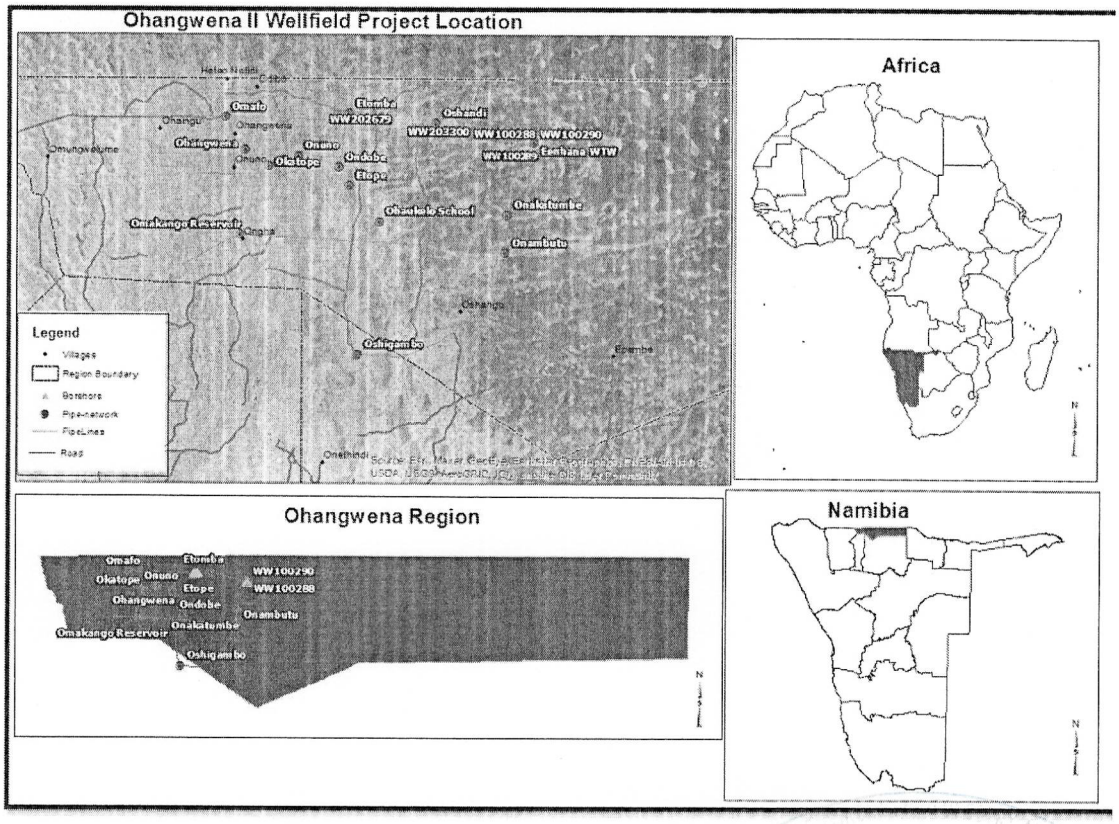
D. DISCLAIMER

The decision taken by the Office of Environmental Commission is based mainly on information provided by the proponent or their representative, therefore, it must be noted here that the proponent is accountable for any wrong and misleading information that may have been presented in the environmental assessment documents.

Yours Sincerely.

Timoteus Mufeti
ENVIRONMENTAL COMMISSIONER

ANNEXURE A: SITEMAP / SITE LAYOUT



Private Bag 13306
15 JUN 2023
ENVIRONMENTAL COMMISSIONER
REPUBLIC OF NAMIBIA

NAMWATER
Namibia Water Corporation Ltd

C-NOEE108: Ohangwena 2 Wellfield Development

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: ENVIRONMENTAL SCOPING REPORT

APPLICATION NO: APP - 00407

ELEMENT Consulting Engineers

A FIFTH DIMENSION TO ENGINEERING

PREPARED BY

SUB-CONSULTANT

OUTRUN CONSULTANTS CC

NOVEMBER 2022

DOCUMENT CONTROL SHEET

Compiled By:	……... J T MUKUTIRI - LEAD EIA PRACTITIONER	…….. Date
Reviewed By:	……	…….. Date

Revision	**Description**	**Date Issued**	**Revision By:**
Final Draft	Considered NamWater's comments on First Draft		J T MUKUTIRI
Final			J T MUKUTIRI

DISTRIBUTION LIST

Revision	**Description**	**Date Issued**	**Revision By:**

APPROVAL

This Environmental Scoping Report was done to the satisfaction of NamWater in accordance with the requirements of the project and I support the recommendations contained in this report.

……..

Chief Executive Officer: NamWater

Date: ……

ENVIRONMENTAL SCOPING REPORT FOR THE DEVELOPMENT OF OHANGWENA II WELL FIELD IN OHANGWENA REGION, NAMIBIA.

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LIST OF ABBREVIATIONS

Abbreviation	Full Name
AfDB	African Development Bank
BID	Background Information Document
BH	Borehole
CEB	Cuvelai-Etosha Basin
CNWSA	Central Northern Water Supply Area
DWSSC	Directorate of Rural Water Supply and Sanitation Coordination
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
ESIA	Environmental & Social Impact Assessment
ESMP	Environmental & Social Management Plan
GG	Government Gazette
GN	Government Notice
HDI	Human Development Index
HPI	Human Poverty Index
IFC	International Finance Corporation
ISS	Integrated Safeguard System
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
NWSSP	Namibia Water Sector Support Programme
OS	Operational Safeguard
OWTP	Oshakati Water Treatment Plant
OWTW	Oshakati Water Treatment Water
RO	Reverse Osmosis
SESA	Strategic Environmental & Social Assessment

OWTW	Oshakati Water Treatment Water
RO	Reverse Osmosis
SESA	Strategic Environmental & Social Assessment

GLOSSARY OF TERMS

"**Competent authority**" is defined as an organ of state which is responsible, under any law, for granting or refusing and authorisation; or the competent authority identified in terms of section 30 of the EMA, Act, 2007.

"**Organ of state**" means any office, ministry or agency of State or administration the local or regional sphere of government or any other functionary or institution: exercising a power or performing a function in terms of the Namibian Constitution, or exercising a public power or performing a public function in terms of any law but does not include a a court or judicial officer.

"**Proponent**" means a person who proposes to undertake a listed activity.

"**Listed activity**" means an activity listed in terms of section 27 (1) or 29.

"Public" refers to the community or people in general.

The **'Implementing Agencies'** – this refers to the institutions/departments that are directly involved in the implementation of the Development of Ohangwena II Aquifer, Namibia Water Corporation Ltd (NamWater) and MAWLR.

The **'Stakeholders'** – this refers to the people, organisations, NGOs that are directly or indirectly affected by the project and / or have an interest in the project.

The **'Environment'** – this refers to the ecology, economy, society and politics.

"Public servitudes" are created in favour of the general public and are not registered in favour of a specific person, legal entity or other immovable property. An example of such servitude would be a public road.

"Human Poverty Index" (HPI) - is a composite index of poverty that focuses on deprivations in human lives, aimed at measuring poverty as a failure in capabilities in multiple dimensions.

PURPOSE OF THE DOCUMENT

The Environmental Scoping Report (ESR) was compiled as part of the Environmental & Social Impact Assessment (ESIA) for the proposed development of the Ohangwena II Wellfield in Ohangwena Region in northern Namibia. It describes the scope of the ESIA study and will be submitted to the competent authority and Ministry of Environment, Forestry and Tourism (MEFT) for approval.

EXECUTIVE SUMMARY

Overview of the project

This scoping study was undertaken for the proposed development of Ohangwena II Aquifer in Ohangwena Region, Namibia. The planned scope of this project comprises the Omakango-Onambutu and Omafo-Eenhana schemes, which are two of several schemes that make up the Central Northern Water Supply Area (CNWSA). Both these schemes are fed through two extensive pipe networks which, due to several reasons such as poor condition of pipes and over-exploitation of the water supply networks, results in insufficient water reaching the remote areas.

Project goal(s)

To resolve potable water shortages in the Omafo-Eenhana and Omakango-Onambutu-Eenhana Schemes' serviced areas through augmentation of bulk water supply from Ohangwena II Wellfield and possible blending with existing boreholes in the Ohangwena region, including possible continued supply from CNWSA where necessary.

Specific objectives

- To provide an optimal integrated hydraulic solution to bulk water supply to above mentioned two schemes through the optimal use of existing and newly planned infrastructure for both schemes,
- To incorporate, hydraulic model, and integrate current rural water supply components already linked to the respective bulk water supply schemes.
- To develop a water supply design concept for the proposed development of Ohangwena II Wellfield.
- To compile preliminary and detail designs and associated tender and construction drawings, based on the Design Development Model.
- To design and construct brine disposal ponds to cater for both new and existing RO plants.
- To compile tender documentation and facilitate the procurement of contractor(s).
- To supervise the construction of infrastructure.
- To monitor quality, scheduling and financial control of construction of infrastructure.
- To supervise commissioning of new infrastructure.
- To oversee the Defects Liability Period.

Project components

The proposed development of Ohangwena II Wellfield will comprise of the following infrastructural development components:

- Upgrading of the pump station at Omafo;
- A new offtake from Omakango – Onambutu pipeline;
- A new pipeline from Oshandi boreholes to Eenhana RO Plant;
- Upgrading of the Eenhana RO Plant;
- A new pipeline from Eenhana boreholes to the Eenhana RO Plant;
- Replace the Omakango – Onambutu bulk pipeline with a new one;
- New offtake pipeline from the Omakango – Onambutu pipeline through Etope to Ondobe;
- A new pump station and reservoir at Omakango;
- A new pipeline from Onambutu to Eenhana via Ondingwanyama.

Planned project activities

The planned project activities logically follow the project cycle as highlighted below:

Project inception

During this first phase, the Consultants engaged in familiarisation of the site and engaged the implementing Agent to confirm and approve of the scope and project brief.

Design (Design development and preliminary design)

This phase entailed extensive review of previous studies conducted and development of the main project concept design criteria, acceptable specifications, identifying possible additional specialist works, development of multiple appropriate design options and assessing alternatives in terms of engineering, life cycle costs (economic), operation and maintenance considerations, environmental and social constraints, risk of disruption of services and other risk factors.

Detailed design

Detailed designs will be done taking cognizance of the outcomes of the preliminary design phase detailing all relevant design parameters and assumptions. The designs will be accompanied by relevant drawings and specifications for all engineering disciplines.

Construction

The procurement of contractor(s) marks the beginning of this phase leading to mobilization to site. The consultants will mainly focus on supervision of the contractors to ensure quality and timely and cost-effective delivery of outcomes.

Operation

The operation phase will encompass the following:

- Operation of pump stations, RO plant, Brine drying pond and pipelines;
- Maintenance of infrastructure; and
- Ongoing consultation with directly affected parties.

Decommissioning

Decommissioning of the proposed developments is not envisioned. However, a generic decommissioning plan will be compiled and submitted a part of the ESMP. Once the water supply infrastructure has reached the end of its service life, the Proponent is responsible for removing all redundant infrastructure while restoring and remediating any environmental disorders. Usually, it is a lengthy process as it may include soil and groundwater remediation, structural demolition and disposal.

Description of the project site and the major environmental and social stakes/challenges

National and regional demographics

The proposed project is being implemented in Ohangwena Region of Namibia. According to the 2011 Population and Housing Census by the Namibia Statistics Agency (NSA), the population of the Ohangwena Region was 245 466, of which 133 316 were females and 112 150 were males. Namibia's population was estimated to be 2 280 716 as of the year 2016 with the majority living in the rural areas, 53.1 %, while 46.9 % lived in the urban areas. Gender distribution is 95 males to 100 females. In Ohangwena where the project is planned the estimated population constitutes 11.1 % of the total population,((NSA, 2011)). Eenhana and Helao Nafidi are the only two towns in the region that are not community settlements. Omungwelume, Ongenga, and Okongo are the three designated settlements in the region's western and eastern halves, respectively. Ohangwena Region's population density of 23 people per square kilometre is significantly higher than the national average of 2.6 people per square kilometre. According to the 2011 census, 5.6 people lived in the average household in 2011, significantly more than the 4.4 people found nationwide. 56 % of households in the region were headed by men in 2011, while 67 % of households were headed by women in 1991 and 2001 (NSA, 2011). In terms of spatial coverage, the 2 water supply schemes serve a total of 8 constituencies as shown in the map below.

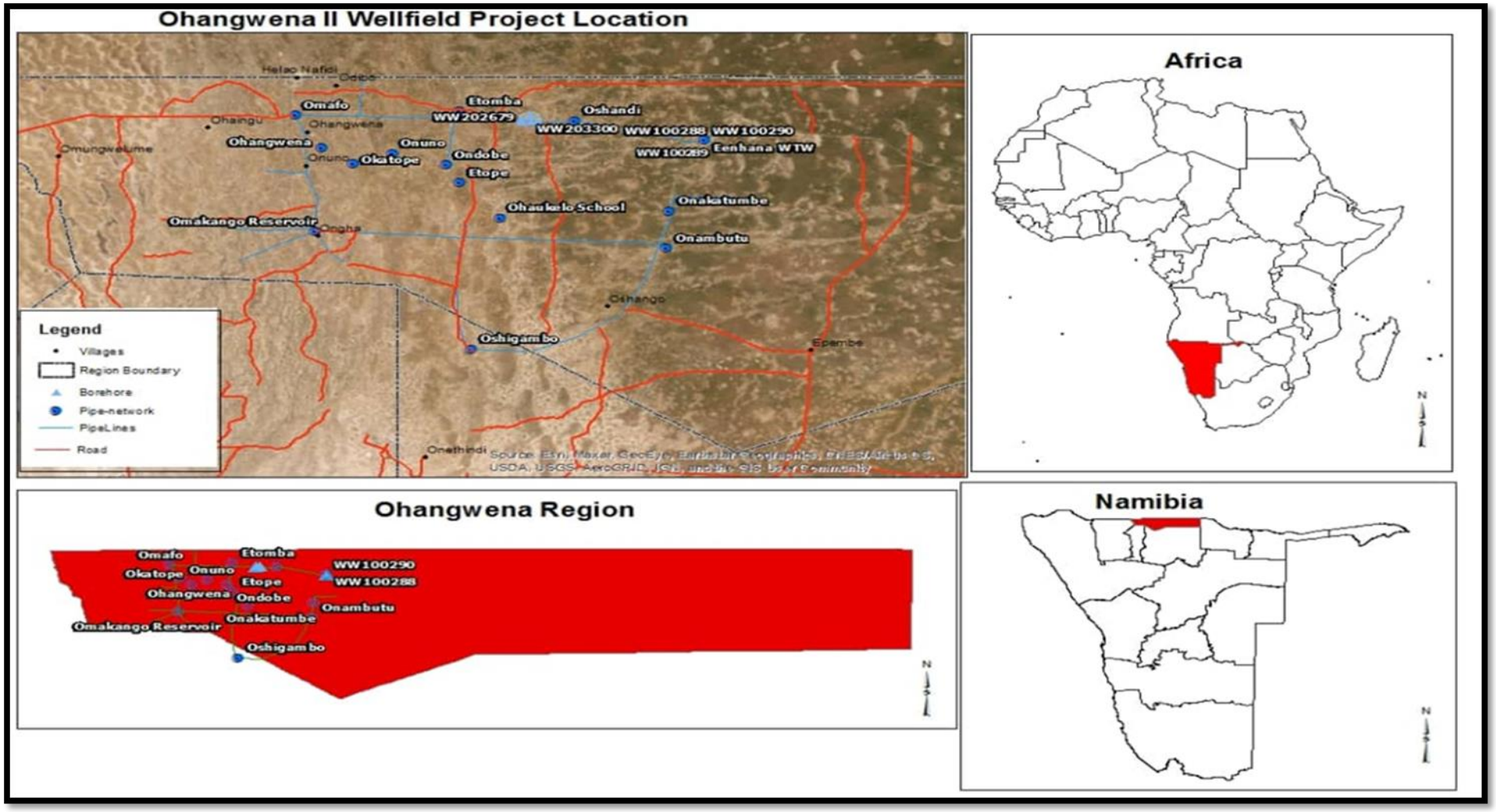


Figure 1: The location of the proposed project in Namibia.

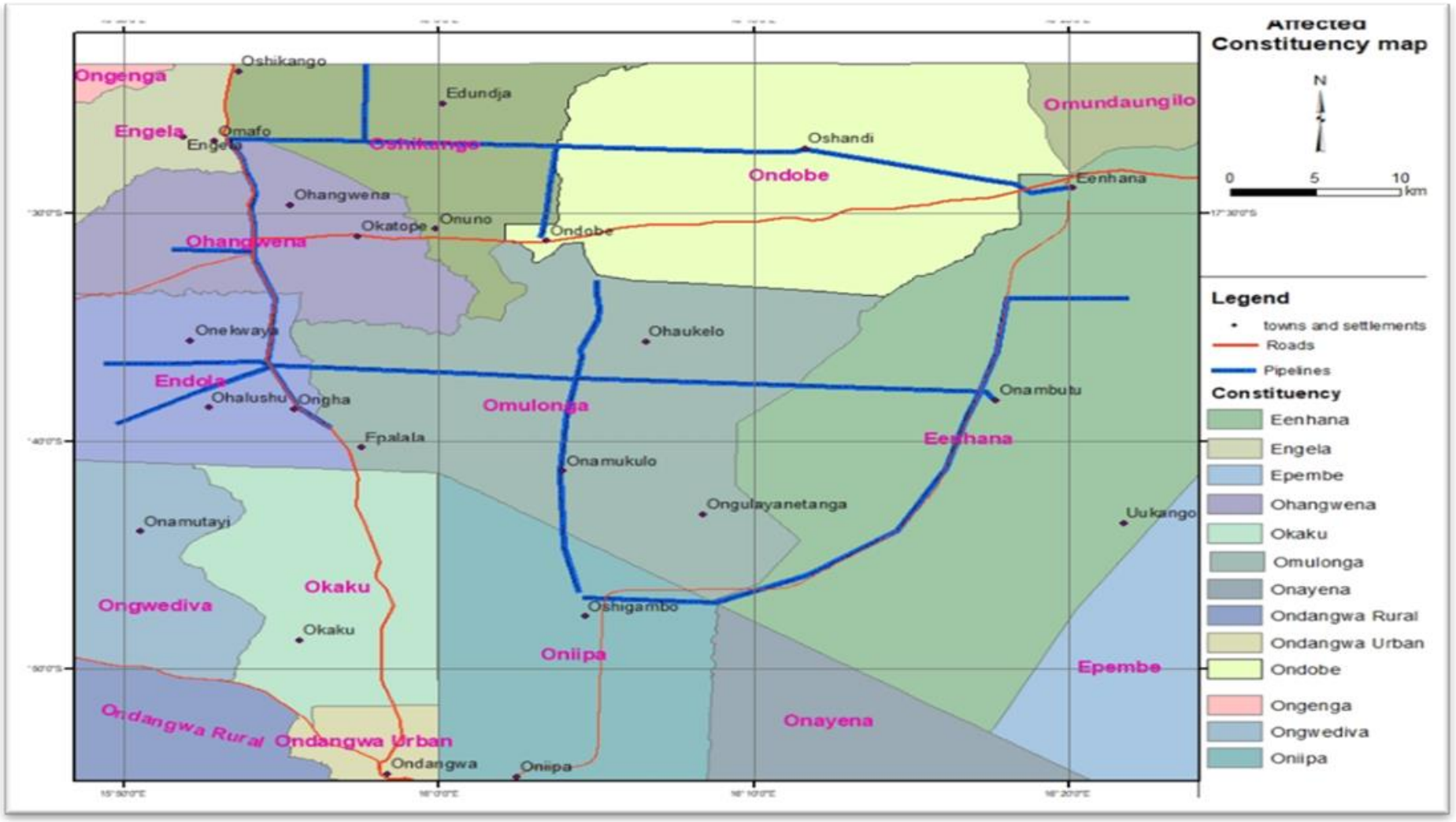


Figure 2: The areal coverage of the proposed project in Ohangwena Region.

Sources of livelihoods

In accordance with Parviainen (2012), Ohangwena Region harbours around 80% of the population, who are subsistence farmers, with agriculture providing the primary source of income for 53% of the locals. Most of them are small-scale subsistence farmers engaged in pearl millet cultivation and livestock raising. They also grow sorghum and keep small herds of goats, calves, donkeys, chickens, and pigs on communal land, which is divided into a few hectares of land. The percentage of households whose primary source of income came from farming dropped from 52% in 2001 to 26% in 2011. Payroll and salary (22%), non-farming enterprises (12%), cash remittances (6%), and state pension payments (29%) were the other major sources of revenue (NSA, 2011). Helao Nafidi and only Eenhana only have access to traditional job opportunities. Farmers, herders, and housekeepers in rural areas have access to a wide range of informal employment options, including weeding fields and herding livestock as well as cleaning and washing homes.

Education

Ohangwena Region is Namibia's most impoverished region. Although the Ohangwena Region had one of the lowest life expectancies at birth, the ninth-lowest literacy rate, and the lowest annual average per capita income of Namibia's 14 regions (according to the UNDP Human Development Index), it had the third-highest gross school enrolment ratio (Nakanyete, 2020). Consequently, Ohangwena has the lowest Human Development Index (HDI) in the country (0.403) (Pohamba-Ndume, 2016). Of the 14 regions, Ohangwena had the seventh-highest illiteracy rate, the eighth-largest share of the population in homes spending more than 60% of their total income on food, and the highest likelihood at birth of not surviving to the age of 40. Consequently, Ohangwena received the third highest Human Poverty Index (HPI) rating (45%) among the 14 regions (Angula, 2016).

Users, Availability, and Accessibility of Water

The greatest proportion of users supplied by the 2 water supply schemes under consideration are rural communities followed by Eenhana Town Council. The availability of water sources has been taken into consideration with outside tap inside the yard being more dominant (54%) followed by internal tap (19%). NamWater has been the available source of water that is widely available and reliable. However, only 50.1% of the respondents have access to water every day of the week, followed by 21% having access for 2-5 days a week, 15% for 5-7 days and 12% for less than 2 days a week.

Energy sources and uses in the project area

Namibia's top energy sources are petroleum, hydropower, imported electricity, and imported coal. The country's own internal resources supply less than one-third of its needed energy requirements. Namibia has high potential for solar, wind and biomass generation. Invade bush is widely spread in the country's

northern parts, which allows large-scale bioenergy-based production capacity. In Ohangwena, 81.8 %, 88% of the population relies on wood for heating and cooking purposes. Only 11 % of the population in this region use electricity for lighting purposes.

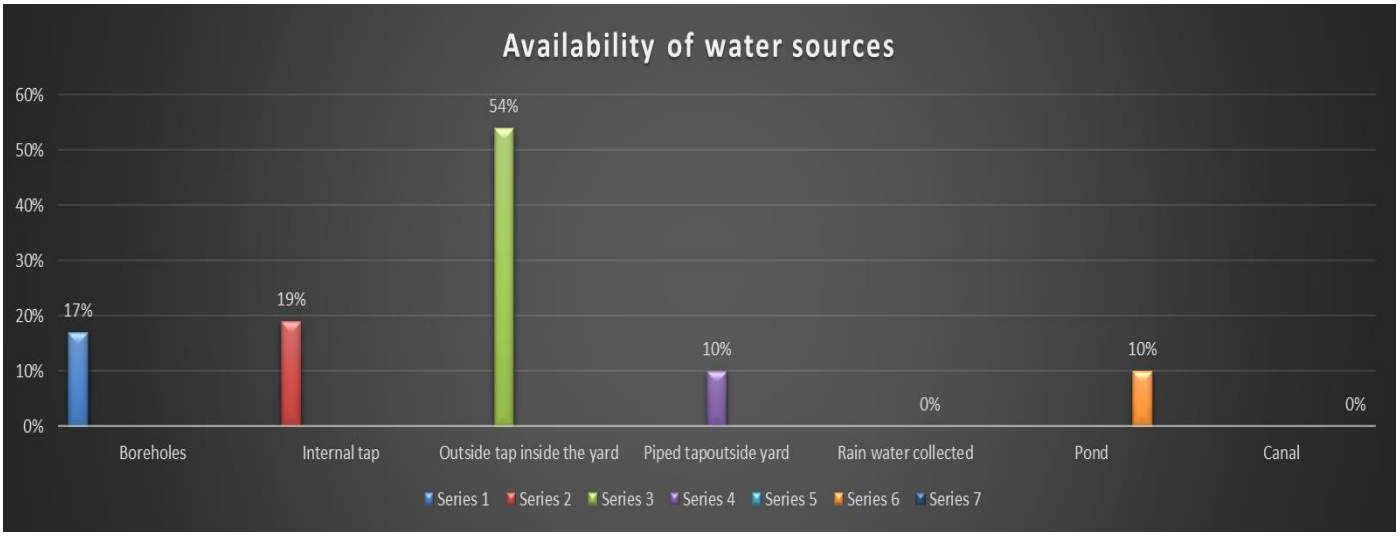


Figure 3: Proportion of respondents against availability of water sources in the project area.

Most respondents in the project area support the fact that drinking is the dominant water use followed by laundry with a notable mean of 4.36 and a consistent standard deviation of 0.612. The findings also depict the fact that respondents strongly need water for cooking with a mean of 4.80 and SD of 0. 576. This shows a strong and consistent support from the respondents that water for them is mainly for domestic purposes. This on its own shows the importance to address the water situation in the project area.

Institutional and legal framework for implementation of the project

The proposed project is being undertaken by NamWater, a government-owned commercialized entity established in December 1997. Its mandate is to provide quality water and related services to the satisfaction of all stakeholders, taking into cognizance of the environment, scarcity of and dependency of all on water. NamWater supplies bulk water to Industries, Government Institutions, Municipalities, Local Authorities, large commercial Entities, and the Directorate of Rural Water Supply and Sanitation Coordination (DWSSC) in the Ministry of Agriculture, Water and Land Reform (MAWLR) and some private online users. This Environmental Scoping Report (ESR) was compiled as part of the ESIA being undertaken for the proposed project in accordance with the requirements of the Environmental Management Act (EMA), No.7 of 2007 and the Environmental Impact Assessment Regulations, No. 30 of 2012. The EMA is implemented by various stakeholders, organs of state and agents. The Minister of the Ministry of Environment, Forestry & Tourism (MEFT) is responsible for developing policies for the management, protection and use of the environment, prepare and publish policies, strategies, objectives and standards for the management of the environment, coordinate environmental management at national level and monitor and ensure compliance with EMA. The

implementation of the act directly rests with the Environmental Commissioner (EC). The EC advises Organs of state on the preparation of environmental plans, receives and record applications for Environmental Clearance Certificates (ECCs) and the overall management, protection, reviewing of assessment report and enforcement of monitoring and implementation of environmental plans in accordance with the EMA. Other Ministries, Government agencies, Local Governments and Traditional Authorities participate in the ESIA process for activities that are within their mandate and conduct inspections for monitoring compliance with EMA relevant to their Ministry. According to MEFT, neither Ohangwena Regional Council nor Eenhana Town Council have been delegated as such and projects taking place there rely on MEFT enforcement.

Description of Potential Impacts (major and moderate impacts)

The potential impacts on environmental and social resources arising from the proposed development include both positive and negative impacts.

Identified potential positive impacts

- **Employment**
    - Both unskilled and skilled labour will be required during the construction (150 to 200 jobs) and operational phases of the project and about 5 additional permanent jobs (1 skilled and 4 unskilled) are expected for the operation of the RO Plant.
- **Improved water supply**
    - The development of Ohangwena II Wellfield will improve water supply to the rural communities, settlements and towns in the project area and eventually improve the well-being of the people.
- **Health**
    - Water and sanitation are interlinked and we anticipate improved health of the people in the project area.
- **Supply of construction materials**
    - Local businesses will benefit through supply of building materials to contractors.

Identified potential negative impacts

As aforementioned potential negative impacts emanating from planned project activities at each project phase were identified and are presented in the following table below:

- Poor water quality
    - Groundwater in Ohangwena area has elevated salt content making it very hard
- Water supply disruptions
    - Disruptions may occur during construction when old lines are being removed and during break downs due to poor workmanship after commissioning
- Poor solid waste management

    - Indiscriminate dumping of solid waste during construction phase. Comprises both domestic waste from workers campsites and construction sites (generated from construction materials packaging materials such as cement)
- Dust emissions (air pollution)
    - Temporal during the construction phase
- Noise and vibrations pollution
    - Noise is generated mainly during the construction phase due to machinery and other construction equipment.
- Gender based violence
- HIV / AIDS and Covid – 19 health impacts
- Sexual abuse and harassment

All the 3 above are interrelated and may be elevated due to increased influx of people from other place resulting in decayed social norms and increased disposable income etc.

Stakeholder Consultations

The scoping process was initialized by compiling a Background Information Document (BID) and invitation to interested and Affected Parties (I&APs) to participate, Document (BID) followed by publishing of notices of the Environmental and Social Impact Assessment (ESIA) in the national Oshiwambo radio, national print media and posters pinned in public places in the respective Constituencies covered by the project. The Ohangwena Regional Council was formally informed of the process through the office of the Chief Regional Officer. The meetings were planned and conducted as shown in the following table below:

Date and Time	Venue and Town/Settlement/Village	Stakeholders or I&APs (Public)
26 July 2022, 10h00	Community Hall at the Eenhana Constituency Office, Onambutu Village	Stakeholders and Public
26 July 2022, 12h30	Ondobe DWSCC Office Open Space, Ondobe Settlement	Stakeholders and Public
27 July 2022, 14h30	Ohangwena Regional Council Boardroom, Eenhana Town	Stakeholders
27 July 2022, 15h30	Ondobe Constituency Office Hall, Oshandi Settlement	Stakeholders and Public

The major issues identified for consideration in the ESIA and ESMP relate to short-and medium-term employment benefits linked to the construction phase. Some of the major issues or concerns raised and responses are as follows:

Issue	Concern	Response
Water pressure / improvement of the pump stations	-The water pressure is low to none in most areas that the water flows slowly and communities are left without water for longer periods or having no access to water during certain hours of the day or morning hours like 2am.	The main objective of the proposed Development of Ohangwena II Wellfield is to improve bulk water supply in the areas covered by the 2 water supply schemes.
Vandalism of water infrastructure	-The children and even some adults are vandalising water infrastructures such as water meters and even pipelines.	Motivation for such acts is unknown but members of the public are urged to look after and protect public assets for the benefit of everyone. Cases of vandalism should be reported to the Namibian police to take appropriate measures.
Employment opportunities for locals	-The communities requests that the youth and capable members of the communities should be considered for work during construction.	The contractors are urged to recruit capable workers from the project area.
Limited water accessibility due to unaffordability.	-Some communities are unemployed and are unable to afford private connections and they live far from communal water points. This particularly affects elderly headed households or elderly living with children only who cannot fetch water from far.	Such communities are urged to register their concern or issues with the Ministry of Agriculture, Water and Land Reform Directorate of Rural Water Supply which deals with installation and maintenance of Communal Water Points.
Compensation of displaced pearl millet field yard (fence) and fruit tree	-The communities were concerned about how they would be compensated for land loss (displacement) or their fruit trees that may be removed to pave way for pipelines.	There is a national compensation policy which guides the handling of compensation of land losses and / or valuable assets. However, at this stage we do not anticipate any displacements or loss of land and valuable assets since most of the planned infrastructure will be on existing NamWater sites and new pipelines will follow existing roads.

Issue	Concern	Response
High rates of water supply	-Some communities claim that their water bills are abnormally high at times even without pipe leak or high-water consumption.	This issue will be communicated to NamWater and MAWLR to investigate and revert with an explanation or answer.
Sizes of the supply pipeline	-Some community members live close to water pipelines and would like to apply for private connection. However, they had been informed that the pipe is small to cater for extra connections.	These some of the challenges that the proposed project seeks to resolve by increasing available water and required capacity to meet the needs of the water Users.
Negligence or exclusion of the communities without water in the project	-The villages towards the borders have no water (Omutwewondjamba-Oheti B). -There water infrastructure upgrade is concentrated to the west and south of Eenhana that already have water (and maybe just a pressure issue), but the north and eastern parts of Eenhana have no water at all.	This will be communicated to NamWater and MAWLR to attend to it.
Aging infrastructure and solutions taking long	-Some communal water infrastructures are old and not maintained. Communities report infrastructure damages but it takes long to get them repaired.	One of the objectives of this project is to upgrade some of the existing infrastructure and / or replace it.
Grievance mechanism during construction.	-During construction of existing pipelines some contractors would claim that they are just doing their job and do not listen to the community complaints while constructing pipelines passing through fields.	A grievance redressal mechanism will be put in place to allow two-way communication between stakeholders and implementing agents to address issues or concerns arising during project implementation.

Conclusion and way forward

Through the scoping process, it was found that there were no significant impacts emanating from this project that warrant conducting specialist studies nor detailed Environmental and Social Impact Assessments. This is mainly due to the fact that the project footprint is on previously disturbed land containing existing infrastructure. In the absence of fauna and flora, potential impacts are minimal or minor in that respect. The planned pipelines will follow the existing pipeline routes while new offtake pipelines will follow existing roads. The planned associated infrastructure will be located on NamWater's existing sites. Potential negative biophysical impacts identified were temporary and moderate and can be significantly reduced through implementation of the proposed mitigation measures. No potential loss of land nor private assets was identified for the reason that existing sites are being used as well as existing public servitude. The land for the brine drying ponds will be bought from the town council. It is the opinion of the Environmental Assessment Practitioner (EAP) that the scoping process was done in and objective manner and taking cognizance of the findings above propose to adopt the identified impacts and mitigation measures for compilation of an ESMP to apply for an ECC.

DOCUMENT STRUCTURE / ROAD MAP

The Scoping Report is intended to meet all requirements as stipulated in environmental management Act (2007) and its Regulations of 2012. The document road map structured in terms of the aforementioned regulatory requirements (Table 1) guides the Reader to navigate through the report.

Table 1: Document roadmap

CHAPTER	TITLE	OVERVIEW
	Purpose of the Environmental Scoping Report	N / A
	Executive Summary	N / A
	Document Road Map	N / A
1	Introduction	This section contains project background information highlighting developmental challenges intended to be solved by the proposed developing development of the Ohangwena II Aquifer, Project location, Baseline study, Justification for the project, Description of the Proponent and the Consultant, Process and Methodology.
2	Description of the Proposed Project	Details the proposed infrastructure to be constructed, Project components, Basic layout of infrastructure, Project activities at the respective project cycle phases.
3	Legislative and Policy Framework Review	Highlights both international and domestic laws and policies that govern the planned project.
4	Public Consultation	Details the public and stakeholder consultation process followed and its findings.
5	Assessment of Alternatives	An analysis of various alternatives on the proposed project.
6	Description of the affected environment	This section covers biophysical and socio-economic environment of the project area.
7	Environmental Impact Assessment	Presents both non-significant and significant impacts identified during the scoping phase of the ESIA. Covers both positive and negative impacts of the project.
8	Conclusion and Way Forward	Conclusion based on the scoping study findings
9	List of References	List of references quoted in the document
10	List of Annexures	All annexed documents as presented in the document

1 INTRODUCTION

1.1 Background information

The Namibia Water Corporation (NamWater), as a custodian of bulk water supply in Namibia, supplies potable water to the Central Northern Water Supply Area (CNWSA) from the Oshakati Water Treatment Plant. The CNWSA's northern boundary coincides with the Angolan-Namibian border. The western and eastern confines of the area generally follow the boundary line between salty and fresh groundwater on either side of the CNWSA. The southern boundary of the CNWSA runs on the northern boundary of the Etosha National Park and coincides with the southernmost extent of the water supply schemes associated with the CNWSA.

The planned scope of this project comprises enhanced water supply to the Omakango-Onambutu and Omafo-Eenhana schemes, which are two of several schemes that make up the CNWSA. However, due to aging infrastructure, poor condition of pipes, over-exploitation of the water supply networks and increased demand over the years result in insufficient water reaching Eenhana and the remote areas. Above all it is a very high risk to rely on the OWTP water supply alone. This scenario has necessitated the development of the Ohangwena II Wellfield in order to improve the water supply in those areas. This is one of the several projects being implemented by the Government of the Republic of Namibia through the Ministry of Agriculture, Water and Land Reform in a bid to address the water supply and sanitation challenges facing the country. The project is supported by African Development Bank (AfDB) through the Namibia Water Sector Support Program (NWSSP). The aim of the program is to increase access, quality, security and sustainability of water supply and sanitation services in Namibia.

Accordingly, Element Consulting Engineers, together with its team of sub-consultants, were procured to compile and implement a comprehensive developmental proposal to resolve the above-mentioned challenges. The main objective is to provide the two schemes with an optimally cost-beneficial solution to enhance the bulk water supply and enable an acceptable sufficiency of water supply capacity to meet the 2037 water demand through the provision of reliable and adequate groundwater sources and associated infrastructure comprising of new pump stations, pipelines, reverse osmosis (RO) plant, storage reservoirs and brine treatment ponds. Such a development project comprises of listed activities and may not be undertaken without environmental clearance from the Ministry of Environment, Forestry and Tourism (MEFT). As a result, it requires an Environmental Impact Assessment (EIA) to be conducted and submitted to the MEFT in compliance with the Environmental Management Act No. 7 of 2007 and its 2012 EIA Regulations and, Environmental Policy (1994). An EIA is a process of identifying, predicting and evaluating of potential impacts emanating from the development of the proposed project on the presiding environment. Since its introduction, EIA was subject to critique with the aim to address issues emerging from its wide implementation and restricted focus on the biophysical environment but little / limited focus on social impacts of development projects / programs.

Due to increased awareness of environmental issues being no longer limited to biophysical components, this led to the introduction of Social Impact Assessment (SIA) as a component of the EIA and over time an Environmental and Social Impact Assessment (ESIA) was introduced. An ESIA is now widely used by multilateral donors and private lending institutions including the Africa Development Bank (AfDB). An Environmental and Social Impact Assessment tool is an integrated process that captures the interrelationships between land and society. This project is supported by the AfDB and with reference to AfDB's operating safeguards, OS1 which relates to Environmental and Social categorisation, this project falls under Category 2. Category 2 projects require an ESIA study to be undertaken before implementation. In a bid to comply with both Namibian legislation and AfDB's operation and safeguard policy, Outrun Consultants cc was sub-contracted through Element Consulting Engineers and Project Managers to conduct the Environmental and Social Impact Assessment for this project.

1.2 Aim of the Study

The aim of this study is to identify and prioritise the key issues associated with the proposed development of Ohangwena II Wellfield that need to be assessed in the ESIA and the extent of work that needs to be undertaken to address those issues.

Objectives of the Environmental Scoping Study

- Identify and engage with Interested and Affected Parties (IAPs) and allow for adequate participation in the process;
- Duly consider alternatives for achieving the project's objectives;
- Identify significant issues to be investigated further during the execution of the ESIA phase;
- Clarify the roles and responsibilities of various stakeholders in the process;
- Determine the scope of the ensuing ESIA phase, in terms of specialist studies, public participation, assessment of impacts and appraisal of alternatives; and
- Allow for informed decision-making with regard to the ESIA process.
- Identify the relevant policies and legislation applicable to the Activity;
- Motivate the need and desirability of the proposed activity, including the need and desirability of the activity in the context of the proposed location;
- Identify and confirm the preferred activity and technology alternative through impact and risk assessment and ranking process;
- Identify and confirm the preferred sites and / or routes, through a detailed site selection process which includes an impact and risk assessment process inclusive of cumulative impacts and a ranking

process of all the identified alternatives focusing on geographical, physical, biological, social, economic and cultural aspects of the environment;

- Identify the key issues to be addressed in the assessment phase;
- Agree on the level of assessment to be undertaken, including the methodology to be applied, the expertise required, as well as the extent of further consultation to be undertaken to determine the impacts and risks the activity will impose on the preferred site through the life of the activity, including the nature, significance, consequence, extent, duration and probability of the impacts to inform the location of the development footprint within the preferred site; and
- Identify suitable measures to avoid, manage or mitigate identified impacts and to determine the extent of residual risks that need to be managed or monitored.

1.3 Project Location and Site

The proposed project is in the Ohangwena Region, central northern Namibia. The Ohangwena Region is one of Namibia's fourteen Regions bordered by Angola in the northern part of the country, Omusati Region in the West, Oshana Region in the Southwest, Oshikoto Region in the South, and Kavango West in the east. The proposed bulk water supply scheme is expected to supply Eenhana, the Regional Capital City, and villages along the bulk pipelines covered by the 2 schemes. The locality map of the proposed project is shown in Figure 4 below.

1.4 Baseline Studies

This chapter describes the biophysical environmental conditions, with which the proposed project will interact. This information was sourced from literature review and observations made during a site visit to the project area. This provides a baseline where changes that occur as a result of the proposed project, can be measured. The study area covers the entire footprint of the project components followed by a brief overview of the possible ways or manner in which the environmental features may be affected (positively or negatively) by the development of the Ohangwena II Aquifer during the project life cycle.

1.5 Location and land ownership

Namibia has two main land tenure systems as follows;

- Freehold: in declared urban areas and commercial farms.
- Customary tenure on communal land, all of which is rural.

The project spans through a vast area due to the extensive bulk pipelines and associated infrastructure and triggering different land ownership depending on location. The project area generally spans through communal lands covering Endola, Ondobe, Eenhana, Oniipa, Omulonga, Endola, Ohangwena and Oshikango Constituencies, see Figure. 5 below. This communal land is State land although governed by Traditional Authorities locally and individuals can own customary land rights for a given piece of land as a

lease over a given period of time, usually 99 years. The following table shows a summary of the planned infrastructure and land ownership status quo and the proposed action plan.

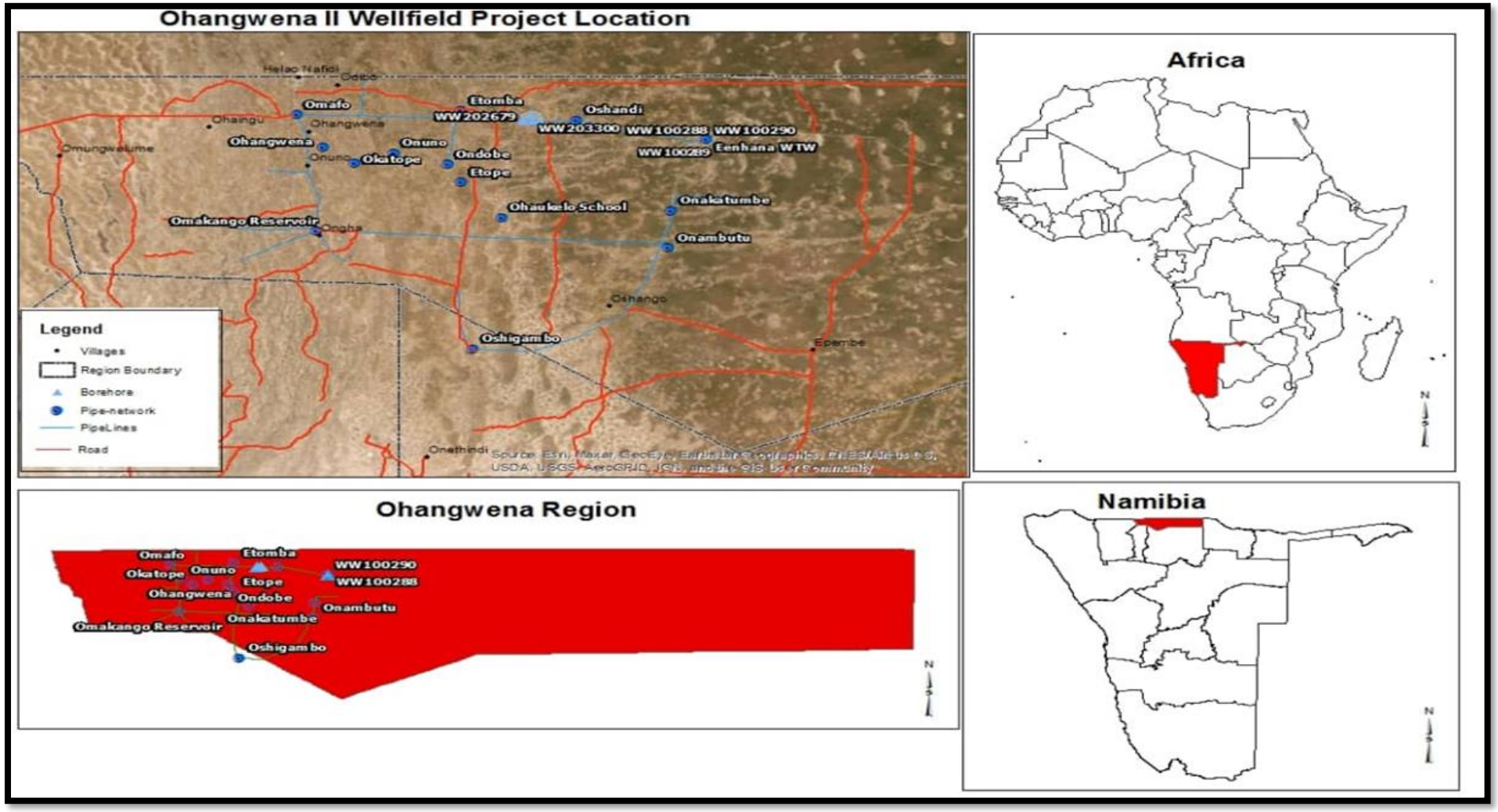


Figure 4: The location of the project area (bulk pipeline footprint) in the Ohangwena Region.

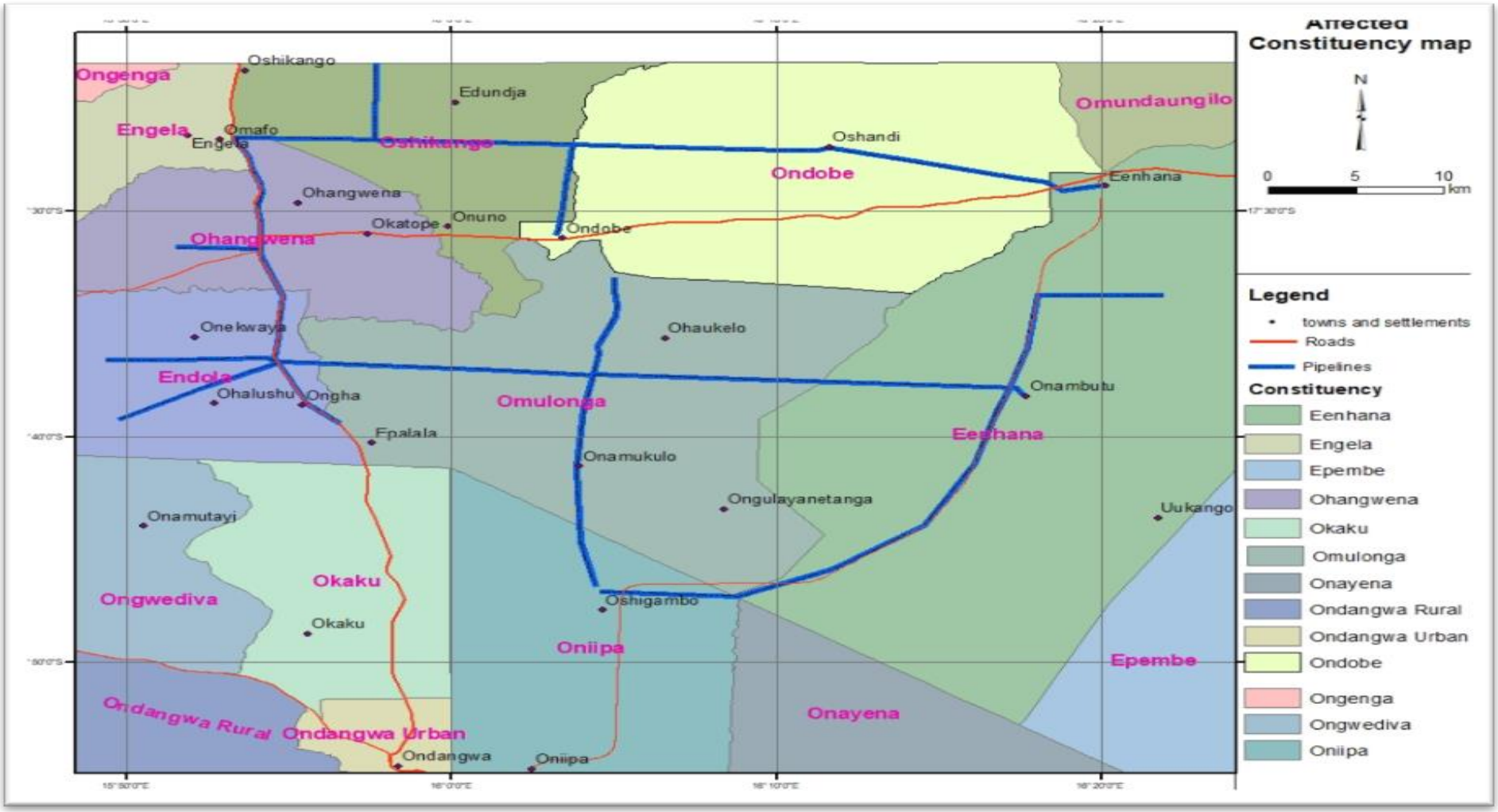


Figure 5: The proposed bulk water supply pipeline footprint across 8 Constituencies in Ohangwena Region.

1.6 Motivation / Justification for the Project

1.6.1 Existing Water Sources, Quality, and Infrastructure

1.6.1.1 Oshakati Water Treatment Plant

Most of the water supplied to the Central – Northern Region of Namibia is conveyed by canal from the Calueque Dam in Southern Angola to Oshakati for treatment before it is pumped to the water supply schemes. The Oshakati Water Treatment Plant (OWTP) supplies water to several schemes including (Omafo – Eenhana) and (Omakango – Onambutu). However, according to previous studies conducted by Windhoek Consulting Engineers (WCE), the OWTP is nearing its capacity and is in the process of upgrading to a capacity of 90 million litres per day (MI/d). Although this may meet the requirements, reliance on the OWTP alone for a crucial commodity like water is a very high risk. This could be obviated by tapping from the Ohangwena II Aquifer groundwater resource using boreholes. Over exploitation of the water supply network and poor condition of pipes result in insufficient water reaching the remote areas.

1.6.1.2 Water quality

For the purposes of this report, the establishment of downstream blending ratios, the product water quality of the Oshakati Water Treatment Water (OWTW) is considered Class A water for all parameters. The Product Water quality results as used in the Development Proposal Report for the Omakango-Onambutu Scheme Upgrade (WCE, 2021) were used to determine viable blending ratios with boreholes at either Oshandi or Eenhana. Specifically, OWTW final water is considered to have a fluoride (F) concentration of 0.1 m/gl. The water quality of boreholes at Oshandi and Eenhana has a Fluoride concentration of 5mg/l while the OWTW is at 1 mg/l, which presents an opportunity for blending.

The Omafo-Eenhana pipeline is unable to supply all rural water requirements as well as the requirements of Eenhana. Augmentation measures include the development of groundwater resources at Eenhana and Oshandi and connection to the Omakango-Onambutu pipeline at two points, centrally via Ondobe and at the end near Onambutu. The Omakango-Onambutu pipeline is at the end of its life and will be replaced. Hence, the purpose of this project is to enhance the water supply to these areas through the consideration of the optimal exploitation and incorporation of Ohangwena II Wellfield into the CNWSA.

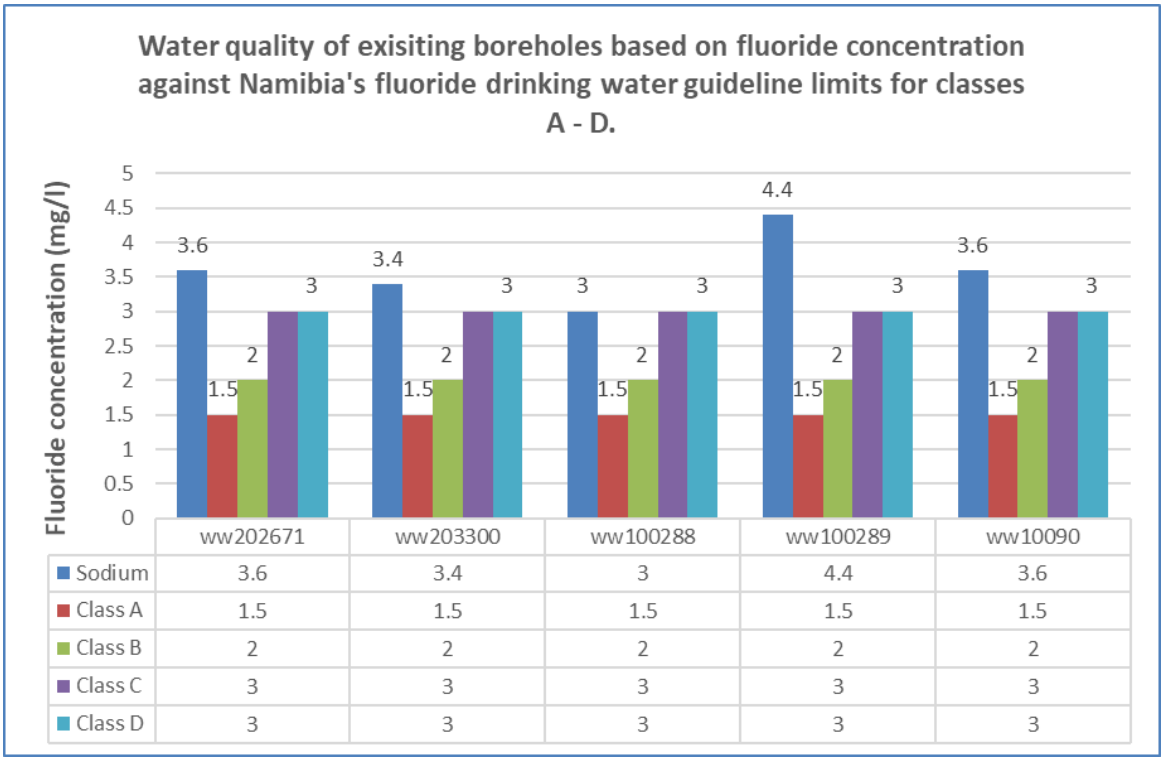


Figure 6: The water quality of the existing boreholes at Oshandi and Eenhana based on fluoride concentration.

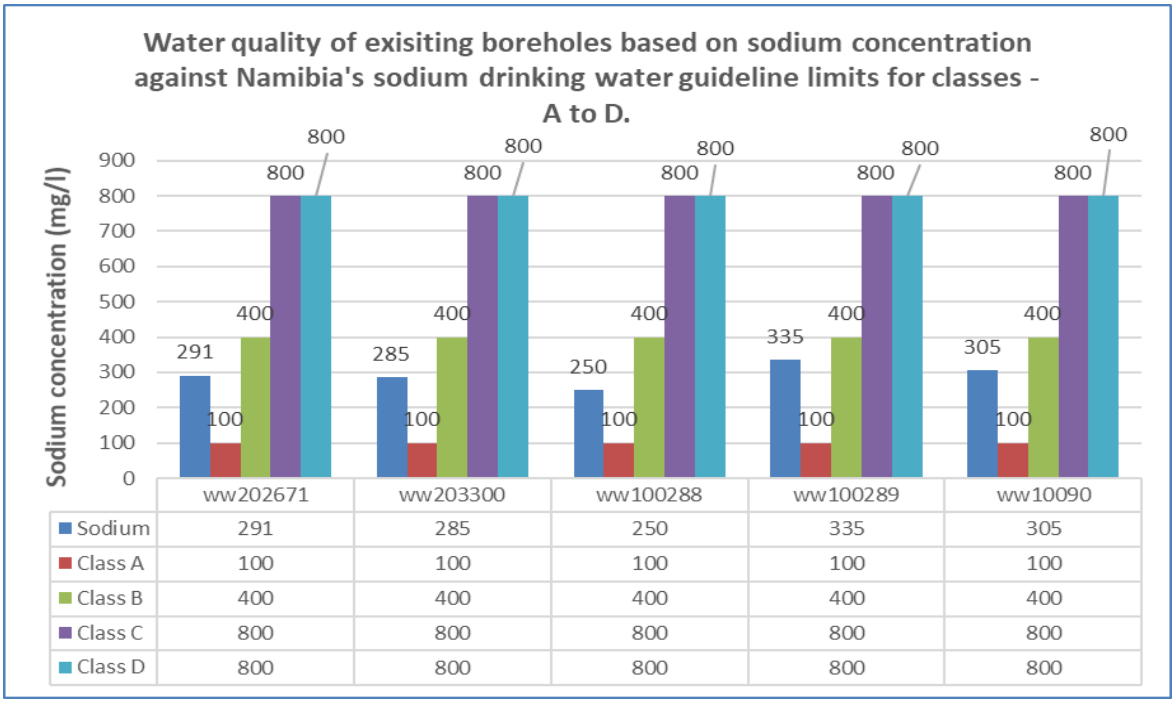


Figure 7: The water quality of the existing boreholes at Oshandi and Eenhana based on Sodium concentration.

1.7 The Proponent of the Proposed Project

The proposed project is being undertaken by NamWater, a government-owned commercialized entity established in December 1997. Its mandate is to provide quality water and related services to the satisfaction of all stakeholders, taking into cognizance of the environment, scarcity of and dependency of all on water. NamWater has offices and water supply schemes in all fourteen regions of the country. It supplies bulk water to Industries, Government Institutions, Municipalities, Local Authorities, large commercial Entities, and the Directorate of Rural Water Supply and Sanitation Coordination (DWSSC) in the Ministry of Agriculture, Water and Land Reform (MAWLR) and some private online users.

1.8 The Consultant

Outrun Consultants CC is a Namibian privately owned consultancy company doing various projects in Southern Africa Development Community (SADC) countries. Our core services are:

- Environmental Impact Assessment;
- Strategic Environmental Assessment;
- Environmental Investigations;
- Research and Training;
- Feasibility Studies;
- Agronomy and;
- Monitoring and Evaluation of Development Projects.

Outrun Consultants draw its experts from regional and international universities such as Rhodes University (South Africa), University of Zimbabwe (Zimbabwe), National University of Science and Technology (Zimbabwe), University of Namibia (Namibia), VSB-Technical University of Ostrava (Czech Republic), Namibia University of Science & Technology (Namibia) and the University of Twente (Netherlands). Outrun declares that we have no interests in this project and are independent and will act as such during the ESIA process as required by the EIA regulations. The key team members carrying out this ESIA are presented in Table 2 below:

Table 2: Outrun Team of Experts and the Roles and Responsibilities in the ESIA Study.

ORGANIZATION	AREA OF RESPONSIBILITY / FIELD OF EXPERTISE	TEAM MEMBERS
OUTRUN Consultants	Project management EIA coordination	Josiah T. Mukutiri
OUTRUN Consultants	EIA process	Tendai Kasinganeti
OUTRUN Consultants	Literature review / Desk study	Josiah T. Mukutiri Tendai Kasinganeti Fredrika Shagama Wilbert Manyangadze
OUTRUN Consultants	Legislation & Policy Review	Tendai Kasinganeti
OUTRUN Consultants	Socio-economic survey	Wilbert Manyangadze

N.B. CVs of the Team members are attached under Annexure 1.

1.9 Process and Methodology

Given that the development of the proposed project development triggers listed / prescribed activities under the Environmental Management Act No. 7 of (2007) and the Environmental Assessment Regulations of 2012, the process started with the appointment of the consulting company as presented above. The Consultants carried out a scoping phase of the ESIA process as required, and this chapter describes the Environmental Scoping process that was followed during the study and the ESIA process that will follow. The ESIA study was guided by the Namibian Environmental Impact Assessment Policy of 1994, the Namibian Environmental Management Act No. 7 of 2007 and the AfDB's Environmental & Social Management Framework (ESMF) for the NWSSP Category 2 projects as specified under the AfDB's Operational Safeguards System on environmental and social assessments. Category 2 projects are likely to have detrimental site – specific environmental and / or social impacts and requires identifying, evaluating and minimizing significant impacts. It is noteworthy that the ESMF is complementary to the national requirements with respect to ESIA. Various methodologies were implemented to fulfill the requirements of each step in the ESIA process as shown below.

1.9.1 ESIA Scoping Methodology

The EIA Regulations require a description of the significance of any significant effects, including cumulative effects that may occur due to the undertaking of the activity. To determine the significance of each of the potential impacts identified, the identified impacts have been subjected to the following questions displayed graphically (steps 1 and 2 - Figure 8) and in tabular form (Table 3) below. These questions form the methodology for assessing the significance of the effects or impacts identified through this ESIA process:

1. The first step is to screen out (set aside) all impacts which do not fall within the scope of this project and the responsibility of the proposed project.

2. The next step is to determine whether sufficient information exists to assess the potential impacts of those that remain. If insufficient information is available to assess (with a high degree of confidence) and recommend mitigation measures to address a given impact, further investigation will be required. However, if sufficient information is available to assess (with a high degree of confidence) and recommend mitigation measures to address a given impact, no further investigation will be required, and management actions to mitigate the impact will be addressed in the ESMP.

3. To fully understand the significance of each of the potential impacts, it is necessary to subject each to a range of assessment criteria. The application of these criteria, in determining the significance of potential impacts, uses a balanced combination of duration, extent, and intensity/magnitude, modified by probability, cumulative effects, and confidence.

The definitions of each of the criteria are contained in Figure 8; and finally based on the answers obtained after applying steps 1-3, a decision can be made regarding the significance of the impact based on three categories – low, medium or high (Table 17).

Screening process to determine project scopes environmental impacts.

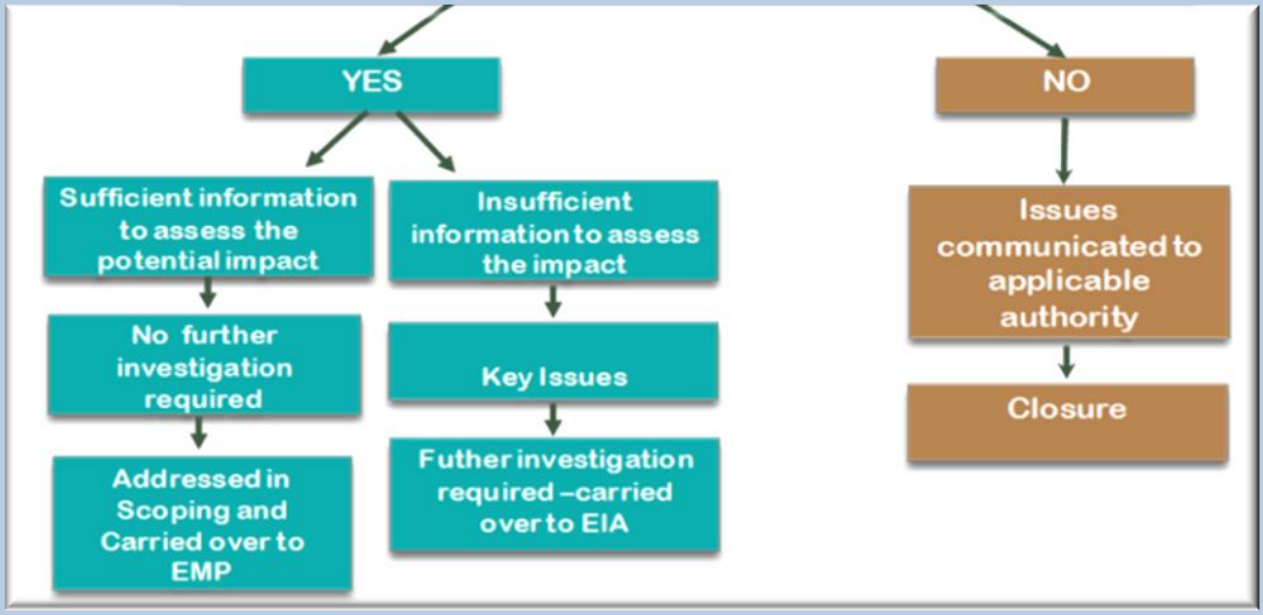


Figure 8: The screening process was followed to determine key issues.

1.10 The Environmental and Social Impact Assessment (ESIA) Process

The ESIA study was conducted as follows:

- Preliminary activities setting terms of reference for the ESIA, selecting the consultant (agent who would prepare the ESIA) to do the ESIA;
- Literature review of all relevant information;

- Field work for conducting baseline studies. This included bio-physical environment and socio-economic conditions;
- An analysis of the potential environmental impacts. This included impact prediction and significance assessment;
- Public participation;
- The preparation of an environmental and social management plan for the project and finally;
- The compilation of the ESIA Report.

The description of the ESIA process phases and stages mentioned above are provided under the following subheadings:

1.10.1 Clarification of the Terms of Reference and Levelling of Expectations

Leveling of expectations – an opening meeting was held between the consultancy team and the Proponent. The purpose of the meeting was to clarify the methodology, communication process between the Consultants and the Proponent, time frame, and expected outcomes of the ESIA study.

1.10.2 Literature review

Various related documents were reviewed to gather information on the potential impacts, the alternatives, how to mitigate the impacts, decommissioning, and rehabilitation plan. The literature included maps, publications, and reports on the topography, climate, land use, and socio-economic setup of the project area where the project site is located. The literature review helped in undertaking components and areas that would deserve attention during field assessment. The literature review which was mainly based on the desk study method and included the following:

1.10.2.1 Information from the internet, journals, books, and stakeholders

Examples of similar projects, i.e., water infrastructure construction and upgrade projects, from both developed and mainly developing world were reviewed including their merits and demerits. Besides its operation, the potential associated potential environmental impacts were also reviewed including other EIAs done in the area?

1.10.3 Identification and analysis of the potential environmental impacts of the project activities from similar environmental setting, data and research.

The major environmental and social components of the receiving environment were chosen to be observed and discussed in detail. Environmental data were analyzed to determine the potential environmental impacts of the project activities. The potential impacts were ranked for impact significance as presented later in this report. This exercise was informed by literature review of similar projects conducted in Namibia and SADC countries.

1.10.4 Field Survey

Field surveys were carried out to verify some facts and information obtained from the literature review. A more informed assessment was however the main objective of the field studies. This was done to confirm

the condition of the area in terms of climate, soils, land use, topography, and socio-economic setup of the area and stakeholder perceptions regarding the proposed project.

1.10.5 Public Involvement

A wide range of key stakeholders including but not limited to Government Ministries, Ohangwena Regional Council, Eenhana Town Council, Traditional Authorities, Churches and Non-Governmental Organizations (NGOs) were invited to participate and express their views through various media communication such as email, social media. The consultations were done mainly to get a view of the affected parties as well as how they think the project should be carried out for minimum impacts on health, environment, and the well-being of the people. Stakeholder engagement was also key to register concerns and assess if specialist studies were required. Issues which were highlighted by stakeholders were incorporated into the ESIA process, the project design and the Proponent has committed the same during project implementation.

1.10.6 Identification and analysis of impacts in terms of magnitude and significance

Construction or upgrading and operation of water supply infrastructure projects have both potentially positive and negative impacts on the environment. Impacts will depend on the sensitivity of the environment and the stress already imposed on it. To accurately predict the various impacts caused by the above mentioned, the ecological and socio-economic impacts were delineated. Potential environmental impacts were identified at each project phase, and an analysis criterion shown in the chapter on impact prediction and analysis **Chapter 9** was used to rank the impacts.

1.10.7 Recommended mitigation measures for identified impacts

Mitigation measures were developed based on practical measures supported by research and scientific evidence. Extensive literature review of reputable publications and journals helped the formulation of mitigation measures.

1.10.8 Analysis of alternatives of the project – both economic and environmental

The analysis of alternatives was done to ensure that resources were used efficiently and that decisions were environmentally sound. Main aspects covered were related to the “No-Go alternative”, alternative routes, site alternative and alternative options for infrastructure development.

1.10.9 Development of an Environmental & Social Management Plan

An Environmental & Social Management Plan (ESMP) will be prepared to give a guideline base to the project Proponent (NamWater) on how the identified impacts could be mitigated and managed. The Plan will be presented in a tabular format indicating the impact, indicator, monitoring frequency and the responsible agent. When all the important information is derived from the impacts’ prediction and analysis section, all the important aspects will be noted down and responsibilities assigned to monitor the different aspects.

1.10.10 Preparation of the ESIA Report

The completion of the various tasks assigned to the team members during the ESIA scoping study gave rise to separate individual reports which were collated to give this ESR. The ESIA process followed is provided under the flow chart shown in **Figure 9**.

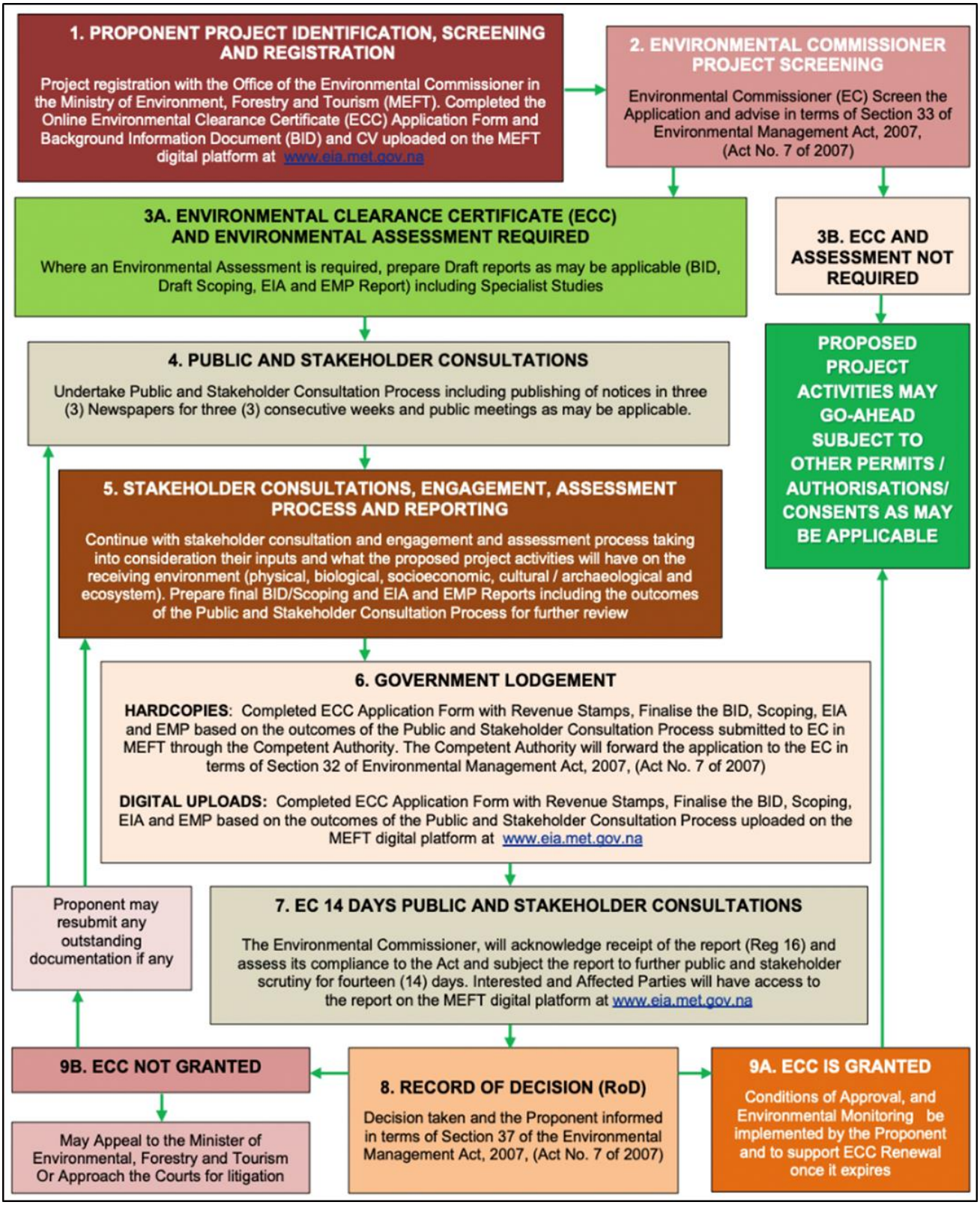


Figure 9: The ESIA Process flow.

2 DESCRIPTION OF THE PROPOSED PROJECT

The following reports compiled by the Design Engineers (DE), Element Consulting Engineers and Project Managers informed the project design for the development of Ohangwena II Wellfield:

- C-NOEE108: Ohangwena 2 Wellfield Development: Terms of Reference
- C-NOEE108: Ohangwena 2 Wellfield Development: Selection of borehole sites in the Ohangwena II Aquifer based on Existing Information;
- C-NOEE108: 01 Inception Report - 2022 – 03 – 31 Ohangwena Wellfield;
- C-NOEE108: Ohangwena 2 Wellfield Development: 2022 – 09 - 09 Development Design Report Final

2.1 Project Components

The proposed project, as portrayed in **Chapter 1**, seeks to improve the Omakango – Onambutu and Omafo – Eenhana water supply schemes. Various socio-economic, technical and technological factors affected the way this can be achieved and gave rise to the development proposal summarised below:

2.1.1 Basic layout and Infrastructure

The proposed infrastructure will comprise a new offtake pipeline from the new Omakango – Onambutu pipeline planned to supply Eenhana. The RO Plant at Eenhana will be upgraded together with the brine handling facilities to supply 800 m^3/day; 400m^3/day from each set of boreholes at Oshandi and Eenhana, respectively. The brine ponds will have a total capacity of 160 m3/day and cover 1.65 Ha of land located adjacent to the existing RO Plant at Eenhana (see figure. 10 below).

The existing Omakango–Onambutu bulk pipeline will be replaced and will supply the rural areas along the line (603 m^3/day). Ondobe will be supplied from the new Omakango-Onambutu line via a new offtake and pipeline (800 m^3/day), to a new reservoir (1.6 million litres). A new pump station and reservoir (3.8 million litres) will be installed at Omakango. A pipeline will be installed from Onambutu to Eenhana via Ondingwanyama to supply Eenhana. The infrastructure layout is presented under Fig.11 below.

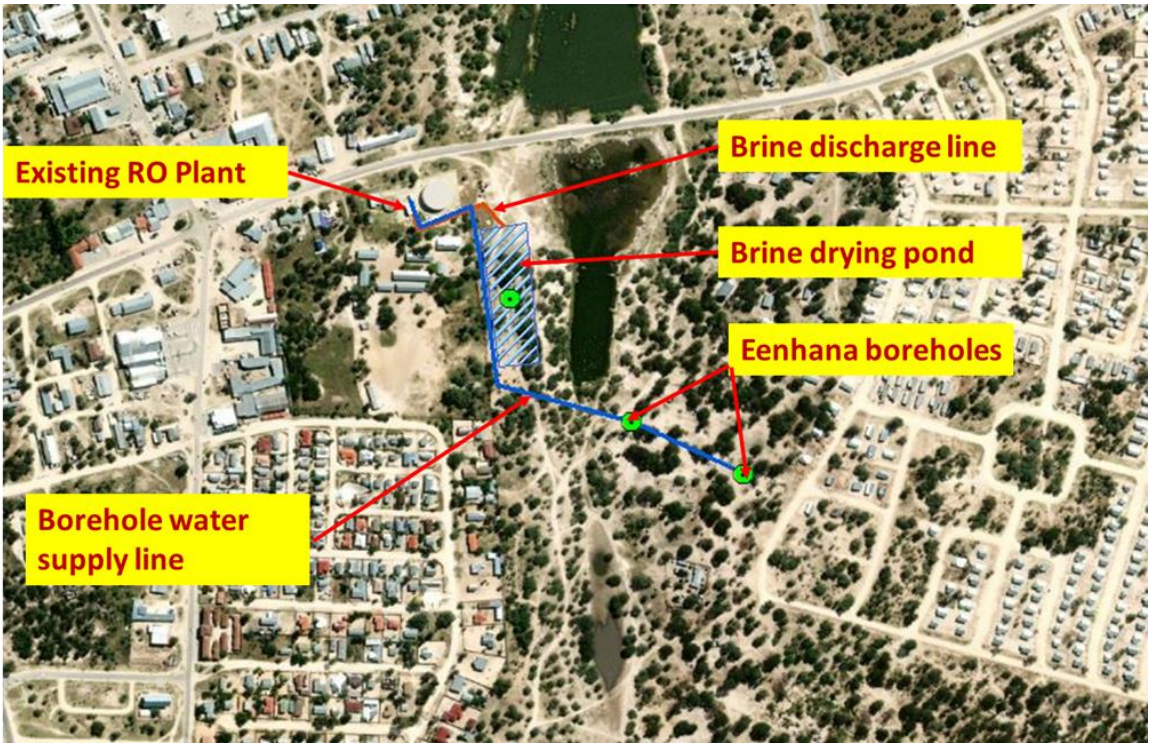


Figure 10: The location of planned brine drying ponds at Eenhana.

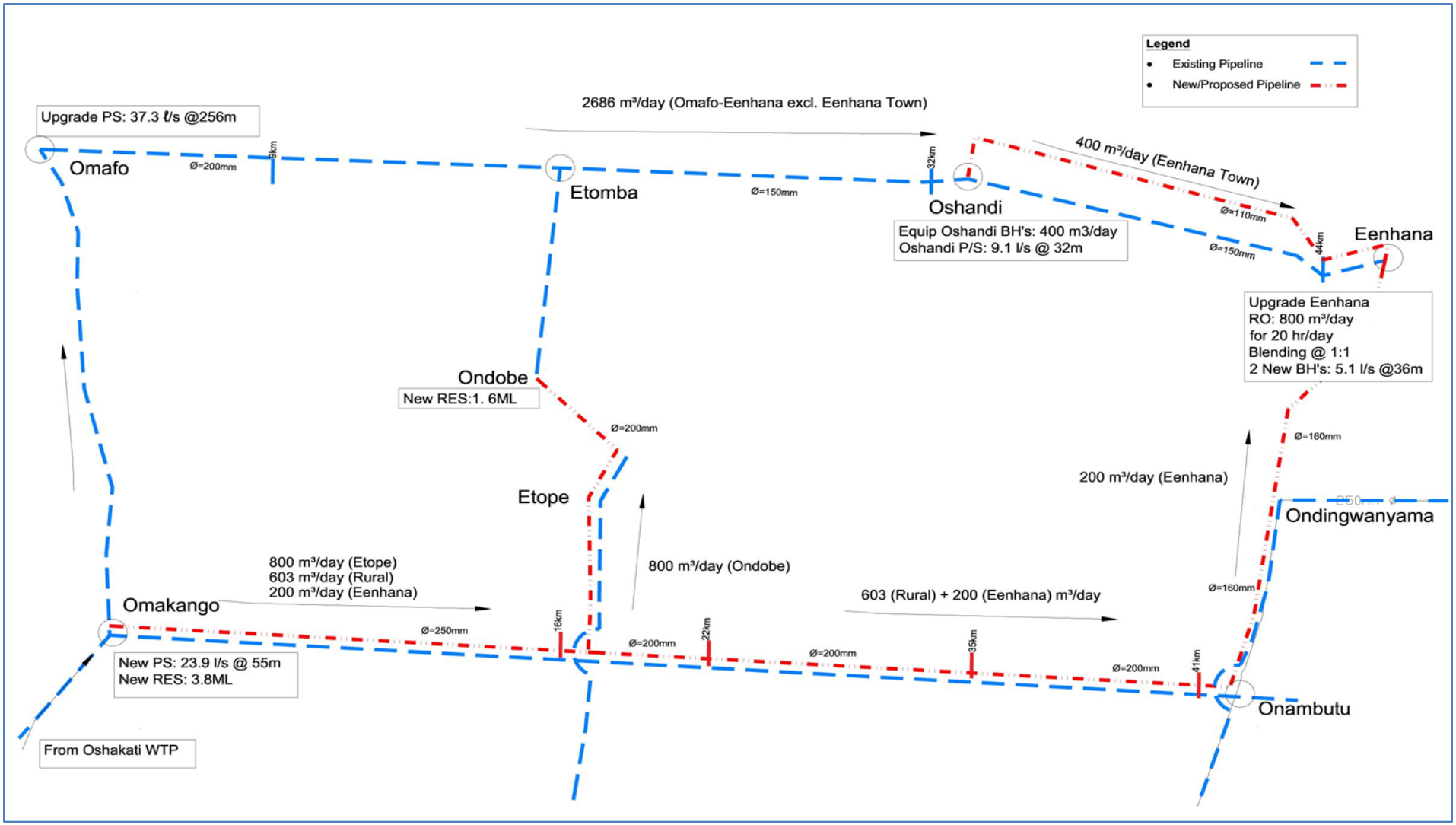


Figure 11: Planned infrastructure schematic diagram.

Treatment Plant

The hydraulic balance for the new envisage treatment plant under Option 9:

- The basic flow distribution of this option will be as follows:
    - Oshandi Boreholes – 40%
    - Eenhana Boreholes – 40%
    - OWTP water via Omakango-Onambutu – 20%
- 18.4 m^3/h of borehole water from the new Eenhana boreholes as well as the Oshandi boreholes will be required respectively.
- The brine from the existing RO plant will be blended with Eenhana borehole water as feed to the new RO plant to reduce the overall brine produced by the old and new plant combined.
- The new RO will have an 80% recovery with this blended feed.
- 9.4 m^3/h of raw Eenhana RO water will be blended with the treated RO water.
- 10 m^3/h of treated water from Oshakati Water Treatment Works will be blended with treated water from the new RO plant.
- 50 m^3/h of final water conforming to Class A requirements will be produced, with a maximum fluoride concentration of 1.25 mg/l;
- 7.7 m^3/h of brine will be produced (from the old and new plant combined), which must be evaporated.

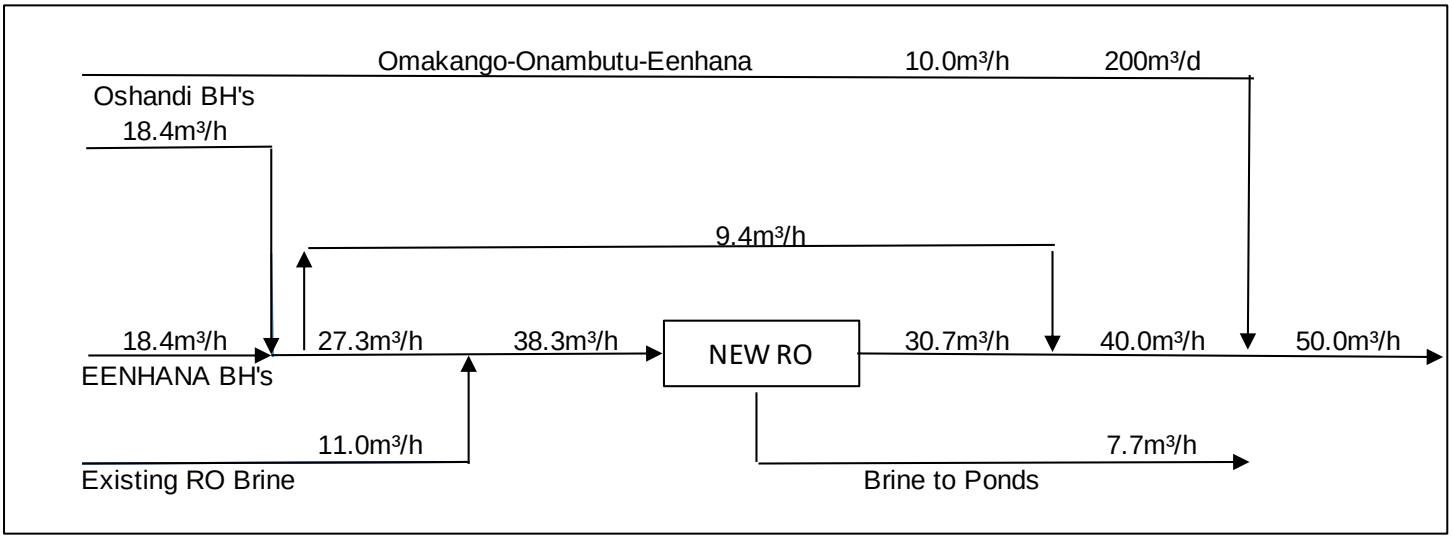
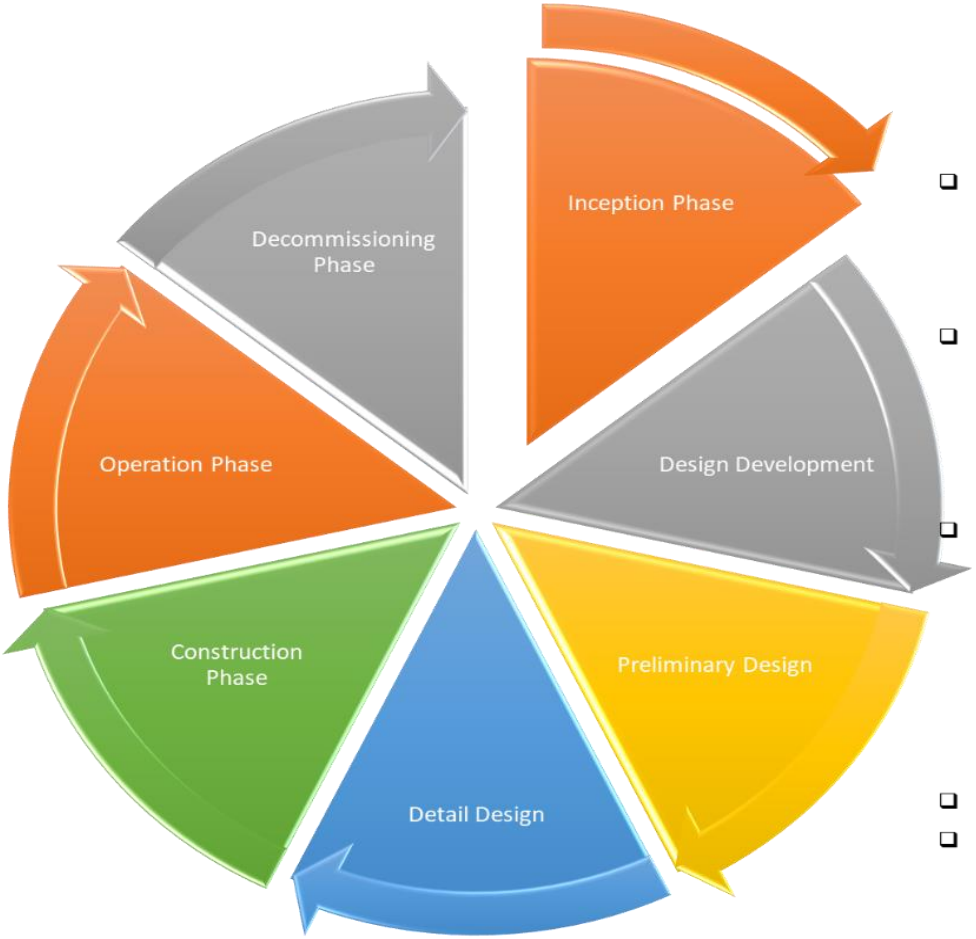


Figure 12: The proposed development mass balance.

To adequately consider the potential impacts associated with the proposed development of Ohangwena II Aquifer, the major project activities based on proposed project components were adopted and incorporated into the project cycle, Fig. 13 to Fig. 18 below. The ESIA process underway only includes the project components described under Option 9 covering the design, construction and operational phases only. The ESMP generated from this exercise will be incorporated into the final Bill of Quantities and its implementation will form part of the contractual performance terms binding the appointed Contractor. Any infrastructure additions will require a new ESIA study and environmental clearance.

2.2 Project activities to be undertaken at the respective Project cycle Phases

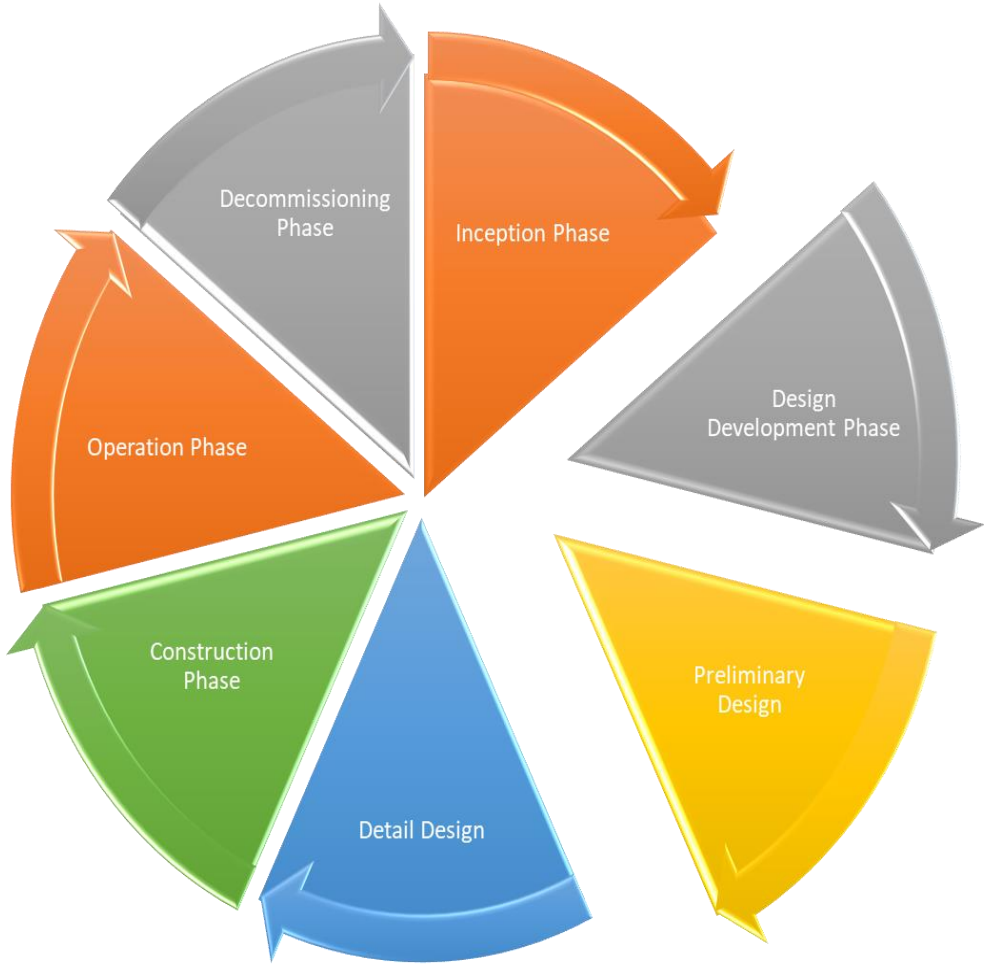
2.2.1 Inception Phase



- **Confirmation and Approval of Scope/Project Brief:**
  - Engineering/Geo-Hydrological
  - Drilling and Testing of boreholes
  - Environmental
- Reconnaissance visits to study area with reference to gathering of information pertaining to:
  - Bulk water supply infrastructure.
  - Groundwater data, i.e., existing production and observation boreholes in the Eenhana and Ohangwena II aquifers,
- Client consultations pertaining to:
  - Project Brief
  - Gathering and collation of Information:
  - Status quo information:
    - Reservoirs
    - Pipelines
    - Pump stations
- Drawings (Layout and Detail), maps, information
- Special design preferences and standards.

Figure 13: Project activities for the Inception Phase.

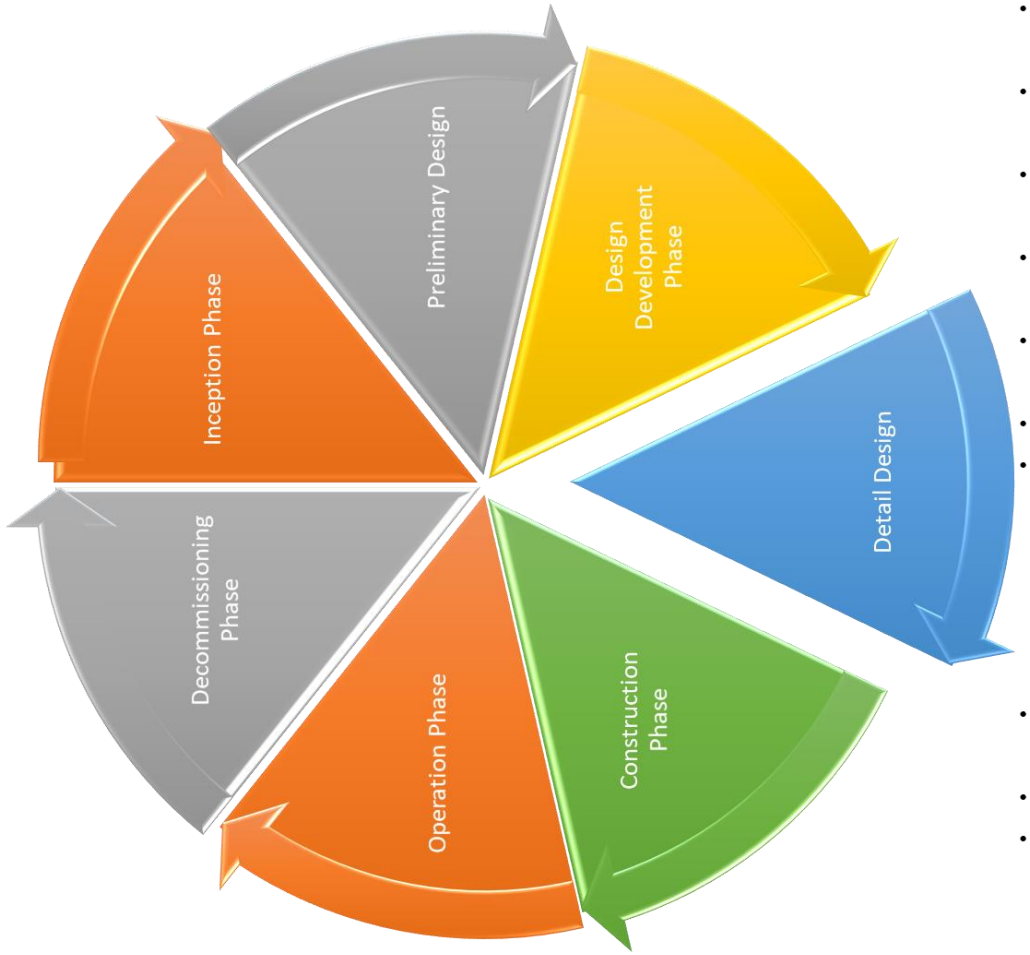
2.2.2 Design development and preliminary design phase



- The design development phase comprised the following:
- Supplementary site visits.
- Design consultation meetings to establish the concept design criteria, acceptable specifications
- Identifying and advise NamWater of any additional specialist works,
- Develop the initial concept design and related programme
- Development of multiple appropriate design options will be presented to NamWater.
- Incorporate regulatory authorities' requirements into the design.
- Assess design options / alternatives in terms of engineering, life cycle costs (economic), operation and maintenance considerations, environmental and social constraints, risk of disruption of services, other risk factors will be compared through a Cost/Benefit Study. The most Cost/Beneficial option will be recommended.
- Compile an integrated hydraulic model that allows for time-simulated modelling of the combined integrated schemes, including node demands and supplies from the CNWSA,
- The main output was Design Development Report and a Preliminary Design Report (in progress)

Figure 14: Planned activities for the design development and preliminary design phase.

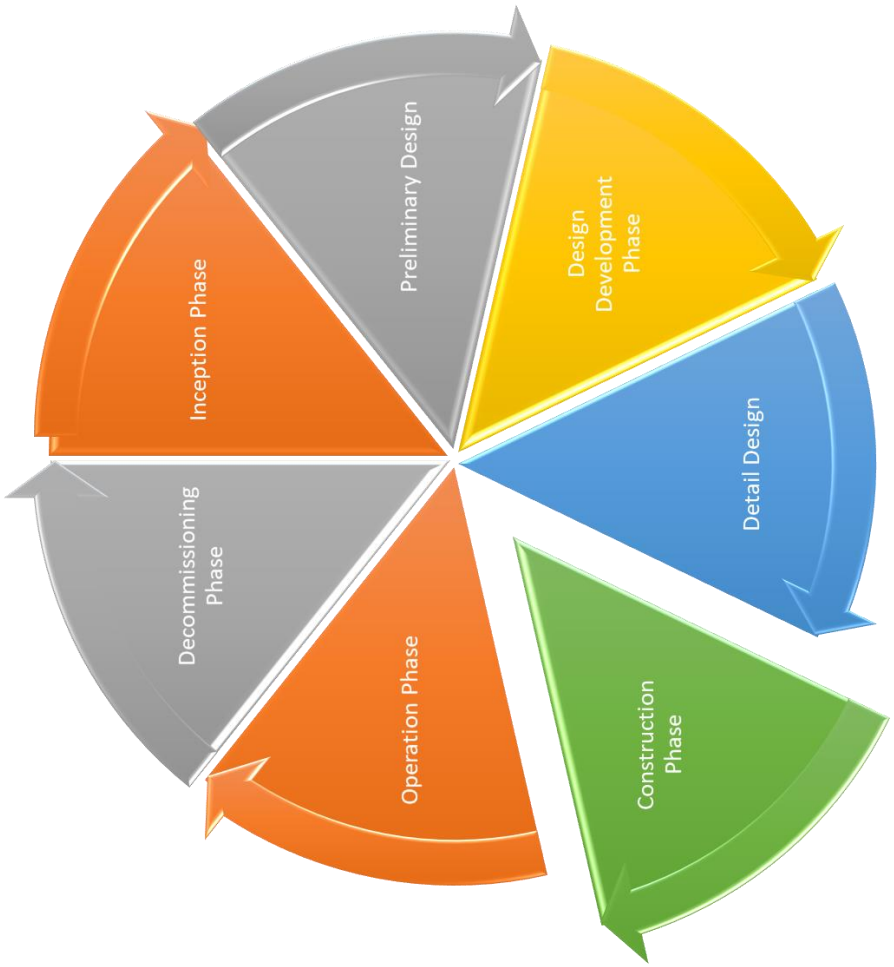
2.2.3 Detail design phase



- Finalize the results from specialist investigations: surveys, geotechnical and materials investigations, location of services, soil resistively etc.
- Consider the EIA studies, obtain record of decisions for environmental approval and Environmental Management Plan (EMP).
- All requirements from regulatory, statutory authorities, client and other consultants will be incorporated into the design.
- Related life-cycle costs incorporated in the CBA referred to earlier in Design Model Development will be included in the final costings.
- Practical considerations pertaining to issues such as logistics, housing of staff, etc. will also be provided for in the costing of the detail design stages.
- Undertake any additional investigations, material testing, etc., as required.
- Prepare detailed design of civil, structural, mechanical/electrical pavement, geometric, hydraulic works for the final selected option:
    - Prepare layout plans, long/cross-sections, installation drawings, longitudinal sections, concrete details and details of tie-ins, pipeline sizing, thrust blocks, cathodic protection, valve position, valves size and arrangement, and valve chambers.
- Prepare and finalize all working drawings, cross sections, bending schedules etc. (if appropriate) and details.
- Prepare Bills of Quantities and update cost estimates.
- Facilitate HAZOP study , comprising the following:
    - Identifying potential hazards and operability issues in the process.
    - Appointment of an independent reviewer (outside the bidding firm),
    - The Consultant will correct and incorporate into the Final Design all identified shortcomings identified and agreed upon in the HAZOP study.

Figure 15: Planned activities for the detailed design phase.

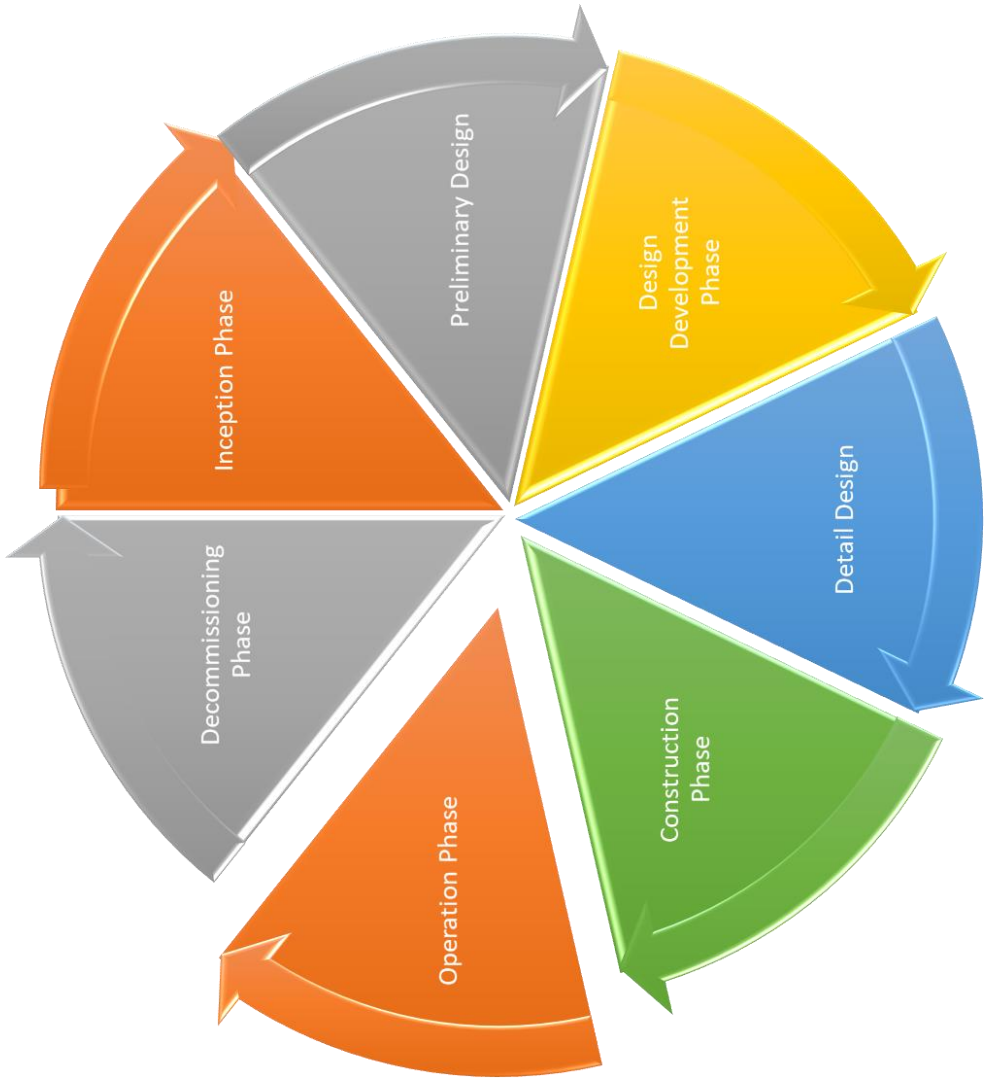
2.2.4 Construction phase



- Tender adjudication and appointment of Contractor(s)
- Mobilization and site camp set up:
- Contractors to appoint own Environmental Control Officer (ECO);
- Set up site camp with temporary offices and administrative facilities;
- Set up ablutions; Set up access control, security; signage and lighting;
- General materials storage and laydown areas
- Construction of chemicals storage facilities (oil, grease, solvents etc.) and associated infrastructure (bunds, secured / roofed areas etc.);
- Above ground fuel storage (e.g. gasoil/ petrol); Employment of construction labour;
- Set up of workshops / areas (e.g. welding, mechanical repair, electrical etc.);
- Change-houses, chemical toilets and showering facilities (linked to conservancy tanks – removal of contents by exhauster vehicle and disposal at permitted facility); and
- Temporary waste storage areas; these shall be established and managed in accordance with ESMP requirements to be developed in the ESIA phase.
- Sourcing of construction materials and equipment:
    - All bulk materials (aggregate, cement, steel etc.) will be sourced from existing lawful commercial sources; there will be no direct mining, harvesting or extraction of natural resources;
- Excavation, earthworks and concreting, Clearing of vegetation; Levelling and compaction using heavy machinery / earthmoving equipment; Potential for excavations and trenching in order to prepare foundations and laying of below ground level equipment (cables, pipes, sumps, drainage etc.); Use of general mechanical equipment within construction areas (generators, cutting and welding equipment, compressors etc.).

Figure 16: Planned activities for the construction phase.

2.2.5 Operation phase



- Operation of pump stations, RO plant, Brine drying pond and pipelines;
- Maintenance of infrastructure; and
- Ongoing consultation with directly affected parties.

Figure 17: Planned activities during the operation phase.

2.2.6 Decommissioning phase

Decommissioning of the proposed development of Ohangwena II Wellfield is not envisioned in the short to medium although a generic decommissioning plan will be shared as part of the ESMP.

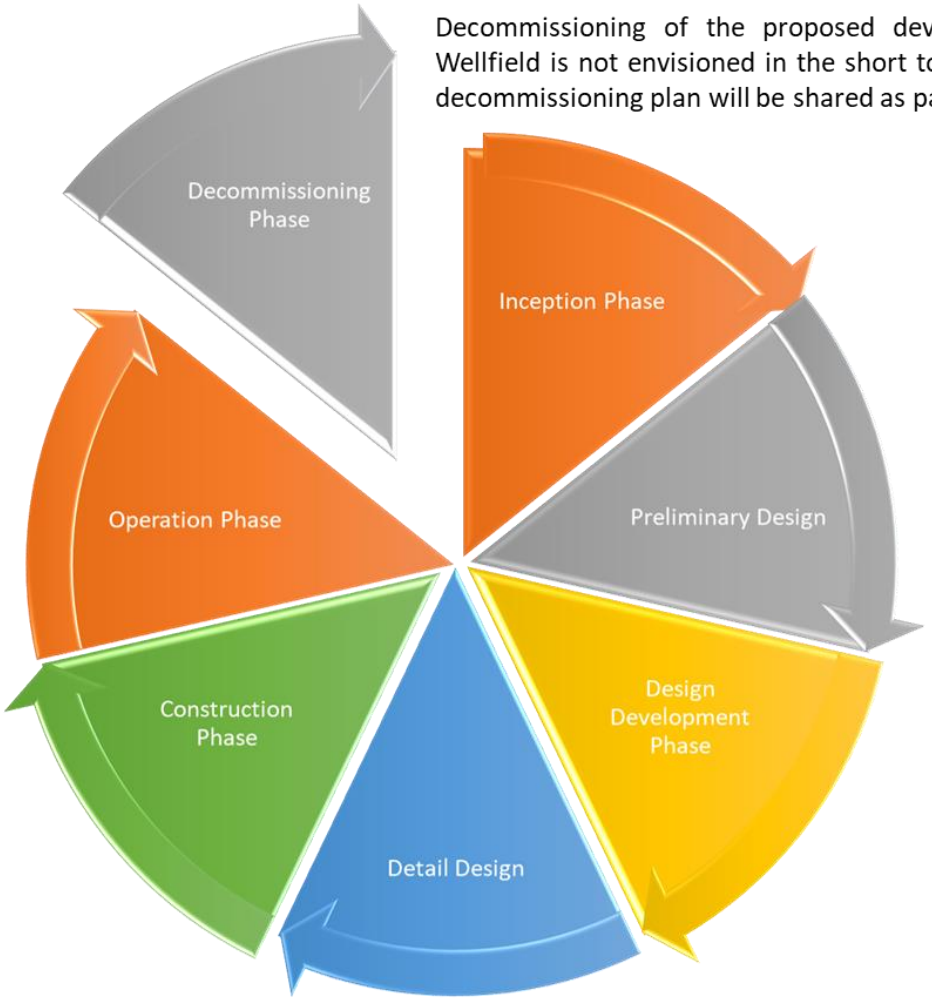


Figure 18: Planned activities during the decommissioning phase.

3 LEGISLATIVE AND POLICY FRAMEWORK REVIEW

3.1 Proposed Project Authorization Requirements

The Environmental Management Act, No. 7 of 2007 and its supporting regulations of 2012 stipulate that an environmental clearance certificate is required to undertake Listed Activities. Listed activities triggered by the proposed project in accordance with the Environmental Management Act, No. 7 of 2007, and its regulations as presented below:

WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES

Section 2.1 - The construction of facilities for waste sites, treatment of waste and disposal of waste.

FORESTRY ACTIVITIES

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

WATER RESOURCES DEVELOPMENTS

Section 8.1 - The abstraction of ground or surface water for industrial or commercial purposes,

Section 8.4 - Construction of water transfer schemes between water catchments and impoundments.

Section 8.5 - Construction of dams, reservoirs, levees and weirs.

INFRASTRUCTURE

Section 10.1 - The construction of- (a) oil, water, gas and petrochemical and other bulk supply pipelines.

AUTHORISATION REQUIREMENTS

In accordance with Regulation 6(1) of the EIA Regulations (GN. 30 of 2012), draft ESIA Report will be submitted to the Competent Authorities, that is the Ministry of Agriculture, Water and Forestry, Department of Water Affairs for comments and to obtain consent. Thereafter the report will be submitted to MEFT for approval and feedback will be communicated to registered stakeholders and I&APs.

3.2 Overview of Legislation: National (Namibia)

This Section is aimed at presenting a concise description of the policy and legislative context within which the development is proposed sub-project including identification of all legislation, policies and guidelines that apply to this activity and are to be considered in the assessment process. Some of the pertinent environmental legislation that has bearing on the development of the Ohangwena II Wellfield project is presented in **Table 3** which describes the linkage between project activities and the relevance of the various legal and policy instruments. The legislation outlined in this document is for the local (institutional), regional, national and international perspectives.

Table 3: National Legal and Policy Instruments Relevant to the Development of Ohangwena II Wellfield.

Theme	Legislation	Relevance Provisions	Project Implications
The Constitution	Namibian Constitution First Amendment Act 34 of 1998.	"The State shall actively promote and maintain the welfare of the people by adopting policies that are aimed at maintaining ecosystems, essential ecological processes and the biological diversity of Namibia. It further promotes the sustainable utilisation of living natural resources basis for the benefit of all Namibians, both present and future." (Article 95(l)).	Ecological sustainability concepts within the constitution should guide all projects. Protect the environment and ensure citizens enjoy their right to a safe environment.
The 5th National Development Plan	NDP 5	The NDP5 is the country's fifth development plan put in place to steer country development plans towards the 2030 global agenda. This is cascaded through sector plans in the existing framework of the 5th Development Plan. The localised Sustainable Development Goal (SDG) relevant to this project is SDG Goal 6: Ensure availability and sustainable management of water and sanitation for all. 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all.	The Development of Ohangwena II Wellfield, is in line with the SDG Goal 6 which aims to ensure equitable access to safe and affordable water for all.
Climate Change	National Policy on Climate Change for Namibia (2011)	The National Policy on Climate Change supports constitutional obligations of the Government of the Republic of Namibia, namely for "the state to promote the welfare of its people and protection of Namibia's environment for both present and future generation." The goal of the National Policy on Climate Change is to contribute to the attainment of sustainable development in line with Namibia's Vision	The project by virtue of providing safe reliable access to water and sanitation services, it enhances and improve the welfare of the people of Namibia, particularly those living in remote and marginalised communities. Through the implementation of the project that offer water supply solutions, the program project

Theme	Legislation	Relevance Provisions	Project Implications
		2030 through strengthening of national capacities to reduce climate change risk and build resilience for any climate change shocks. The policy reckons that Namibia has limited capacity to adapt to climate change impacts. The policy projected that Namibia would become drier with more variability in rainfall and developed strategies and action plan to cope with adverse climate change impacts, (Namibia, Adaptation, 2010).	contributes towards sustainable development. The project, directly and indirectly, reduces the climate risk for several communities through provision of reliable, safe water to the people of Namibia. The project implementation is aimed at addressing climate change mitigation and adaptation. By implementing the project, NamWater is promoting the provision of basic services which is safe, clean and reliable water.
	National Climate Change Strategy & Action Plan 2013 - 2020	The Strategy outlines Namibia's response to climate change. The strategy aims to address and plan for action against climate change, both through mitigation and adaptation actions. In its adaptation strategy, the Strategy recognises the role of a sustainable water resource base.	The project implementation should adopt measures that strengthen the development of a sustainable water resource base of the country. The implementation should be very careful on not to cause harm to ensure sustainable use of the available water resources but improve the management through various conservation technics.
Environment	Environmental Assessment Policy of Namibia 1994	The Environmental Policy of 1994 is a a guiding document that supports the EMA Act of 2007 in protecting the environment and also guides the ESIA process to be followed to obtain an Environmental Clearance Certificate.	The ESIA process is guided by the Environmental Policy together with the EMA Act (2007) and its Regulations of 2012.

Theme	Legislation	Relevance Provisions	Project Implications
	Environmental Management Act, (Act No. 7 of 2007) EIA Regulations Government Notice (GN) 57/2007 (Government Gazette (GG) 3812).	The Act gives general principles for the management of the environment and natural resources. Requires that projects with significant environmental impact are subjected to an environmental assessment process (Section 27). Requires for adequate public participation during the environmental assessment process for interested and affected parties to voice their opinions about a project (Section 2(b-c)). Details principles which guide the EIA process. Details requirements for public consultation within a given environmental assessment process (GN No 30 Section 21). Section 3 (2) (e) states that "assessments must be undertaken for activities which may have a significant effect on the environment or the use of natural resources". Details the requirements for what should be included in a Scoping Report (GN No 30 S8) an EIA report (GN No 30 S15).	The EMA and its regulations should inform and guide this ESIA process of the project. An ECC should be obtained for the project The ECC once granted should be renewed every three years, and compliance to the ESMP should be audited.
Vegetation	Forestry Act 13 of 2005 & Forestry Regulations	Section 10 (1) set out the aim of the forest management as to: The purpose for which forest resources are managed and developed, including the planting of trees where necessary, in Namibia is to conserve soil and water resources, maintain biological diversity and to	The clearing of vegetation is prohibited (subject to a permit). Certain tree species occurring in the area are protected under this Act and require a permit from the Directorate of Forestry for removal.

Theme	Legislation	Relevance Provisions	Project Implications
	(GN 170 of 2015.	use forest produce in a way which is compatible with the forest's primary role as the protector and enhancer of the natural environment. Section 22. (1) (Protection of Natural vegetation) Unless otherwise authorised by this Act, or by a licence issued under subsection (3), no person shall on any land which is not part of a surveyed erven of a local authority area as defined in section 1 of the Local Authorities Act, 1992 (Act No. 23 of 1992) cut, destroy or remove - (Namibia, Law and Environmental Assistance Platiform, 2021)	The construction of waterworks infrastructure (bulk water supply) such as water pipelines and brine drying ponds may trigger the removal of vegetation. The waterworks and infrastructure maybe located on areas that are not part of a surveyed erven of a local authority especially for projects under the bulk water supply component and their related activities. The removal of trees in the above instances would require the project contractors or sub-contractors to acquire necessary permits first.
Health and Safety	Labour Act 11 of 2007. Health and Safety Regulations GN 156/1997 (GG 1617)	Empowers the minister responsible for labour to publish regulations pertaining to health and safety of labourers (S135). Details requirements regarding minimum wage and working conditions (S39-47). Details various requirements regarding health and safety of labourers. Section 119 states that "no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health."	All contractors involved in the construction of the services infrastructure for this project are required to comply with this Act and its regulations. Potential nuisances (e.g. dust generation) should be considered during the construction phase and avoided. Employees should be provided with adequate and appropriate Personal Protective Equipment. Employees should be trained and occupational health and safety and that they are knowledgeable

Theme	Legislation	Relevance Provisions	Project Implications
			about the risks and hazards associated with their respective work duties.
	Public and Environmental Health Act No. 1 of 2015	The Act serves to protect the public from nuisance and states that no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.	The Proponent and all its employees and contractors should ensure compliance with the provisions of these legal instruments.
	Pollution Control and Waste Management Bill	The bill aims to "prevent and regulate the discharge of pollutants to the air, water and land" Of particular reference to the Project is: Section 21 "(1) Subject to sub-section (4) and section 22, no person shall cause or permit the discharge of pollutants or waste into any water or watercourse." Section 55 "(1) No person may produce, collect, transport, sort, recover, treat, store, dispose of or otherwise manage waste in a manner that results in or creates a significant risk of harm to human health or the environment."	The project activities trigger section 21 and 22 of the Bill, this so because activities like servicing of construction equipment & machinery, borehole drilling, operation and maintenance of pumps can potentially directly pollute the soils and ground water through oil spills and leakages. Contractors of the civil works of the projects should make it mandatory that they manage their waste in a manner that do not cause environmental threat and risk both to the surroundings and the local communities.
Water	Water Act 54 of 1956	The Water Resources Management Act 24 of 2004 is presently without regulations; therefore, the Water Act No 54 of 1956 is still in force: -Prohibits the pollution of underground and surface water bodies (S23 (1)).	The protection of ground and surface water resources should be a priority. The main threats will most likely be concrete and hydrocarbon spills during construction.

Theme	Legislation	Relevance Provisions	Project Implications
		-Liability of clean-up costs after closure/ abandonment of an activity (S23 (2)). -Protection from surface and underground water pollution	
	The Water Resources Management Act No. 11 of 2013 (still to be gazetted)	The aim of the Act is to provide for the management, protection, development, use and conservation of water resources; to provide for the regulation and monitoring of water services and to provide for incidental matters. Section 3 of the Act recognises the fundamental principles in Water Resources Management in Namibia: Equitable access for all people to safe drinking water is an essential basic human right to support a healthy productive life. Access by all people to a sufficient quantity of safe water within a reasonable distance from their place of abode to maintain life and productive activities; Promotion of the sustainable development of water resources based on an integrated water resources management plan which incorporates social, technical, economic, and environmental issues; Development of the most cost-effective solutions, including conservation measures, to infrastructure for the provision of water;	The protection (both quality and quantity/abstraction) of water resources should be a priority. Relevant permits and or agreements to abstract and use water should be applied for and obtained from the Ministry of Agriculture, Water and Land Reform's Directorate of Water Resources Management. Obviously the brine generated from the RO plants will have TDS exceeding 500 mg/l, the allowable effluent disposal standard. As a result brine drying ponds will be required to treat the RO effluent. The general standard for Article 21 permits for effluents is attached at the end of this report under Annexure 12.8.

Theme	Legislation	Relevance Provisions	Project Implications
		Supporting integrated water resources management through human resources development and capacity building; Promotion of water awareness and the participation of persons having interest in the decision-making process should form an integral part of any water resource development initiative	
	Wetland Policy	This policy strives to complement existing instruments regarding sustainable development and sound natural resource management in Namibia and provides a platform for the conservation and wise use of wetlands, thus promoting inter-generational equity regarding wetland resource utilisation. Furthermore, it facilitates the Nation's efforts to meet its commitments as a signatory to the International Convention on Wetlands (Ramsar) and other Multinational Environmental Agreements (MEA's).	The project area lies within the Cuvelai Drainange Basin and is characterised by several seasonal Oshanas which support diversity of life forms from small amphibians, fresh water fish to livelihoods. The Brine drying pond should be sized not to encroach into the Oshana.
	The Water Policy of Namibia, (2000)	The Policy established that the development and management of water services in Namibia have focused on building and running supply delivery systems to meet water needs of various users. These structures and systems include – at the sophisticated end of the scale – large dams, canals, major pipelines, pumping stations, and water treatment works. The Policy listed 12 principles of water management in Namibia among to support Water Resources Management Act No. 11 of 2013:	The project is compliant with the policy requirements which among others aims to promote development, utilization and management of water resources in such a way as to promote equitable and sustainable socio – economic development.

Theme	Legislation	Relevance Provisions	Project Implications
		Equity (right to water for all Namibians), Promotion of development (water resources should be utilized, developed and managed in such a way as to promote equitable and sustainable socio – economic development), Economic value (scarce water in Namibia should be utilised and recognised as an economic value), Awareness and participation (fostering participation of different water stakeholders), Openness and transparency, Decentralisation (The operational management of water resources and water services shall be decentralised to the lowest practicable level), Ecosystem values and sustainability, Integrated management and planning, Clarity of institutional roles and accountability, and Capacity building The policy reckons that water sector reform should be an ongoing process. Policy development is a dynamic activity that needs to take account of changes in society and technology. The Policy established that the development and management of water services in Namibia have focused on building and running water supply delivery systems to meet water needs of various users. These structures and systems include – at the sophisticated end of the scale – large dams, canals, major pipelines, pumping stations, and water treatment works	

Theme	Legislation	Relevance Provisions	Project Implications
	The Water Supply and Sanitation Policy (WSASP) of 2008	The policy has strong focus on Water Demand Management (WDM). The policy was formulated with four long term components: - Water supply and sanitation services should become available to all Namibians; Equitable improvement of water and sanitation services should be achieved by the combined efforts of the government and the beneficiaries, based on community involvement and participation, the acceptance of a mutual responsibility and by outsourcing services where necessary and appropriate, under the control and supervision of government. Communities should have the right, with due regard for environmental needs and the resources and information available, to determine which water and sanitation solutions and service levels are acceptable to them within the boundaries of the national guidelines. The policy formulated to improve the provision of water supply to: - Contribute to improved public health; - Reduce the burden of collecting water; - Promote community based social development taking the role of women - into special account; - Support basic water needs; - Stimulate economic development; and - Promote water conservation The policy has two water supply priorities: (1) This is the provision of water for domestic use, and. (2) This is the provision of water for economic activities.	It is relevant as it puts emphasis on access to water supply and sanitation services, and that improvement of those services should be a combined effort of the government and the beneficiaries, based on community involvement, participation and responsibility, it is thus imperative to determine which solutions and service levels are acceptable to them, and they shall contribute towards the cost of services.

Theme	Legislation	Relevance Provisions	Project Implications
	The Integrated Water Resource Management Plan (2010)	The Plan promotes coordinated management and utilisation of water, land and related services in Namibia to realise social, environmental and economic growth. The overall long-term goal of IWRM in Namibia is to achieve a sustainable water resources management regime contributing to social equity, economic efficiency and environmental sustainability.	The implementation of the project is line with the goal of the IWRM Plan of Namibia because the program would ensure there is social equity and economic efficiency of water management.
Soil	Soil Conservation Act 76 of 1969	The Act established to consolidate and amend the law relating to the combating and prevention of soil erosion, the conservation, improvement and manner of use of the soil and vegetation and the protection of the water sources in the Republic of Namibia. The Act give powers to the Minister in section 3 (d) the powers to gazette activities that relate to the run-off or drainage of rainwater, the withdrawal from cultivation, the protection and stabilizing of natural water courses and the establishment, maintenance and protection of artificial water courses	Duty of care must be applied to soil conservation and management measures must be implemented during the construction and maintenance stages of the project.
Social and Human Environment	Public Health Act 36 of 1919 Health and Safety	Section 119 states that “no person shall cause a nuisance or shall suffer to exist on any land or premises owned or occupied by him or of which he is in charge any nuisance or other condition liable to be injurious or dangerous to health.” Details various requirements regarding health and safety of labourers.	Provision of community labour, the input of the local communities is usually in the form of labour for the excavation, backfill and compaction of the pipeline trenches. All employees should work under safe conditions and be provided with adequate and appropriate personal protective equipment.

Theme	Legislation	Relevance Provisions	Project Implications
	Regulations GN 156/1997 (GG 1617)		The Proponent should ensure that the project infrastructure, vehicles, equipment, and machinery are designed and operated in a way that is safe, or not injurious or dangerous to public health and that the noise and dust emissions which could be considered a nuisance remain at acceptable levels.
Heritage	National Heritage Act 27 of 2004	Section 48(1) states that "A person may apply to the (Heritage) Council for a permit to carry out works or activities in relation to a protected place or protected object" Protects and conserves cultural heritage and cultural resources with special emphasis on places and sources of National heritage including graves, artefacts and any objects older than 50 years.	The construction of long pipelines has a potential to pass through heritage sites, graveyards. Any heritage resources (e.g. human remains etc.) discovered during excavations would require a permit from the National Heritage Council of Namibia for relocation. Detailed designing of the pipe routes and locations of installation of pumps and tanks should avoid the heritage sites, when it's not possible, necessary arrangements with right stakeholders should lead the process.
Land	Communal Land Reform Act 5 of 2002	The law states who owns communal land, how the land is given to people by whose authority. The Act regulates the registry of customary land rights and certificate of registration of customary land right. Wherever, there is potential to interfere with the communal land. Right procedures should be followed. The Act give Chiefs or Traditional	The bulk water supply projects may interfere with communal landowners, this may cause disputes, especially in where pipelines are passing through fields. Consent to lay pipes through should be obtained from land Owners and the Traditional Authorities. Contractors should always approach chiefs or traditional authorities wherever there is

Theme	Legislation	Relevance Provisions	Project Implications
		Authority the power to allocate a customary land right under section 22 of the Act.	potential to interfere with communal land and disputes.
	National Resettlement Policy	The primary objective of the Policy is to focus on resettlement of eligible person in ways which are institutionally, sociologically economically and environmentally sustainable and allow beneficiaries to become self-supporting. The Policy reckons that resettlement should not only mean providing people with land, housing, infrastructure, knowledge and skills to maintain and develop new environment, but it also means establishing innovative attitude.	There are project activities and projects that can potentially cause resettlement of communities, This is not foreseen given that pipeline routes have been advised to use existing servitudes. Wherever resettlement happens during the implementation of various activities, the victims (affected parties) should be fairly compensated in line with the policy.
	Traditional Authority Act (Act No. 25 of 2000)	The Act also stipulates that Traditional Authorities (TAs) should ensure that natural resources are used on a sustainable basis that conserves the ecosystem. The implications of this Act are that TAs must be fully involved in the planning of land use and development for their area. It is the responsibility of the TA's customary leadership, the Chiefs, to exercise control on behalf of the state and the residents in their designated area.	The project routes fall under the Traditional Authorities of mainly Oukwanyama and partly Ondonga (at the Onambutu area). Therefore, they should be consulted and updated throughout the project implementation through local representatives such as headmen and or secretaries/chairpersons.
	National Policy on HIV / AIDS, 2007.	The National Policy on HIV/AIDS is geared towards guiding efforts related to our expanded national response to the epidemic. It encompasses policy statements related to the creation of an enabling environment; prevention; treatment, care	All contractors and institutions taking part in the project are expected to create a favourable environment that promotes HIV / AIDS awareness, prevention and support.

Theme	Legislation	Relevance Provisions	Project Implications
		and support; impact mitigation and workplace interventions and stewardship and management of our response.	
	National Gender Equality Policy, 2008 - 2018	The overarching goal of the National Gender Policy is to achieve gender equality and the empowerment of both female and male persons in Namibia. In this respect, the policy framework provides mechanisms and guidelines for all sectors and other stakeholders for planning, implementing and monitoring gender equality strategies and programmes in order to ensure effective strategies for gender equality and women's empowerment.	All participating contractors, government institutions and private organization should mainstream gender policy and promote women empowerment through providing access to opportunities throughout the project cycle.
	Namibia Covid 19 / Occupational Health and Safety Guidelines	The guidelines were formulated to reduce the impact of Covid-19 on business, customers, workers and the public.	All employers are required to plan to fight and suppress the spread of Covid-19 by employing measures to minimize to spread and exposure such as reducing number of employees on duty, provision of adequate personal protective equipment as required in the Labour Act. 2007 (Act 11 of 2007).

Table 4: Summary of permits / authorisation required for various project activities.

Activity / Type of Permit	Issuing Authority
Abstraction of ground water	Ministry of Agriculture, Water and Land Reform
Land clearing to make way for new infrastructure	Ministry of Environment, Forestry and Tourism
Construction of brine drying ponds	Land should be rezoned to industrial use (Site is located within town boundaries)
Environmental Clearance Certificate for the development of Ohangwena II Wellfield	Ministry of Environment, Forestry and Tourism

Table 5: Summary of planned infrastructure, land ownership and proposed action plan.

Planned / Proposed Infrastructure	Location	Land Ownership	Proposed action plan
New bulk water pipeline	Omakango to Onambutu	Roads Authority / Communal Land	Obtain consent from the Traditional Authority to use land adjacent to the existing road followed by applying for servitude registration with Ministry of Lands and Resettlement
New bulk water pipeline	Onambutu to Eenhana	Roads Authority	Obtain consent from the Traditional Authority to use land adjacent to the existing M121 road followed by applying for a public servitude registration with Ministry of Lands and Resettlement
New bulk water pipeline	Etope to Ondobe	Roads Authority	Obtain consent from the Traditional Authority to use land adjacent to the existing D3625 road followed by applying for a public servitude registration with Ministry of Lands and Resettlement
Pump station and Reservoir	Omakango	NamWater	Use existing site unless land is inadequate
Pump station	Omafo	NamWater	Use existing site unless land is inadequate
Upgrade Reverse Osmosis Plant	Eenhana	NamWater	Use existing site unless land is inadequate
Construct brine drying ponds	Eenhana	Eenhana Town Council	Purchase adequate land from Eenhana Town Council adjacent to the existing RO Plant and rezone it to industrial.

3.3 Applicable Institutional legal framework

3.3.1 Policy context

As presented earlier-on in this Chapter, the Government of Namibia is committed to environmental protection and socio-economic and sustainable development as articulated in Vision 2030 and the National development Plans and the enactment of the EMA Act of 2007, and its regulations of 2012. Various actors are required to act and fulfil their role(s) in the implementation of the EMA Act and their participation in the EIA process is the cornerstone of identifying key issues that deserve attention before decisions can be made during the project life cycle. The following table summarises stakeholders and their roles and responsibilities in the ESIA process in Namibia.

Table 6: Stakeholders and their role in the ESIA process in Namibia

Government Authorities	Stakeholder	Roles in the ESIA process
Environmental Authorities	The Minister, (MEFT)	Develop policies for the management, protection and use of the environment Prepare and publish policies, strategies, objectives and standards for the management of the environment Coordinate environmental management at national level Monitor and ensure compliance with EMA
	The Environmental Commissioner	Advise Organ of state on the preparation of environmental plans. Receive and record applications for ECCs. Determine whether an activity requires and ESIA or not. Determine the scope, procedure and methods of an assessment Review the Assessment report in accordance with the EMA Act 2007.

		Maintain a register of ESIAs undertaken in terms of EMA Act 2007. Maintain a register of ECCs issues and environmental plans approved in terms of EMA.
	Environmental Officers	Conduct inspections for monitoring compliance with the EMA Undertake inspections on projects with ECCs to check for compliance. Issue compliance order to a person that has contravened conditions of ECC.
Organ of State	Line Ministries	Grant or refuse an authorisation regarding ESIA. Participate in the ESIA process for activities that are within their mandate. Conduct inspections for monitoring compliance with EMA relevant to their Ministry.
	Other Ministries and Government agencies	Participate in the ESIA process for activities that are within their mandate. Conduct inspections for monitoring compliance with EMA relevant to their Ministry.
	Local Governments and Traditional Authorities	Participate in the ESIA process for activities that are within their mandate. Conduct inspections for monitoring compliance with EMA relevant to their Ministry.
Project Proponents, Contractors and Suppliers		Develop the project concept Appoint EAP and furnish them with adequate and relevant information. Comply with EMA and its Regulations.

		Facilitate implementation of project life cycle activities
Environmental Assessment Practitioners (EAP)		Manage the ESIA process, ensuring compliance with EMA, its Regulations and guidelines for the proposed activity.
The public (Civil society, Interested and Affected Parties)		Engage and participate in the different ESIA stages and register as an IAP. Raise the issues of concern regarding environment, HIV and its impact on gender equality to be addressed in the ESIA and mitigation plans. Review the draft scoping report to check if issues raised in meeting were adequately addressed.

3.4 Applicable African Development Bank (AfDB) Legal Framework, Standards, and Guidelines

3.4.1. The AfDB Operation Safeguards (OS)

The proposed project is funded by the AfDB and the institution has certain legal requirements that need to be met by the project implementing agency (borrowers or clients). These requirements are aimed at protecting the environment, and local people/communities against exclusion and marginalisation caused by certain economic development activities.

The AfDB has Operation Safeguards (OS) which are a set of five safeguard requirements that Bank clients are expected to meet when addressing projects that have the potential to cause social and environmental impacts and risks. The five OS of the AfDB that should be adhered to are given below:

1. Environmental and social assessment,
2. Involuntary resettlement land acquisition, population displacement, and compensation,
3. Biodiversity and ecosystem services,
4. Pollution prevention and control, hazardous materials and resource efficiency, and
5. Labour conditions, health, and safety

The five OS and their relevance to the project are detailed in Table 7 below.

Table 7: The AfDB Legal and Policy Instruments Relevant to the Development of Ohangwena II Wellfield and associated project activities (as adopted from the NWSSP SESA Report, 2019)

Theme	Legislation Instrument	Relevance Provisions	Project Implication
Environment	The Operational Safeguard 1 (OS1): Environmental and Social Assessments	This overarching safeguard governs the process of determining a project's environmental and social category and the resulting environmental and social assessment requirements.	This safeguard guides the environmental and social categorization process and the requirements that should be fulfilled. The proposed development of Ohangwena II Wellfield is a Category 2 project which requires and ESIA study to be undertaken before project implementation. The nature of the project activities triggers both environmental and social impacts; negative and positive. Activities like the construction of bulk water infrastructure (pipelines, installation of elevated water reservoirs, trenching, excavations, and contractor's construction vehicle movements) potentially causes environmental impacts to the receiving communities and hence require assessments prior the implementation. Wherever possible, the negative environmental impacts should be avoided or, if avoidance is not possible, minimize, mitigate and compensate for adverse impacts on the environment and on affected communities. The provision of safe reliable initiative improves the social wellbeing and livelihoods of communities. This requires assessment to enhance the social positive benefits. The project activities will also create jobs to the societies hence improving the socio-economic status of the communities.
Social	The Operational Safeguard 2 (OS2): Involuntary Resettlement, Involuntary resettlement Land Acquisition, Population displacement and compensation	This safeguard consolidates the policy commitments and requirements set out in the Bank's policy on involuntary resettlement and incorporates a number of refinements designed to improve the	It is essential before implementation that all the projects activities that can potentially causes involuntary resettlement, acquisition of land, population displacement and compensation are properly addressed and assessed. In an event there, if there are activities that are triggering all these, proper planning and compensatory measures should be communicated with the affected communities or populations prior to implementation. Activities like the installation of long pipelines potentially cuts across vast land hence trigger land acquisition along the paths to be followed. Hence it is important to seek consent from the Traditional Authority and Land Owners to traverse through their lands. While land for the Brine drying ponds lies within the Town Council Area, NamWater is advised to buy the land from Eenhana Town Council.

Theme	Legislation Instrument	Relevance Provisions	Project Implication
		operational effectiveness of those requirements.	
Biological Environment	The Operational Safeguard 3 (OS3): Biodiversity and ecosystem services	This safeguard aims to conserve biological diversity and promote the sustainable use of natural resources. It also translates the commitments in the Bank's policy on integrated water resources management into operational requirements.	The project implementation should ensure that all the natural resources are conserved and sustainably used to allow future use of the resources and development. Concepts of sustainable development should guide the process.
Pollution	The Operational Safeguard 4 (OS4): Pollution prevention and control, hazardous materials and resource efficiency	This safeguard covers the range of key impacts of pollution, waste, and hazardous materials for which there are agreed international conventions, as well as comprehensive industry-specific and regional standards, including	The project activities like the construction of bulk water infrastructure (pipelines, installation elevated water reservoirs, trenching, excavations, and contractor's construction vehicle movements) potentially generate solid waste that can pollute the environment. Proper planning of waste through waste management plan should be provided to/by contractors prior to civil works.

Theme	Legislation Instrument	Relevance Provisions	Project Implication
		greenhouse gas accounting that other multilateral development banks follow.	
Social: Health and safety	The Operational Safeguard 5 (OS5): Labour conditions, health and safety	This safeguard establishes the Bank's requirements for its borrowers or clients concerning workers' conditions, rights and protection from abuse or exploitation. It also ensures greater harmonisation with most other multilateral development banks.	The construction and installation of bulk water infrastructure require enormous labour which majority of it particularly the unskilled labour should be provided by locals. These are people with no training and some of them would be woman and other vulnerable groups, hence proper human management and monitoring is needed to avoid accidents at work, and ensuring good labour conditions is also critical. Some of them would be woman and other vulnerable groups. The provision of safe reliable water and basic sanitation through the project promotes health by reducing the spread of diseases associated with poor unsafe water supply and inadequate sanitation such as related diseases like cholera and typhoid.

3.4.2. The AfDB Safeguard Policies

In addition to the Operation Safeguards provided above, the AfDB also has Safeguard Policies where the Integrated Safeguards System (ISS) are developed from. The proposed project activities trigger the following AfDB safeguard policies:

- Involuntary resettlement (2003),
- Environment (2004),
- The Gender (2001),
- The Climate Risk Management and Adaptation Strategy (2009),
- Health (1996),
- Integrated Water Resources Management (2000),
- Agriculture and Rural Development (2000, 2010), and
- Poverty Reduction (2004)

The Policies and their relevance (applicability) to the project are provided under Table 8 below.

Table 8: The AfDB Legal and Policy Instruments (Safeguard Policies) (as adopted from the NWSSP SESA Report, 2019).

Theme	Legislation Instrument	Relevance Provisions	Project Implication
Social: Gender	Gender (2001)	The policy reaffirms the commitment of the Bank to promote gender mainstreaming. The focus of the policy is on gender equality as a development goal rather than on women as a target group	The implementation of the project activities should be gender-sensitive, mainstreaming gender roles. The needs for both men and women should be equally represented in program project activities during the consultation, implementation / construction and operation and decommission.
Climate Change	Climate Risk Management and Adaptation Strategy (2009)	The goal of the strategy is to ensure that progress is maintained by African countries towards the eradication of absolute poverty and there is steady improvement of people's living conditions despite climate change.	The project implementation is aiming to increase climate resilience through provision of safe reliable water through improving water security. Provision of water for agriculture and livestock in some regions increases food security of the country hence poverty eradication.
Health and safety	Health (1996)	The Bank lending policy encourages borrowers to include guidance on a comprehensive range of environmental, occupational health and safety, community health and safety and construction and decommissioning topics.	The implementation of the project is aiming to increase access to water supply and sanitation. This will offer opportunities of improving human health and nutrition linked to provisioning services for safe drinking water, food and proper sanitation.
Water resources	Integrated Water Resources Management (2000)	To ensure that Bank-supported activities in the water sector adopt the principles of integrated approach, the Bank lending policy encourages borrowers to adopt and implement an integrated approach to water resources management. The objectives of this Policy are to rationalize and strengthen Bank Group interventions in the water sector, and encourage	The implementation of the project should be coordinated in the development and management of water resources to maximize economic and social welfare without compromising the sustainability of vital ecosystems.

Theme	Legislation Instrument	Relevance Provisions	Project Implication
		borrowers, in accordance with the ADF VII lending policy on water, to develop policies and undertake lending operations based on a comprehensive framework. The central objective of the policy is to promote efficient, equitable, and sustainable development through integrated water resources management.	
Economy: Agriculture	Agriculture and Rural Development (2000, 2010)	The Bank's vision for the agriculture and rural development sector is to assume a leading catalytic role in supporting the technological, institutional and policy changes that would trigger a lasting transformation of the rural economies by empowering their rural populations to improve their productivity and real incomes in an equitable and environmentally sustainable manner.	The proposed project is aimed at increasing access to water supply in the rural areas. The rural communities would increase the water use for agriculture outputs either at subsistence level or small-scale irrigation. All that is aimed at improving food security and contribute to economic development provide water for rural areas.
Social: Poverty	Poverty Reduction (2004)	The policy affirms the commitment of the Bank to its overarching goal of poverty reduction by emphasizing the importance of supporting national ownership, participation and outcome orientation in the effort to improve the lives of the poor in Africa. The policy considers lessons learnt in national poverty reduction efforts and the experience with international aid for social and economic development. The policy abolishes the need to travel long distances, on foot, to purchase inputs, sell outputs, seek employment or fetch water and firewood.	The provisional of safe reliable water to communities through the project reduces the distance people (woman and children) must walk to collect water is reduced.

Theme	Legislation Instrument	Relevance Provisions	Project Implication
Environmental and social assessments	International Finance Corporation (IFC) – Operational Policy 4.01: Environmental Assessment	An environmental assessment: • Evaluates a project's potential environmental risks and impacts in its area of influence, • Examines project alternatives, • Identifies ways of improving project selection, siting, planning, design and implementation by preventing, minimising, mitigating or compensating for adverse environmental impacts and enhancing positive impacts, and • Includes the process of mitigating and managing adverse environmental impacts throughout project implementation. The IFC's policy further stipulates that environmental assessments consider: • the natural environment (land, water and air), • human health and safety, • social aspects (including cultural property) and trans boundary and global environmental aspects. As of 28 October 2018, there are ten (10) Performance Standards (Performance Standards on Environmental and Social Sustainability) that the IFC requires a project Proponents to meet throughout the life of an investment. and these are: Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts Performance Standard 2: Labour and Working Conditions Performance Standard 3: Resource Efficient and Pollution Prevention and Management	In line with the AFDB's IFC operational policy, this project has potential negative environmental impacts and so is subjected to ESIA. The ESIA is being conducted as required in fulfilment of the requirements of the EMA Act No. 7 of 2007, its regulations of 2012, the Environmental policy and this guideline.

Theme	Legislation Instrument	Relevance Provisions	Project Implication
		Performance Standard 4: Community Health and Safety Performance Standard 5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement Performance Standard 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources Performance Standard 7: Indigenous Peoples/Sub-Saharan African Historically Undeserved Traditional Local Communities Performance Standard 8: Cultural Heritage Performance Standard 9: Financial Intermediaries (FIs) Performance Standard 10: Stakeholder Engagement and Information (Bank, 2017).	

3.5 Applicable International Legal Framework and guidelines

Namibia is a signatory to various International Conventions, Standards and Guidelines and will only refer to the ones deemed relevant to the development of Ohangwena II Wellfield to foster international acceptability. The international legislations and guidelines are described below (Table 8):

Table 9: The international Legal and Policy Instruments governing the proposed project activities for the development of the Ohangwena II Wellfield

Theme	Legislation Instrument	Relevance Provisions	Project Implication
	The Equator Principles	The Equator Principles are a voluntary code of conduct and a risk management framework for determining, assessing and managing environmental and social risks in projects, such as energy or infrastructure projects. They are used as a financial industry benchmark for determining, assessing and managing environmental and social risk in projects (June 2013). The Equator Principles have been developed in conjunction with the International Finance Corporation (IFC), to establish an International Standard with which companies must comply with to apply for approved funding by Equator Principles Financial Institutions (EPFIs). The Principles apply to all new project financings globally across all sectors, (Weber, 2016).	This project is being supported by funding from the AfDB, partially as a loan and grant from the Rural Water Supply Initiative Trust Fund to support the "Water Sector Support Programme".
	Stockholm Declaration on the Human Environment, Stockholm (1972)	It recognizes the need for: "a common outlook and common principles to inspire and guide the people of the world in the preservation and enhancement of the human environment."	During implementation, it is important to ensure protection of natural resources and prevention of any form of pollution wherever possible.
	African Convention on Conservation of Nature and Natural Resources	This Convention focuses on living resources, calling for the creation of protected areas and for the specific conservation measures for listed species. It also provides the grounds for the conservation of other natural resources such as soil and water, for the consideration of environmental concerns in development plans, and for research and education.	The project construction activities will have a direct impact on the natural resources such as soil disturbance during excavation.

Theme	Legislation Instrument	Relevance Provisions	Project Implication
	United Nations Convention to Combat Desertification	The United Nations Convention to Combat Desertification (UNCCD) addresses land degradation in arid regions with the purpose to contribute to the conservation of biodiversity and the mitigation of climate change.	Project implementation should not lead to desertification. It is important to embrace climate change issues, reduce the vulnerability of communities to climate change through provision of water and sustainable management of the resource.

3.6 Institutional Capacity Assessment / Framework

The proposed project is being undertaken by NamWater, a government-owned commercialized entity established in December 1997. Its mandate is to provide quality water and related services to the satisfaction of all stakeholders, taking into cognizance of the environment, scarcity of and dependency of all on water. NamWater supplies bulk water to Industries, Government Institutions, Municipalities, Local Authorities, large commercial Entities, and the Directorate of Rural Water Supply and Sanitation Coordination (DWSSC) in the Ministry of Agriculture, Water and Land Reform (MAWLR) and some private online users. This Environmental Scoping Report (ESR) was compiled as part of the ESIA being undertaken for the proposed project in accordance with the requirements of the Environmental Management Act (EMA), No.7 of 2007 and the Environmental Impact Assessment Regulations, No. 30 of 2012. The EMA is implemented by various stakeholders, organs of state and agents. The Minister of the Ministry of Environment, Forestry & Tourism (MEFT) is responsible for developing policies for the management, protection and use of the environment, prepare and publish policies, strategies, objectives and standards for the management of the environment, coordinate environmental management at national level and monitor and ensure compliance with EMA. The implementation of the act directly rests with the Environmental Commissioner (EC). The EC advises Organ of state on the preparation of environmental plans, receives and record applications for ECCs and the overall management, protection, reviewing of assessment report and enforcement of monitoring and implementation of environmental plans in accordance with the EMA. Other Ministries, Government agencies, Local Governments and Traditional Authorities participate in the ESIA process for activities that are within their mandate and conduct inspections for monitoring compliance with EMA relevant to their Ministry. According to MEFT, neither Ohangwena Regional Council nor Eenhana Town Council have been delegated as such and projects taking place there rely on MEFT enforcement.

3.7 Gender Based Violence (GBV), HIV / AIDS and Sexual Abuse & Harassment (SAH)

Gender-based violence is defined by the United Nations Multilingual Terminology Database, as physical, mental or social abuse (including sexual violence) that is attempted or threatened, with some type of force (such as violence, threats, coercion, manipulation, deception, cultural expectations, weapons or economic circumstances) and is directed against a person because of his or her gender roles and expectations in a society or culture. In circumstances of GBV, a person has no choice to refuse or pursue other options without severe social, physical, or psychological consequences. Forms of GBV include sexual violence, sexual abuse, sexual harassment, sexual exploitation, early marriage or forced marriage, gender discrimination, denial (such as education, food, freedom) and female genital mutilation". GBV is rooted in structural inequality in power relations between women and men (UNFPA, 2010).

Violence against women and girls has devastating short and long-term consequences on their health and wellbeing. These include physical injuries, depression, anxiety disorders, and even death. It is linked to negative outcomes in sexual and reproductive health, including unintended pregnancies, increase risks of

miscarriage, unsafe abortions, stillbirth and increased vulnerability to HIV and other sexually transmitted infections. It places significant demand on the health, social, justice system and economic sector. It has been observed that influx of many different people into a community disintegrates the social fabric resulting in lack of respect, bad attitude, and bad behaviour and compounded by drug / alcohol abuse increase the risk of GBV, HIV and SAH.

3.7.1 Integration of HIV / AIDS and Gender related issues in the EIA process in Namibia

There is evidence that links large scale projects such as infrastructure development with increased prevalence of HIV rising mainly from the large numbers of migrant workers. In Namibia, integrating or mainstreaming health and social issues into the EIA process is one practical way to ensure that large scale project purposefully consider these during the project life cycle. Failure to mainstream HIV and gender issues negatively impacts the efforts to improve livelihoods and socio-economic welfare of the people. Analysis of the EMA Act, shows that HIV and gender can be factored into the EIA process at many different stages of the assessment and the various stakeholders can be actively engaged for this purpose as well. However, there is need for enforcement of the EMA Act and regulations led by MEFT in order to guide the scope and content of ESMPs and their implementation. One challenge to affect such mainstreaming of HIV and gender issues is that the definition of 'environment' in the EMA Act focuses mainly on the human environment than to explicitly refer to human health and well-being and to social aspects such as gender issues. This restricts the legal need to explicitly include and enforce inclusion of health and gender issues in ESIA yet this is now the best practice to do so. At this stage guidelines have been developed and clearly spell how to integrate health issues at the different ESIA stages including roles and responsibilities of stakeholders.

3.8 Namibia's Corona virus disease (Covid – 19) / Occupational Safety and Health Guidelines of 2021.

Covid – 19 is a viral disease which affects the upper respiratory system and manifests itself like a flu. Patient shows symptoms of fever, runny nose, sneezing, cough, shortness of breath and generally body weakness. In response to the outbreak, the government of Namibia put in place response guidelines to combat the devastating effects of the disease.

3.8.1 Purpose of the guidelines

- To promote the integration of Covid – 19 prevention and management into the broader work place safety and health management.
- To outline the minimum preventive measures that employers should take to curb the spread of Covid – 19 at work place.

Policies and procedures

In respect of the guidelines the following is required for all Employers:

a. An Employer should develop and implement an OSH policy that incorporates Covid – 19 in consultation with OSH committee. The written policy shall contain a declaration of the management commitment to reduce the risk of exposure to occupational hazards including the transmission of Covid – 19 at the work place.

b. Develop a Preparedness and Response Plan (PRP) for Covid – 19 in considering all work areas and tasks performed by workers and potential sources of exposure.

c. Develop a procedure setting out the steps describing who, what, where, when and why establishing compliance and accountability actions.

d. Develop flexible attendance and sick leave measures that encourage employees to stay home when sick or when caring for the sick family members on well-defined terms and conditions.

3.9 Grievance redress mechanism

The grievance management mechanism will be established by the project proponent in order to extend an opportunity to all the stakeholders, in particular, those affected by the project to air their views on the project proposals. This will form a channel to allow two-way communication from the lowest level to the top and vice-versa and in a way allow access to information and also to cascade resolutions. Grievances will be handled at the community level and will include the following steps and timelines:

- Provide for communication of the issue / concern by the concerned party / stakeholder;
- Open discussion of the issue by project team and proponent to formulate resolution(s);
- Provide for communication of the resolution to the concerned stakeholder(s);
- Provide for an appeal process if the stakeholder is not satisfied with the proposed resolution of the complaint;

If the stakeholder is still unsatisfied then they should be advised of their right to legal recourse. It is important to have multiple and widely known ways to register grievances. Anonymous grievances can be raised and addressed. The grievance registration form is attached at the end of this report under Annexure 12.8. Several uptake channels to consider include:

- Walk-ins at focal points, Contractor's site office and NamWater
- Emails
- Telephone calls

Once an issue is received it must be recorded and resolved within a specified time period. All issues should be reported on and followed up during monthly progress meetings. Such a grievance redress mechanism can be summarised by the flow chart below:

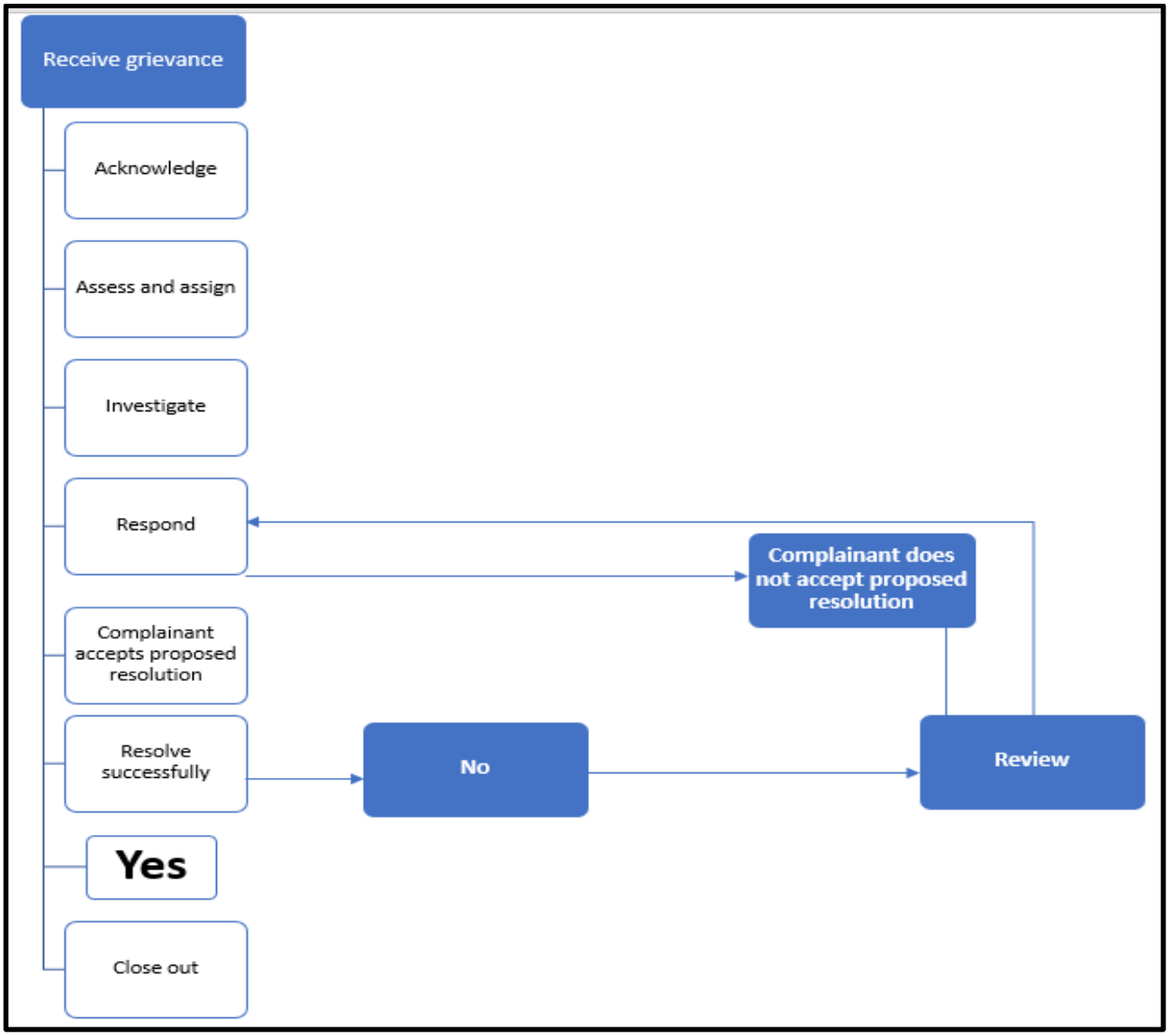


Figure 19: Proposed grievance redressal mechanism.

4 PUBLIC CONSULTATION

Public and stakeholder consultation and participation forms an important component of an EIA process as required by Section 21 to 24 of the EIA Regulations. The consultation process allowed the stakeholders and potential Interested and Affected Parties (I&APs) to comment on and raise any issues relevant to the proposed development for consideration in the assessment documents (Environmental & Social Impact Assessment (ESIA) Report) and Environmental & Social Management Plan (ESMP)). The comments, issues and suggestions raised and submitted to the Consultant greatly aid and influence the planning and design of the development in the early stages. This is also to ensure that development truly aligns with the need or expectations of I&APs and fulfil the development's intended purposes and objectives in the area.

Furthermore, the public and stakeholder' consultation and engagement process also assists the Environmental Consultant to thoroughly in identifying and recording potential impacts that they may have missed and to what extent further investigations are necessary. This process can also aid in identifying possible mitigation measures to some potential adverse impacts or to maximize the benefits of the development in the environment. The public and stakeholder consultation for this proposed development (upgrading and construction of water infrastructures) has therefore been conducted in accordance with the EMA and its EIA Regulations.

4.1 Pre-identified and Registered Interested and Affected Parties (I&APs)

The relevant and applicable national, regional, and local authorities, and other interested members of the public were identified and registered in the list of stakeholders and I&APs. The list was updated throughout the ESIA consultation process. The completed Attendance Register and list of registered I&APs and stakeholders are provided in **Annexure 3: Items 14.2 and 14.3 respectively**.

4.2 Means of Notification and Communication for Consultation

The steps taken or that guided this public consultation process are as detailed under section 21 to 24 of the EIA Regulations. The notifications and communication with I&APs and stakeholders with regards to the proposed development were facilitated through the following means and in the order described from sections 4.2.1 to 4.2.3.:

4.2.1 The Background Information Document (BID): A Summary of the proposed Project and ESIA Process

A Background Information and Invitation to participate Document (BID) containing brief information about the proposed project was compiled and shared with registered I&APs – **the BID was shared as an accompanying document** attached under Annexure 2.

4.2.2 Public Notification (Newspaper Advertisements) and Communications

The notices of the ESIA Study for the proposed project activities were published in the *Namibian* and *New Era* newspapers (first adverts), with the first adverts placed in two newspapers (*The Namibian* and *New Era*) dated the 16th and 24 of February 2022, and the 15th and 24th of February 2022 respectively. Given the importance of the development and to ensure that the notification reached as many I&APs as possible, the second round of newspaper notification was placed in the *Confidente* (dated 15-21 & 22 – 28 July 2022) and *Windhoek Observer* (dated 11 July 2022). The proof of the newspaper advertisements is included as annexure to this report – (**Annexure 3: Item 14.1)**. The newspaper adverts briefly explained the proposed development (project activities), its locality, consultation meeting details, and a public invitation to register as I&APs as well as submit their comments/concerns to the Environmental Consultant using the provided contact details.

The Ohangwena Regional Council was formally informed and invited for the ESIA consultation meetings on the 31st of January 2022. The notification and invitation contained information on the project, proposed dates of consultation meetings, and request for the local constituency councilors of the targeted project areas to notify the public of the meetings. The acknowledgment (proof) of the communication from the Regional Council, dated 9 February 2022 was received via Email (– **Annexure 3: Item14.4**.)

4.2.3 Public and Stakeholders' Consultation Meetings

A. First Series of Public Consultation Meetings: 28 February to 02 March 2022

A series of consultation meetings were scheduled and held with the available stakeholders and I&APs (members of the public) at selected locations in the Ohangwena Region. The meetings were held at the places presented in **Table 10** below. The Minutes taken from the meetings and respective attendance registers of the meetings are attached as **Annexure 3: Item 14.5**.

Table 10: The series of the first consultation meetings held between 28 February and 02 March 2022.

Date and Time	Venue and Town/Settlement/Village	Stakeholders or I&APs (Public)
28 February 2022, 10h00	Community Hall at the Eenhana Constituency Office, Onambutu Village	Stakeholders and **I&APs**
28 February 2022,12h30	Ondobe Constituency Office Hall, Oshandi Settlement	Stakeholders and **I&APs**
28 February 2022, 15h30	Ohangwena Regional Council Boardroom, Eenhana Town	Stakeholders
1 March 2022, 09h40	Directorate of Water Supply and Sanitation Coordination (DWSSC) Office, Ondobe Settlement	Stakeholders
1 March 2022, 12h20	DWSSC Office, Omafo/Helao Nafidi Town	Stakeholders
1 March 2022, 15h30	Eenhana Town Council Boardroom, Eenhana Town	Stakeholders

02 March 2022, 15h00	Community Hall at the Eenhana Constituency Office, Onambutu Village	Stakeholders and I&APs (rescheduled)

B. Second Series of Consultation Meetings: 27 July 2022

The second series of consultation meetings were scheduled within the first week of July 2022. This was done by contacting the respective constituency offices for the councillors to announce the meetings on the radio and confirm the availability of proposed meeting venues. Radio announcements are one of the most effective ways of disseminating information to the communities in the northern regions, because not everyone has access to newspapers daily nor access to smartphones. The meeting invitation was also sent to the registered stakeholders via email on the 19th of July 2022 (see **Annexure 3: Item 14.4**). The consultation meetings were held with the available stakeholders and I&APs (members of the public) at selected locations in Ohangwena Region on the 26th - 27th of July 2022. The meetings were held at the places presented in **Table 11 below**.

Table 11: The second series of the first consultation meetings held on the 27th of July 2022.

Date and Time	Venue and Town/Settlement/Village	Stakeholders or I&APs (Public)
26 July 2022, 10h00	Community Hall at the Eenhana Constituency Office, Onambutu Village	Stakeholders and **I&APs**
26 July 2022, 12h30	Ondobe DWSCC Office Open Space, Ondobe Settlement	Stakeholders and **I&APs**
27 July 2022, 14h30	Ohangwena Regional Council Boardroom, Eenhana Town	Stakeholders
27 July 2022, 15h30	Ondobe Constituency Office Hall, Oshandi Settlement	Stakeholders and **I&APs**



Figure 20: Consultation meeting in Onambutu on 27 July 2022 at 10h00.

4.3 Feedback from Stakeholders and Interested & Affected Parties

Issues were raised by I&APs (from the consultation meetings). These issues have been recorded and form the basis of the DESIA Report and ESMP documents. The summary of these few key issues are presented in and the Issues and Response Trail as extracted from the consultation meetings are provided under **Annexure 3: Item 14.5**.

Table 12: Summary of main issues and comments recorded during the ESIA consultation process (consultation meetings).

Issue	Concern
Water pressure / improvement of the pump stations	-The water pressure is low to none in most areas that the water flows slowly to one and communities are left without water for longer periods or having access to water during certain hours of the day or morning hours like 2am.
Long distances to water supply points	-Some communities travel over 5km to water points (about 12 houses in Omhedi Village travel to other villages for water).
Vandalism of water infrastructure	-The children and even some adults are vandalising water infrastructures such as water meters and even pipelines.
Employment opportunities for locals	-The communities requests that the youth and capable members of the communities should be considered for work during construction.
Limited water accessibility due to unaffordability.	-Some communities are unemployed and are unable to afford private connections and they live far from communal water points. This particularly affects elderly headed households or elderly living with children only who cannot fetch water from far.
Conflicts surrounding land use and water infrastructure servitudes	-NamWater raised that some challenges are with landowners who sometimes lock their gates that NamWater team cannot carry out maintenance with ease or connect new water connection applicants. -There is an issue of communities constructing structures within water servitudes or on top of infrastructure. -The communities were informed by NamWater about the distance from the pipeline to the structures that can be erected near the water infrastructures.
Compensation of displaced pearl millet field yard (fence) and fruit trees	-The communities were concerned about how they would be compensated for land loss (displacement) or their fruit trees that may be removed to pave way for pipelines.
High rates of water supply	-Some communities claim that their water bills are abnormally high at times even without pipe leak or high-water consumption.

Issue	Concern
Sizes of the supply pipeline	-Some community members live close to water pipelines and would like to apply for private connection. However, they had been informed that the pipe is small to cater for extra connections.
Lack of community engagement and involvement on water supply matters	-The communities feel like there is no engagement with the water supplier on water supply issues. They also believe that some infrastructures in the communities are not checked by the supplier after construction that they age without their knowledge because they are not maintained or attended upon reports of damages. -There is a need for yearly community engagement meetings by NamWater and DWSSC to discuss issues around supply and infrastructures.
Negligence or exclusion of the communities without water in the project	-The villages towards the borders have no water (Omutwewondjamba-Oheti B). -There water infrastructure upgrade is concentrated to the west and south of Eenhana that already have water (and maybe just a pressure issue), but the north and eastern parts of Eenhana have no water at all.
Aging infrastructure and solutions taking long	-Some communal water infrastructures are old and not maintained. Communities report infrastructure damages but it takes long to get them repaired.
Grievance mechanism during construction.	-During construction of existing pipelines some contractors would claim that they are just doing their job and do not listen to the community complaints while constructing pipelines passing through fields.
Favouritism over water applications in communities	-Conflict in the communities regarding application for water supply line that some community members would prefer that certain people are assisted or given preference over others.

4.4 Review of Draft Environmental Scoping Report and Environmental & Social Management Plan

The draft ESR was shared with NAMWATER for incorporation of comments before it is publicized to stakeholders for comments. The stakeholders were allowed 14 days to comment on the draft ESR.

4.5 Public Participation: Way Forward

Comments on the report were incorporated to generate the final report before submission to the Competent Authority: and MEFT and the decision regarding the ESR will be published and communicated to all registered I&APs.

5 ASSESSMENT OF ALTERNATIVES

5.1 Assumptions and Limitations

This section presents assumptions and limitations that will guide the assessment. Some of the assumptions were adopted based on common practices in the water sector in Namibia, while limitations were a result of incomplete information since the project is still in the early development stage and are as follows:

- Recommended blending of untreated groundwater with RO permeate or OWTP water.
- **Technology**

It is assumed that NamWater will prefer RO technology for any extensions of the existing Eenhana RO plant that may be required, from an operator familiarity and ease of implementation point-of-view. Hence, using RO technology again for any extensions is considered optimal. As a result, no technological alternative assessments will be conducted in this regard. The technology allows use at various scales, from small to large water treatment works which allows choice of the required size depending on the need. Recovery is 80% and energy efficiency is high.

- **Final Water Quality**

This filtration includes progressively finer membranes that remove contaminants from your water. These contaminants include elements such as sodium, sulfate, calcium, mercury, lead, arsenic, fluoride, and chloride. Reverse osmosis can remove as much as 98% of these contaminants from drinking water and is much more effective than using a charcoal filter alone, which is incapable of removing certain contaminants.

5.2 Assessment of Alternatives

According to the EMA ESIA Regulations and AfDB Environmental Assessments guidelines, alternatives must be considered during the ESIA process. The EIA Regulations state that “an alternative, in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity. Alternatives considered include, “No – Go alternative” and strategic alternatives only. No Alternative routes for water lines and location alternatives were considered. This is because the new pipelines will follow the old existing pipeline route while where it is non-existent, it will follow the existing roads.

5.2.1 The “No – Go” Alternative

Given that the “No-go” option is the best option for the environment since it means maintaining the status quo in which no project is implemented. However, given the dire need for water in the project, this option cannot be considered.

5.2.2 Technical Alternatives

There were nine (9) development options proposed by the Consultants based on the project goals as listed below:

5.2.2.1 Option 1

Basic Infrastructure

Option 1 comprises of the following basic infrastructure:

- Upgrade Omafo pump station;
- Upgrade the Eenhana RO Plant (1000 m3 / day);
- Construct new Brine drying ponds at Eenhana;
- Replace the Omakango – Onambutu bulk water pipeline with a new line;
- Construct a new reservoir (2.6 million litres) and pump station at Omakango;
- Construct a new offtake pipeline from the new Omakango – Onambutu line to Ondobe;
- Construct a new reservoir at Ondobe (capacity – 1.6 million litres);

5.2.2.2 Option 2

Basic Infrastructure

Option 2 comprises of the following basic infrastructure:

- Upgrade Omafo pump station;
- Upgrade the Eenhana RO Plant (500 m^3 / day);
- Replace the Omakango – Onambutu bulk water pipeline with a new line (604 m^3/day);
- A new reservoir (2.8 million litres) and pump station will be installed at Omakango;
- Construct a new offtake pipeline from the new Omakango – Onambutu line to Ondobe (800 m^3/day);
- A new reservoir will be constructed at Ondobe (1.6 million litres);
- Construct a new reservoir (2.8 million litres) and pump station at Omakango;

5.2.2.3 Option 3

Basic Infrastructure

The proposed basic infrastructure for Option 3 is as follows:

- Upgrade Omafo pump station;
- Upgrade the Eenhana RO Plant (500 m3 / day);
- Construct Brine drying ponds;

- Replace the Omakango – Onambutu bulk water pipeline with a new line (604 m^3/day);
- A new reservoir (2.8 million litres) and pump station will be installed at Omakango;
- Construct a new offtake pipeline from the new Omakango – Onambutu line to Ondobe (800 m^3/day);
- A new reservoir will be constructed at Ondobe (1.6 million litres);
- Construct a new reservoir (2.8 million litres) and pump station at Omakango;

5.2.2.4 Option 4

Basic Infrastructure

The proposed basic infrastructure for Option 4 is as follows:

- Upgrade Omafo pump station;
- Construct a new offtake from the new Omakango – Onambutu pipeline;
- Construct a new pipeline from the Eenhana boreholes to Eenhana RO Plant;
- Upgrade the Eenhana RO Plant (500 m3 / day);
- Construct Brine drying ponds;
- Replace the Omakango – Onambutu bulk water pipeline with a new line (604 m^3/day);
- Construct a new offtake pipeline from the new Omakango – Onambutu line to Ondobe (800 m^3/day);
- A new reservoir will be constructed at Ondobe (1.6 million litres);
- Construct a new reservoir (3.8 million litres) and pump station at Omakango;

5.2.2.5 Option 5

Basic Infrastructure

Option basic infrastructure project components:

- Upgrade Omafo pump station;
- Construct a new offtake from the new Omakango – Onambutu pipeline (1000 m^3 / day);
- Replace the Omakango – Onambutu bulk water pipeline with a new line (604 m^3/day);
- Construct a new offtake pipeline from the new Omakango – Onambutu line to Ondobe (800 m^3/day);
- A new reservoir will be constructed at Ondobe (1.6 million litres);
- Construct a new reservoir (4.8 million litres) and pump station at Omakango;

5.2.2.6 Option 6

Basic Infrastructure

Option 6 basic infrastructure:

- Upgrade Omafo pump station;
- Construct a new line from the new Omakango – Onambutu pipeline to Oshandi, via Ondobe (1680m^3/day capacity line with 800m^3/day reserved for Ondobe) and Etomba (capacity 1104 m^3/day);
- Upgrade the Eenhana RO Plant (500m^3/day) and construct new Brine drying ponds;
- Replace the Omakango – Onambutu bulk water pipeline with a new line (604 m^3/day);
- A new reservoir will be constructed at Ondobe (1.6 million litres);
- Construct a new reservoir (1.6 million litres) and pump station at Ondobe

5.2.2.7 Option 7

Basic Infrastructure

Option 7 proposed basic infrastructure and capacity:

- Upgrade Omafo pump station;
- Construct a new line from the new Omakango – Onambutu pipeline to Oshandi, via Ondobe (913m^3/day capacity line will supply Ondobe, the rural requirements from Etomba to Oshandi as well as supplying water to Oshandi that will be utilised for blending with Oshandi borehole water
- Ondobe will be supplied from the new Omakango-Onambutu line via a new offtake and pipeline of capacity 1448 m^3/day, with 800m^3/day being reserved for Ondobe;
- Replace the Omakango – Onambutu bulk water pipeline with a new line (604 m^3/day);
- A new reservoir will be constructed at Ondobe (1.6 million litres) as well as a pump station to pump water to Oshandi;

5.2.2.8 Option 8

Basic Infrastructure

Under this Option the following infrastructural developments were proposed:

- The pump station at Omafo will be upgraded;
- The existing Omakango–Onambutu bulk pipeline will be replaced and will supply the rural areas along the line (604 m^3/day);

Eenhana Town will be supplied with 333 m^3/day water from OWTP via a new offtake from the new Omakango – Onambutu pipeline. A new pump station and reservoir (3.8 million litres) will be installed at Omakango. A new pipeline will be installed from Onambutu to Eenhana via Ondingwanyama. Ondobe will be supplied from the new Omakango-Onambutu line via a new offtake and pipeline (800m^3/day), to a new reservoir (1.6 million

litres). The RO plant at Eenhana with associated brine disposal facility will be upgraded to supply an additional 333 m^3/day.

5.2.2.9 Option 9

Option 9 was the best option chosen for development and is described in full under Chapter section 2.19 of this report.

Treatment Process

The assumptions for the treatment process were only tied to the determination of the capital, operation, and maintenance costs for Reverse Osmosis (RO) treatment plants. All 9 options considered met the project's needs and were evaluated to determine the most feasible solution, based on an assessment of a clearly defined set of criteria. Four main evaluation categories were used:

- Engineering
- Environmental
- Public & Social
- Financial

The important factors considered under each category in the option analysis criterion are as follows:

- Relative weighting of the respective Engineering disciplines (45%), and it included design considerations, flexibility in future additions/modifications, etc. versus Financial (20%), which included Capital Layout, Life-Cycle Costs and associated financial parameters i.e., URV, IRR and NPV. In this regard options such as Option 2, which operated at excessively high pressures, was negatively affected in the consideration of the URV.
- Public and Social (45%) which included the following parameters:
    - Staffing Requirements with particular reference to challenges pertaining to housing and transport in remote areas.
    - Operational difficulty and flexibility
- Environmental (25%), which comprises the following parameters:
    - Ecological
    - Surface/Groundwater
    - Failure Impact.

It follows for the outcome of the matrix as portrayed in the table below, that Option 9 emerged as the most viable and was considered for this project.

Table 13: Option analysis decision matrix ranking. Source: Adopted from Design Development Report by Element Consulting Engineers and Project Managers.

DISCIPLINE	Weight	Option 1	Option 2	Option 3	Option 4	Option 5	Option 6	Option 7	Option 8	Option 9
ENGINEERING	55%	1.82	1.54	1.62	1.65	0.52	1.65	1.77	2.23	2.48
ENVIRONMENTAL	10%	0.28	0.29	0.25	0.29	0.29	0.31	0.31	0.31	0.31
PUBLIC & SOCIAL	10%	0.36	0.39	0.39	0.39	0.47	0.39	0.39	0.43	0.43
FINANCIAL	25%	0.56	1.08	0.99	0.65	1.08	0.89	0.47	0.35	0.18
TOTAL	**100%**	**3.01**	**3.30**	**3.24**	**2.98**	**2.37**	**3.23**	**2.94**	**3.30**	**3.39**
Ranking		6	3	4	7	9	5	8	2	1

5.2.3 Routing Alternatives

The new bulk water pipelines for the proposed project will follow existing public servitudes and will not have to change route alignment. There are no existing pipelines for the Etope to Ondobe (Fig. 20.) and the Onakatumbe to Eenhana (Fig. 21) right of ways since there are no existing pipelines. Given the above scenario, no route alternatives were assessed but consider following existing servitudes.



Figure 21: New pipeline connecting from Etope to Ondobe.

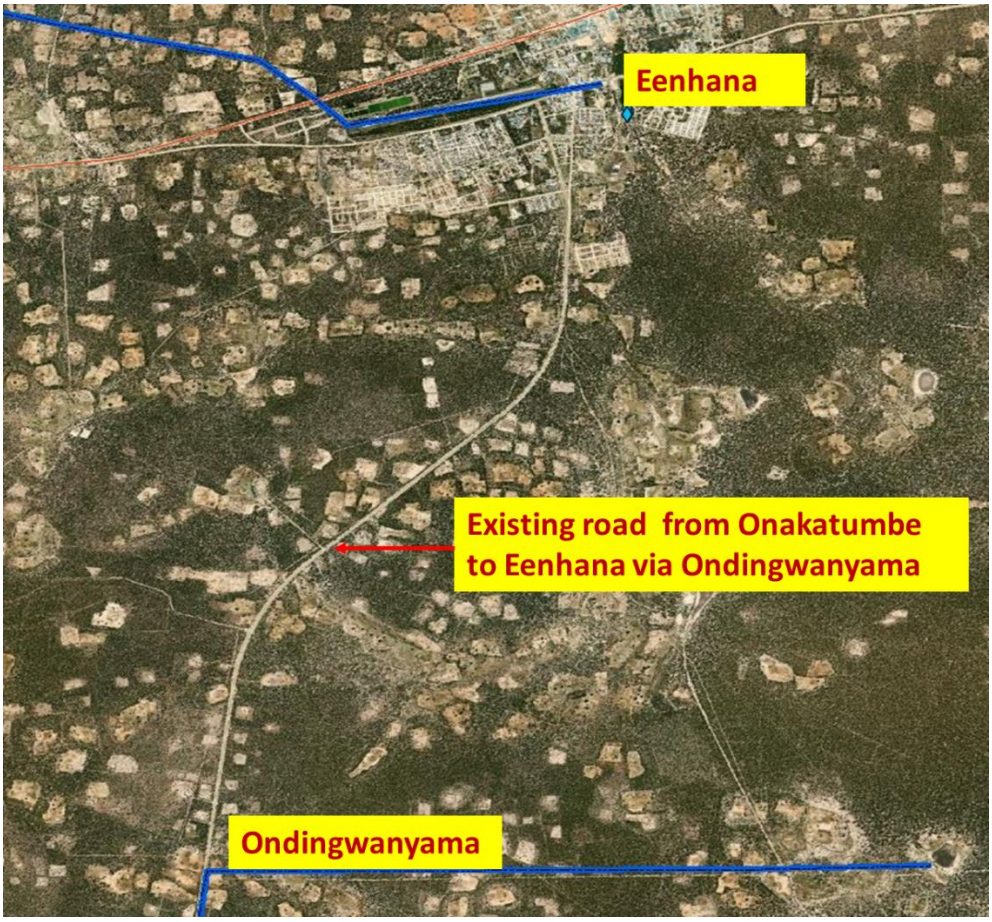


Figure 22: The new pipeline from Ondangwanyama will follow the existing road to connect to Eenhana.

5.2.4 Location Alternatives

No assessment of alternative sites was done for pump stations and reservoirs since they will be constructed on existing Namwater sites. Brine evaporation ponds will be constructed on a vacant piece of land adjacent to the existing RO Plant identified by the town council. No other site can be considered since it is the only land available and offered for sale by Eenhana Town Council. Old pipelines will be replaced with new ones following the existing routes.

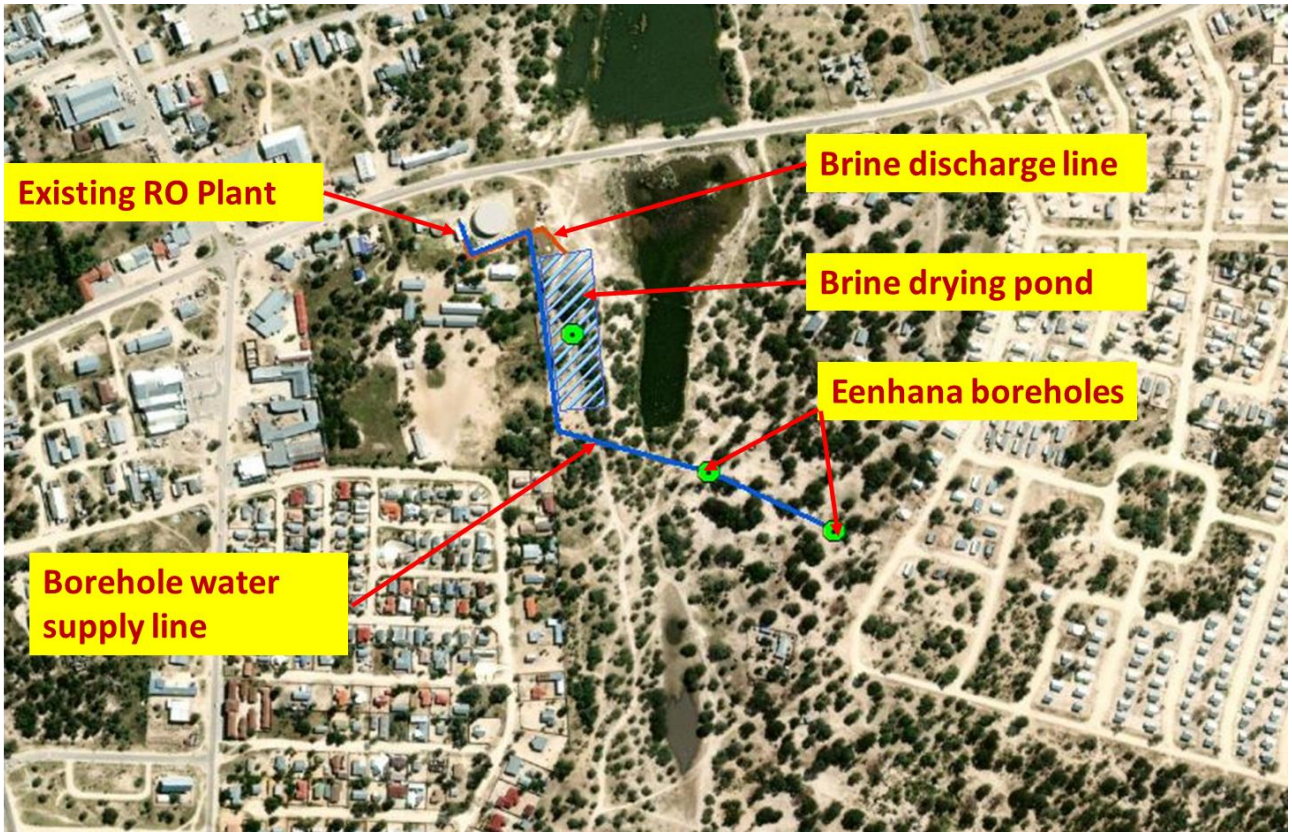


Figure 23: Spatial arrangement of the brine drying ponds, planned water supply and brine discharge line in relation to the existing RO plant at Eenhana.

6. DESCRIPTION OF THE AFFECTED ENVIRONMENT

6.1 Climate

According to (John Mendelsohn, 2002), Namibia is generally considered a hot country, with temperature variations but the temperatures vary a good deal, during the day, from day to day, seasonally, and over much longer periods.

6.2 Temperature and Precipitation

The data used was obtained from the SASSCAL Weathernet portal collected from the nearest station at Omafo (**Station ID: 4756)** in Ohangwena Region, (SASSCAL, 2022).

The average annual temperature in the Ohangwena Region are more than 22°C. The minimum and maximum temperatures range between 6 and 8°C, and 34 and 36°C, respectively. Ohangwena Region is characterised by a sub-tropical climate with hot summers and cools to warm winters. It is semi-arid, annual rainfall varies from 480mm in the western part to 600mm in the East.

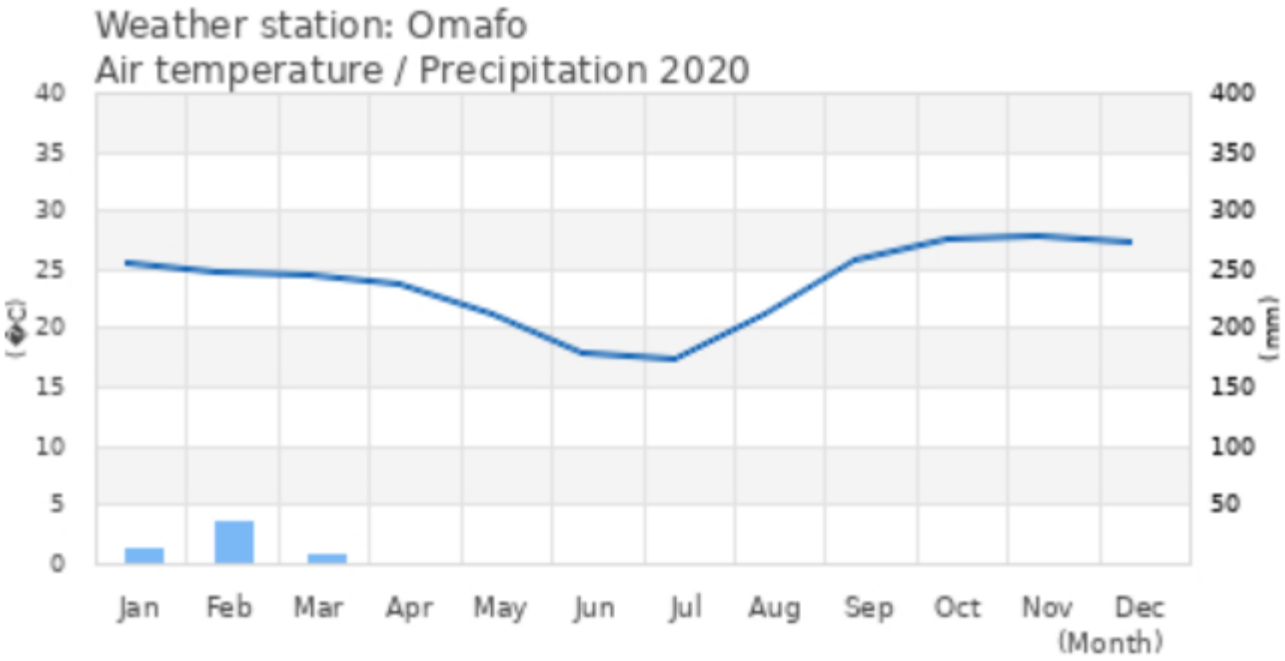


Figure 24: Monthly average air temperature and precipitation in Ohangwena Region in a year, 2020.

6.3 Humidity

Maximum humidity and cloud cover are experienced during the summer months, the highest being 70% and 30% respectively and the lowest during the winter months from May through to September.



Figure 25: Monthly average air humidity in Ohangwena in year, 2020.

6.4 Wind

Easterly prevailing winds blow through Ohangwena most of the with maximum speeds / gusts reaching 2.2 m/s during the months of August and September but generally experiences calm winds most of the time throughout the year.

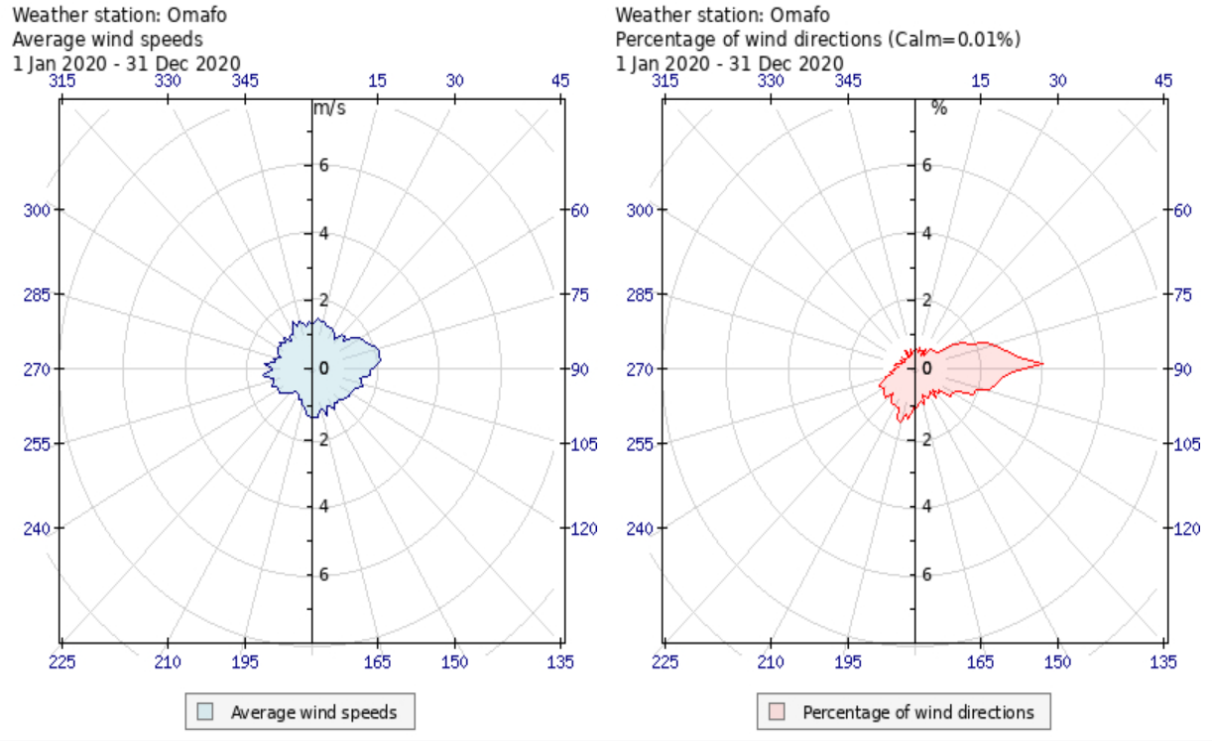


Figure 26: Ohangwena wind roses depicting monthly wind speeds and respective directions in a year, 2020.

6.5 Topography

The Ohangwena Region is situated in the Cuvelai Basin whereby most of the land surface is very flat, dipping from 1,150 m above sea level in the northeast to 1,080 m above sea level in the Etosha Pan to the south. All the basin surface drainage, therefore, flows slowly in the direction of the Etosha Pan (Robert Arendt, 2021). And like any other areas in the northern parts of Namibia, the topography and drainage of the Ohangwena region is generally flat.

6.6 Geology

The Ohangwena II Aquifer is a part of the Cubango Mega Fan, a topographic and sedimentary feature that is part of the geological Owambo Basin and the equivalent Cuvelai-Etosha hydrological basin. The sediment pile forming the Cubango Mega Fan is part of the regional Kalahari Basin and is predominantly arenaceous with dominant quartz sand and a variable amount of silt and clay. Duricrust layers are occasionally interbedded.

6.7 Hydrogeology

The project area and the Ohangwena Region at large fall under the Cuvelai-Etosha Basin (CEB), which is defined as the Namibian part of the Cuvelai River catchment. The hydrogeology of the CEB comprises the Omusati, Oshana, Ohangwena, and Oshikoto Regions and parts of the Kunene Region (Robert Arendt, 2021).

According to (Christelis. G, 2011), the CEB Unit 1 and 2, including Ohangwena Aquifer System (Unit 2) is a three-layered system dominated by unconsolidated sand with some sandstones, with an average aquifer thickness of 220 m. It has a high primary porosity and an average transmissivity value of 220 m²/day. The groundwater in and around the project site is hosted in the porous Kalahari sediments. The sediments are in some areas of the Basin underlain by bedrocks of limestone, sandstone, conglomerate, mudstone, and siltstone as the CEB aquifers and lithology characteristics presented in (Robert Arendt, 2021).

The predominant lithology is sediment – sand and sedimentary rocks – sandstones that are overlain by unconsolidated sedimentary sands. It has a high primary porosity with no secondary porosity and high horizontal connectivity. Within Namibia, the total groundwater volume is about 300 million cubic meters, which represents 60% of the total water available in Namibia, (Institute, 2021) . Within Namibia, the mean annual recharge, which is 100% through natural conditions, is 35 Mm^3 per year over an area of about 35 000 km^2. During extreme recharge events that are characteristic of this area, the average recharge rises to 70 Mm^3 /yr. The aquifer has not been much utilised much and there is no difference yet, in the long-term trend of the water level.

6.7.1 Groundwater Flow, Average Level, and Annual Recharge

The groundwater flow in the CEB, which hosts the project area flows in a south eastern direction towards the Etosha Pan. The groundwater flow towards Etosha Pan is due to the structure of the Basin and its deepest point, i.e., the base level of the groundwater flow system (Christelis. G, 2011). However, in terms of local drainage patterns, these may vary due to local groundwater abstraction in the area.

The average piezometric level of the CEB is 30 m below ground level, and the aquifer is mostly confined, but in some parts is unconfined. The typical borehole depth is 100 to 250 m, and the mean annual recharge is 35 million cubic meters (Mm^3) (Christelis. G, 2011).

6.7.2 Vulnerability of Groundwater to Pollution

According to (Van Wyk, 2001)'s Groundwater Resources Vulnerability Map of Namibia, the risk of pollution is assessed based on the aquifer type, groundwater flow, depth to groundwater, and annual recharge. The vulnerability of groundwater to pollution in the northern regions of the country is considered moderate, thus, from a local level (site specific), the vulnerability to pollution is moderate. The vulnerability of groundwater to pollution in the area could be worsened by the porous nature of the sediments overlying the project site and surrounding areas in the Region that once pollution lands on the ground surface. Groundwater pollution would generally be a concern in such areas that are overlain by porous sediments and alluvial (sediments) aquifers, especially, if there is a significant point source of pollution.

6.8 Hydrology

In terms of hydrology (surface water), there is not much water on the surface in Namibia, as the little rain that falls either evaporates, seeps into the ground or is rapidly drained by ephemeral rivers that dominate natural surface water systems inside the country. The only perennial water systems (rivers) that can hold

surface water over prolonged periods are extremely varied, ranging from great rivers that define the country's borders, to a host of smaller rivers and channels that flow at varying frequencies, (John Mendelsohn, 2002).

As it is with many towns in the northern areas of Namibia, the project area is prone to flooding which results in wet marshes (Oshanas) that dry up a few months after the rainy season, i.e., the Oshanas do not hold water throughout the year or longer periods. The floods occur due to a combination of several factors such as low soil permeability, and the fact that the Oshanas lie below the flood lines for frequent floods triggered by runoff from the great Kunene River system in southern Angola, etc.

6.8.1 Linkages with other water systems

The predominant source of recharge is from precipitation in the aquifer area, and the major recharge mechanism is through runoff into the aquifer area while the predominant discharge mechanism is through evapotranspiration.

6.8.2 Environmental aspects

Within Namibia, 35% of the aquifer is not suitable for human consumption for a significant part of the aquifer due to elevated natural salinity. Some pollution within the superficial layers has been observed but more data on this is not available. Shallow groundwater covers around 5% of the area as do the groundwater-dependent ecosystems, (Greg Christelis, 2015).

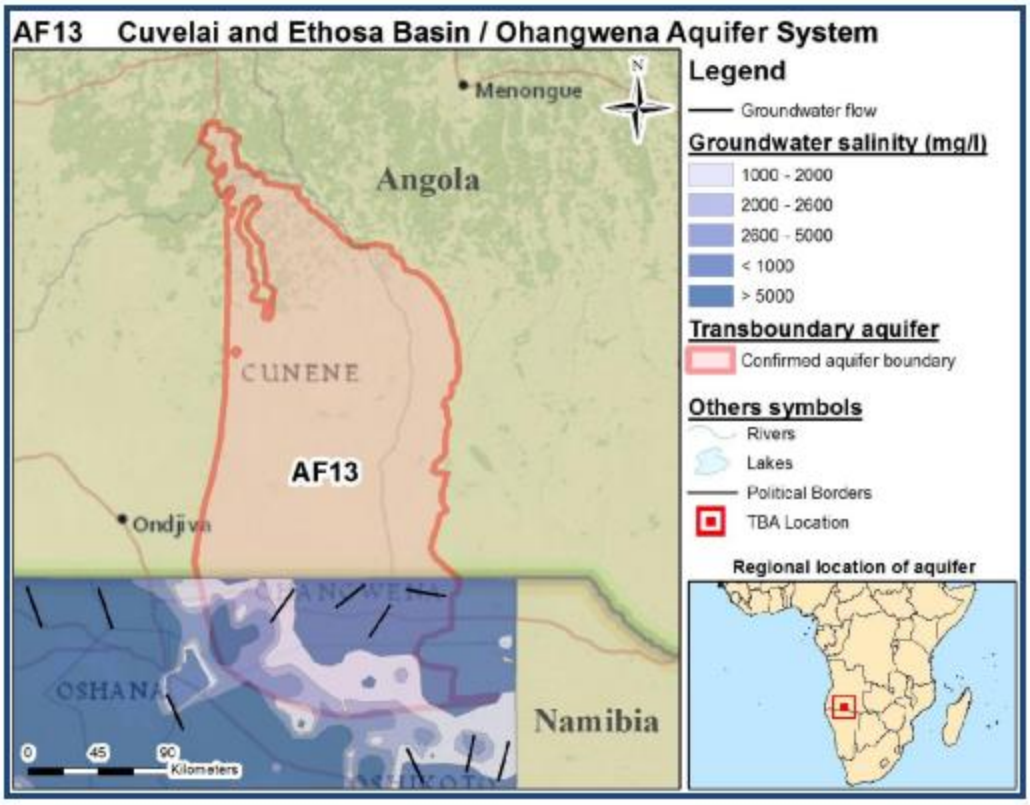


Figure 27: Ohangwena spatial ground water salinity.

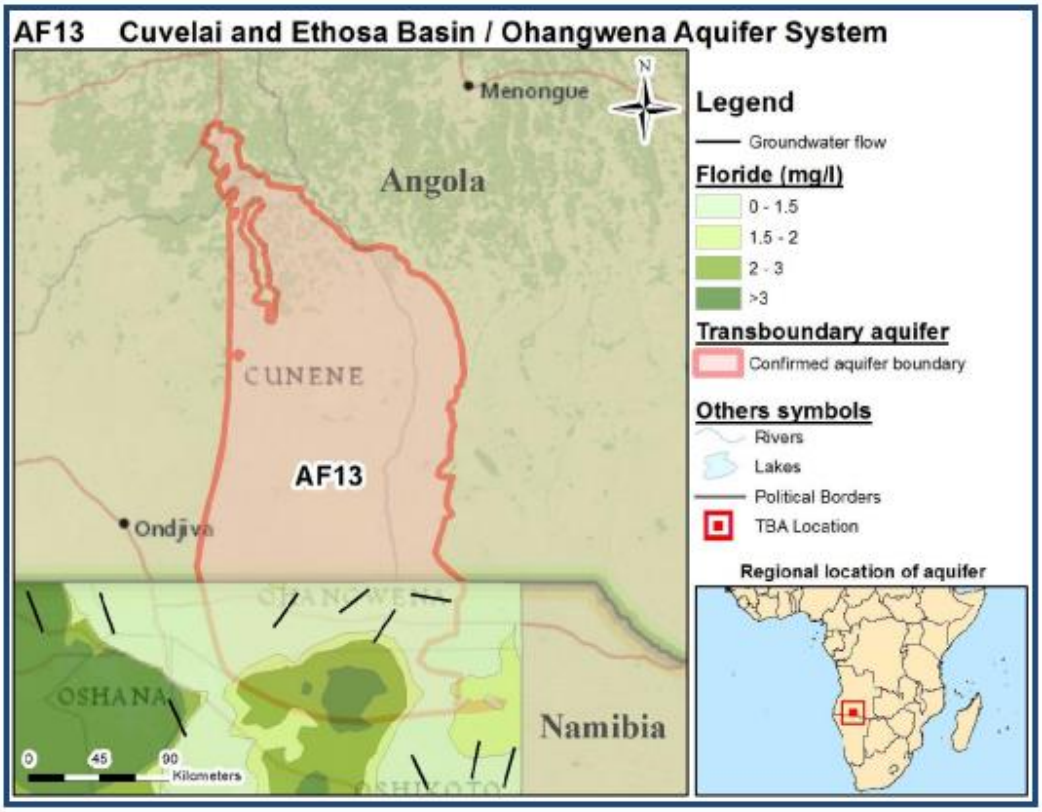


Figure 28: Ohangwena spatial groundwater fluoride concentration.

6.9 Trans-boundary Mandate

There is a negotiated bilateral agreement with limited scope and there is no Trans-boundary Aquifer Institute in place although a commission for this basin has been established. The National Institute within Namibia has a full mandate with limited capacity. The major environmental concern is that most of the recharge of the Ohangwena II Aquifer comes from Angola. The water scarcity on the Namibian side makes this a valuable resource. The joint management of this resource needs to be adequately negotiated between the two countries.

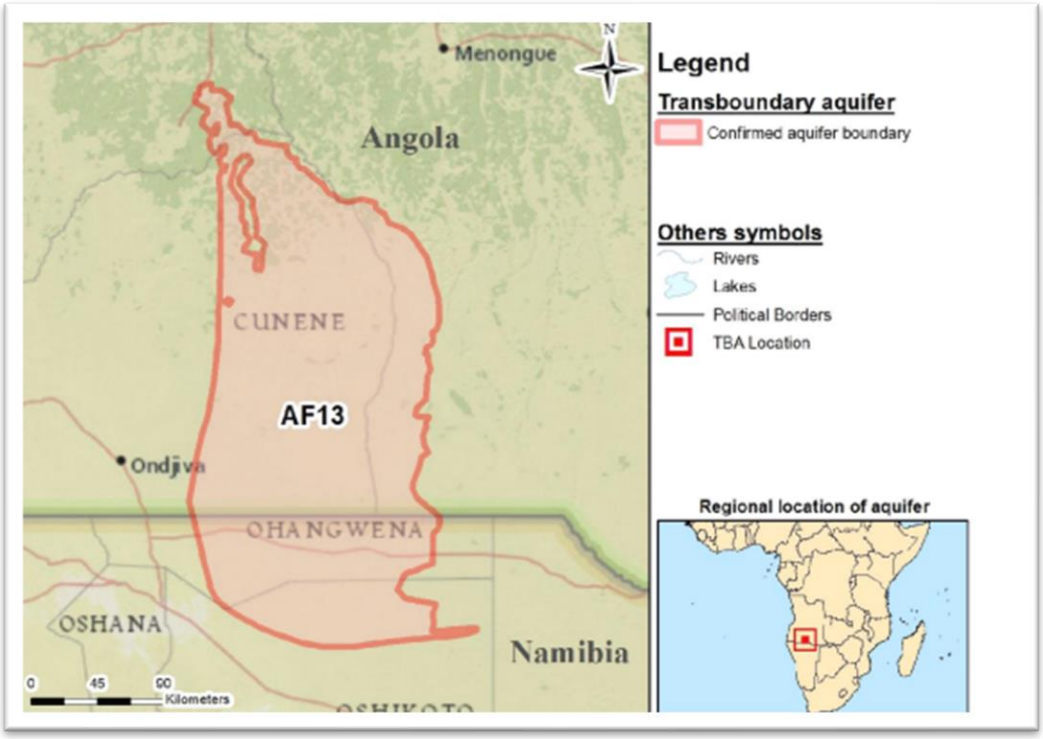


Figure 29: The spatial extent of the Ohangwena II Aquifer between Namibia on the southern side and Angola in the North.

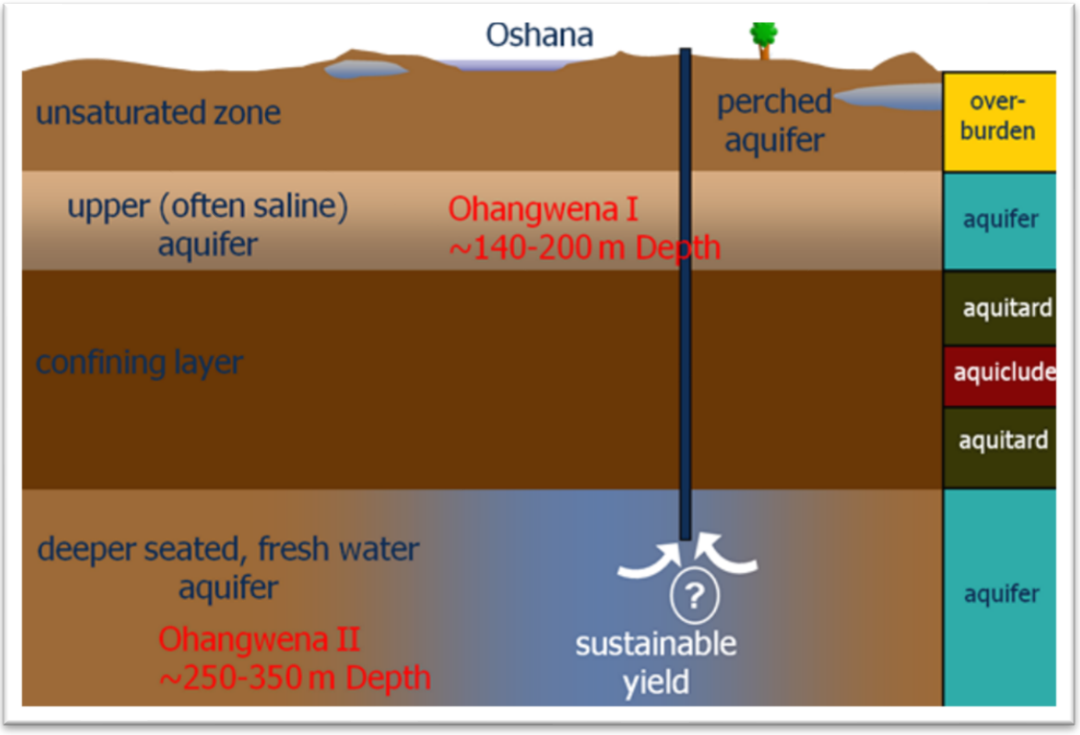


Figure 30: Various geological layers overlying the Ohangwena II Aquifer.

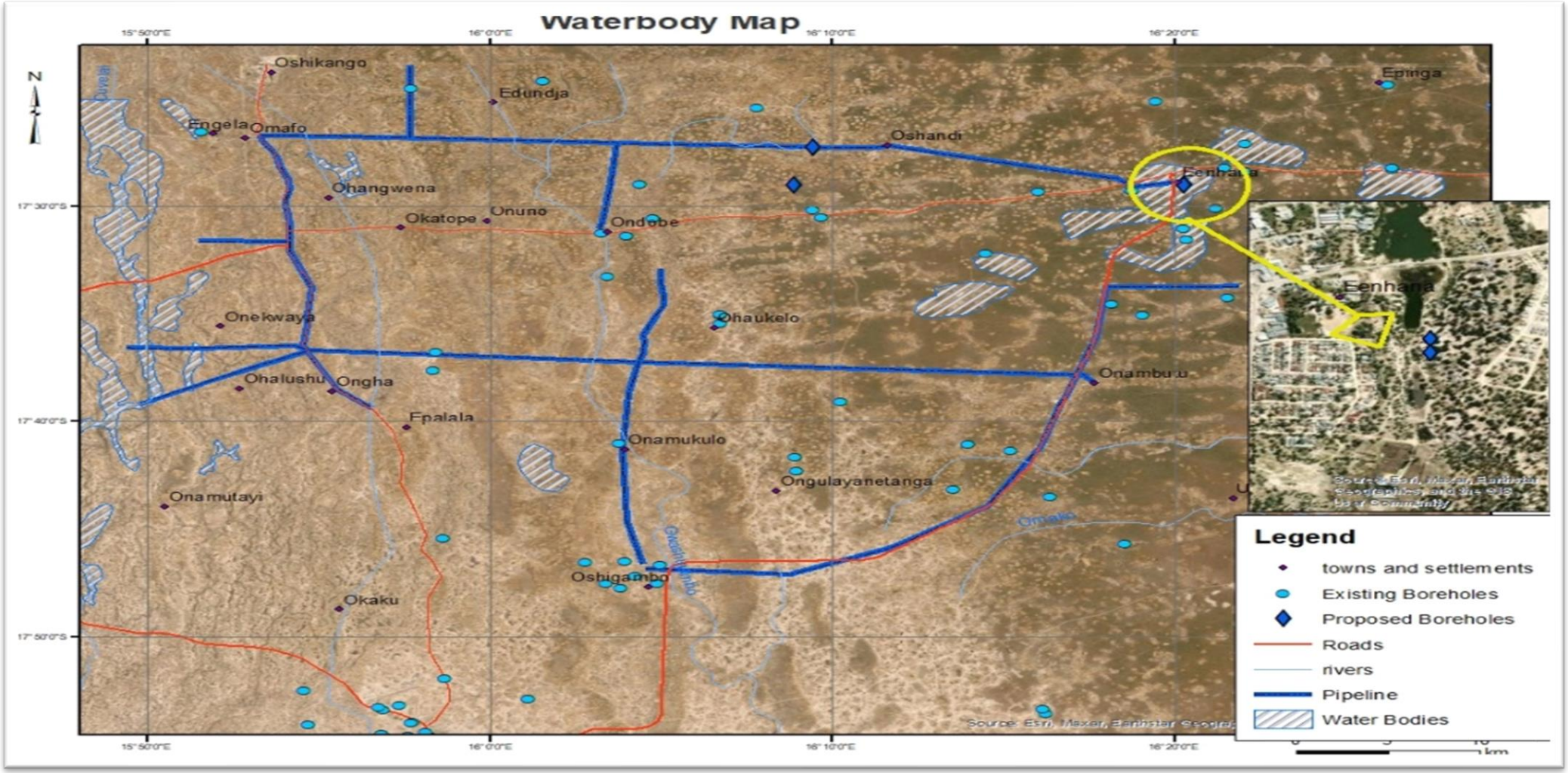


Figure 31: The location of the planned new boreholes, existing bulk pipeline in relation to existing boreholes and Oshanas in the project foot print.

6.10 Soils and land capability

According to the Dominant Soil Map by Mendelson et al (2022), the dominant soils in the Ohangwena Region are Cambic Arenosols and some areas Eutric Cambisols. The soil types in the Region vary considerably, for the most part, the soil consists of volatile sand mixed with a small percentage of silt and clay (Arenosols), and there are also soils deriving from oshana deposits and in the south, the soils are mainly clayey (Luvisols), deposits (Cambisols) or rocky outcrops.

Arenosols are sandy-textured soils that lack any significant soil profile development. They exhibit only a partially formed surface horizon (uppermost layer) that is low in humus, and they are bereft of subsurface clay accumulation. They are poor in nutrients and are generally susceptible to erosion. Contain less than 0.2% carbon and are highly permeable and have poor water storage capacity, all of which presents limitations to crop farming but mainly used for extensive livestock grazing, (ISRC, 2022).

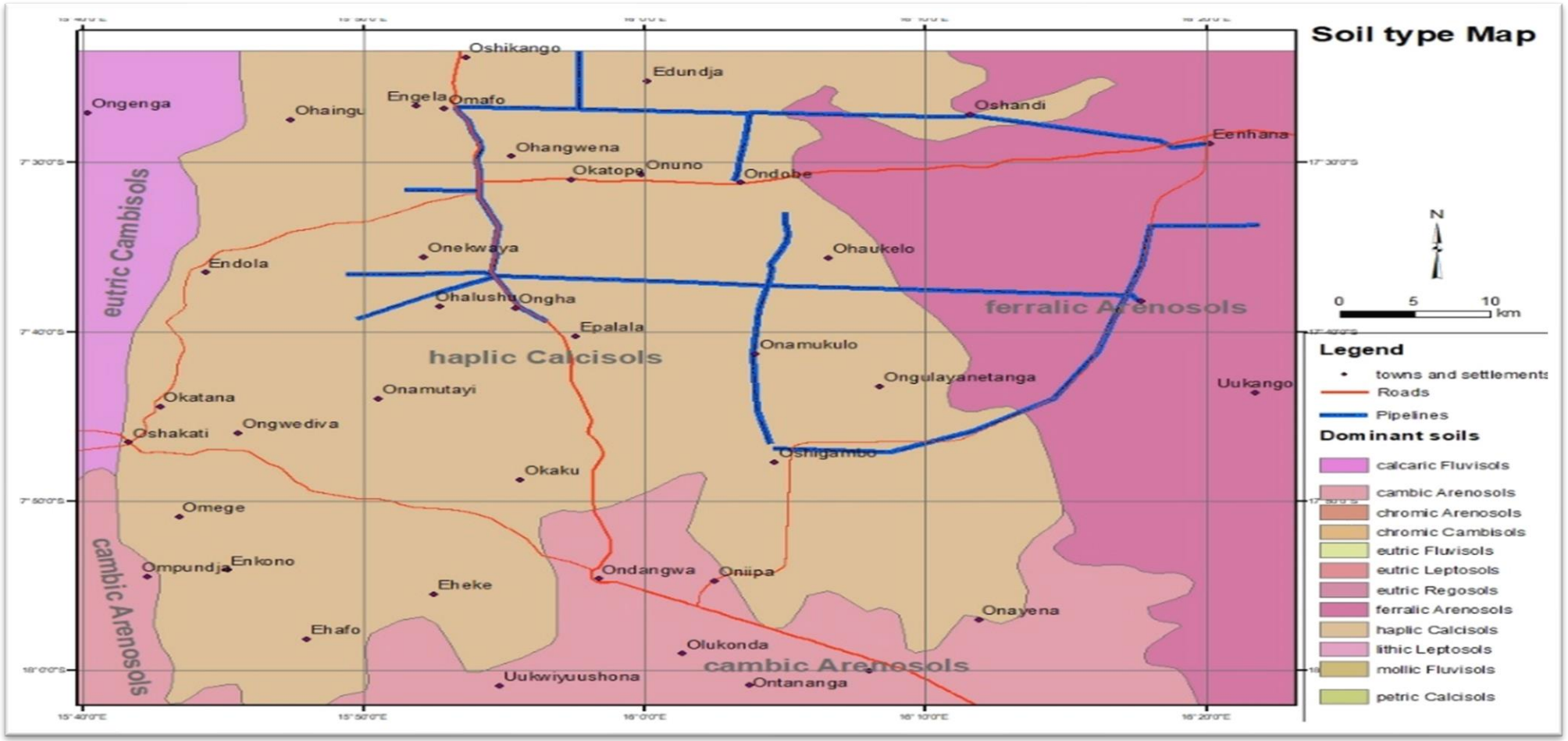


Figure 32: The project area in relation to dominant soil types.

6.11 Air quality;

Air quality is generally regarded to be very good since this is predominantly rural, however, there could be localised air contamination or pollution due to vehicle emissions when vehicles pass through the road network in the project area, smoke from veld fires, and methane from livestock kraals. Sensitive receptors include homesteads.

6.12 Noise;

Noise generated in the project area primarily comes from households, cuca -shops, vehicles driving on the roads and church gatherings. However, vehicle traffic decreases as one goes deeper into the villages. Ambient noise levels can be considered to be low. Sensitive noise receptors identified in the project area are:

- Primary health care facilities/clinics
- Schools
- Offices

6.13 Biodiversity: Fauna and Flora

6.13.1 Fauna

No endangered domestic or wildlife species were observed present within the project area or surrounding. Expected fauna are the small mammals such as the wild rabbits, squirrels and Elephants seldom migrate from Angola through the project area. No wildlife was observed in the vicinity of the project area, only domestic animals mainly cattle, goats, and donkeys are present in the vicinity of the proposed project routes and general area. These domestic animals are some of the livestock kept by the communal landowners (subsistence farmers) in the households.

6.13.2.1 Reptiles

Namibia harbours about 250 species of reptiles, 59 of which are endemic. The following are expected to habitat in northern Namibia:

- Cape flat lizard,
- Nama padloper tortoise,
- Caprivi rough-scaled lizard,
- Namib sand gecko, and the
- Marbled leaf-toad gecko

6.13.2.2 Avians / birds

The avifauna of Namibia included a total of 688 confirmed species as of September 2021, of which 2 are endemic, and four have been introduced by humans. Expected bird species likely to be found in the project area include:

Larioturdus torquatus; Dicrurus adsimilis; Corvus albus; Lamprotornis nitens; Ploceus subaureus; Uraeginthus angolensis; Numida Meleagris; Guttera pucherami; Coturnix coturnix; Apus melba; Mycteria ibis; Aviceda cuculoides; Falco biarmicus; Dendroperdix sephaeni; Streptopelia semitorquata; Spilopelia senegalensis; Oena capensis; Alcedo constata; Rhinopomastus cyanomelas; Tockus damaransis

6.13.2 Flora

The project area lies in the northern central regions of the country where we find the only Tree Savanna or Woodland biomes in Namibia are found. In the northern and north-eastern parts are fine stands of *Baikiaea plurijuga, Pterocarpus angolensis, Dialium engleranum, Burkea africana, schinziophyton rautaneni*| *Lonchocarpus capassa, Guibourtia coleosperma, s. pungens, ochna pulchra, Combretum spp., Gretvia spp., Bauhinia petersiana subsp. macrantha and B. urbaniana* to name only a few of the most characteristic trees and shrubs. The palm, *Hyphaene*Htphaene petersiana occurs in omurambas and on open flats, (Giess, 1998).

The area west of Oshandi i.e. Omafo, Ohangwena, Okatope, Ondobe and Omakango in the southeast fall under the Cuvelai Drainage Basin supporting the Western Kalahari Woodlands. Most trees here are broad-leafed and short but form dense forests. Moving further to the east and southwards from Eenhana area, we find the north-eastern Kalahari Woodlands. They consist of dense, tall Savanna interspaced with small pans, (Raison, 2011). The Oshanas are covered by grass while the palms and mopanes grow on higher ground in the gently sloping plains. Much of the plant cover has been cleared for cultivation, building homes, or grazing in densely populated areas, (Raison, 2011).

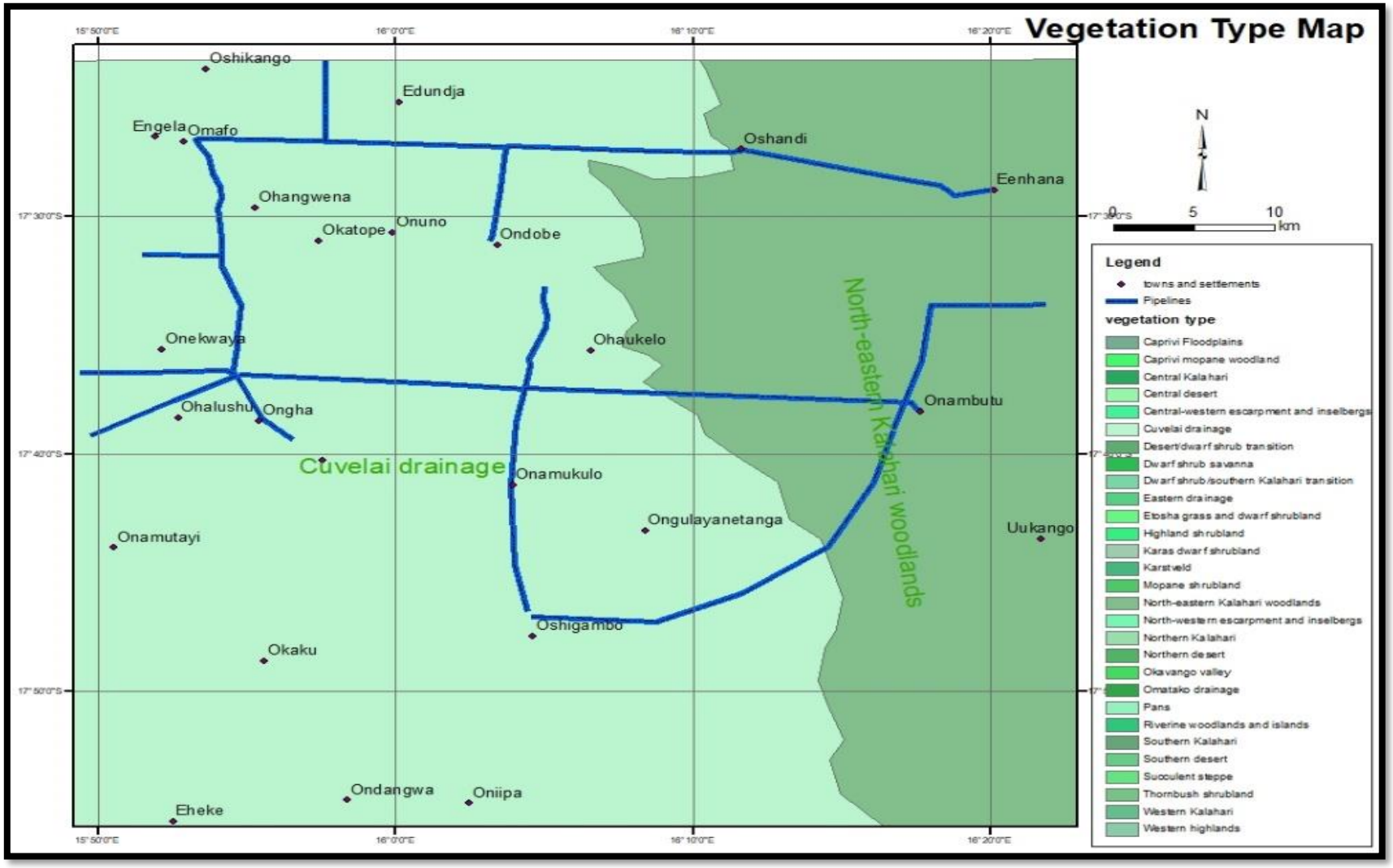


Figure 33: Expected vegetation type on the project footprint.

During the site visit conducted between 28 February and March 2022 and between 25 and 27 July 2022, moderately scattered short grasses, young camelthorn (*Acacia reficiens*), mopane (*Colophospermum mopane*), and some makalani palm (*Hyphaene petersiana*) shrubs, as well as acacia and palm trees were observed in the study area. It should be noted that the makalani palm and mopane trees are protected.

Table 14: Identified protected tree species occurring in the project area, Forestry Act of 2001.

Tree Species	Growth Pattern, Distribution, and Environmental Concern / Implication
Combretum collinum	*Combretum collinum* is a small to medium-sized, semi-deciduous tree 4-18 m in height, with a rounded or flat, heavy crown. Bark light grey, creamy-brown, reddish-brown or brown-black, fissured, and transversely cracked, with smooth scales of various sizes. Can propagated using seeds. Live tree is tolerant to grass fires so can be used as fire break.
Acacia sieberana	Height ranges from 7 to 15 m. Bark conspicuous, rough, peeling, grey yellow. Thorns straight white, 50 mm.
Grewia retinervis	A shrub up to 3 m high occurs in sandy plains, roots used medicinally and branchlets as tooth brush. No conservation concerns are recorded yet, (www.treeatlas.biodiversity.org.na.).
Combretum fragrans	Have been used for medicinal purposes, tested for curing of anal cancer but trials were not done because it was not effective enough.
Acacia erioloba	Grows up to 11 m with a spreading crown. Bark rough, fissured, and grey to brown. Straight thorns. Leaves are grey-green, (Carruthers, 2008). Mostly used for firewood and occurs in many areas throughout Namibia. It is slow growing and is protected under the Forestry Act 2001.
Sclerocarya caffra	Medium-sized deciduous tree. Leaves alternate, crowded near the ends of branches, imparipinnate with 7-15 pairs of ovate to elliptic leaflets and a terminal leaflet, dark green above, paler bluish-green below. Flowers in axillary and terminal sprays, red in bud, turning pinkish white, unisexual, mostly on separate trees. Fruits fleshy, plum-like, pale green turning yellow when ripe. The fruit is edible and highly valued by animals and people.
Combretum zeyheri	Widely used by people because of its hardness and resistance to termite attack. It is protected by the Forestry Act 2001.

Baikiaea plurijuga	Protected by the Forest Act, but lower-risk and of least concern. It is mainly used for timber.
Terminalia sericea	Grows to a height ranging from 4 to 8m with flat branches. Bark blackish grey, deeply fissured. Leaves covered in silvery hairs. It is mainly used for firewood.
Colophospermum mopane	Used for firewood and construction work. Bark is deeply fissured, flaking, greyish-white to blackish, (Carruthers, 2008). Protected by the Forestry Act 2001.

6.14 Socio-Economic Structure

This section was compiled using information obtained from the socio-economic survey conducted as part of this project. A combination of primary and secondary data sources was used and the same valued components adopted during the socio-economic survey were inherited under this section.

Table 15: Valued components and indicators used for socio-economic analysis.

Valued Component (VC)	Indicator
Economy	Living standards Economic investment including earnings and income Employment and unemployment
Demography	Population Changes (growth, immigration, migration, age, and sex)
Land Use and Livelihood Activities	Land use and livelihood activities in the direct project footprint Land use and livelihood activities in the surrounding land of the proposed project
Community Services	
Housing	Housing availability, housing status of local communities
Education	Level of Education
Health Social Services	Water-related disease demographics
Energy	Type of energy sources, availability and affordability
Infrastructure Services	
Utilities	Access to water Affordability of water Water infrastructure (Existing water sources and uses) Problems with water supply and problem-solving turnover time

	Level of water supply service satisfaction

6.14.1 National and regional demographics

According to the 2011 Population and Housing Census by the Namibia Statistics Agency (NSA), the population of the Ohangwena Region was 245,466, of which 133 316 were females and 112 150 were males. Namibia's population was estimated to be 2 280 716 as of the year 2016 with the majority living in the rural areas, 53.1 %, while 46.9 % lived in the urban areas. The estimated average household size is 4.2 persons with rural households being bigger than urban households, 4.9 persons and 3.6 persons respectively. In terms of age distribution, the country's population if youthful with 66 % being less than 30 years old while only 11.9 % is greater than 50 years of age. Gender distribution is 95 males to 100 females. In Ohangwena where the project is planned the estimated population is 253,348 constituting 11.1 % of the total population (NSA, 2011). Eenhana and Helao Nafidi are the only two towns in the region that are not community settlements. Omungwelume, Ongenga, and Okongo are the three designated settlements in the region's western and eastern halves, respectively. Ohangwena Region's population density of 23 people per square kilometre is significantly higher than the national average of 2.6 people per square kilometre. According to the 2011 census, 5.6 people lived in the average household in 2011, significantly more than the 4.4 people found nationwide. 56 % of households in the region were headed by men in 2011, while 67 % of households were headed by women in 1991 and 2001 (NSA, 2011).

6.14.2 Sources of livelihoods

In accordance with (Parviainen, 2012), Ohangwena Region is home to around 80% of the population, who are subsistence farmers, with agriculture providing the primary source of income for 53% of the locals. Still, farming is primarily subsistence-oriented and provides a basis for a variety of livelihood activities, including small-scale pearl millet cultivation and livestock raising. People in rural areas grow pearl millet and keep small herds of goats, calves, donkeys, chickens, and pigs on communal land, which is divided into a few hectares of land. The percentage of households whose primary source of income came from farming dropped from 52% in 2001 to 26% in 2011. Payroll and salary (22%),), non-farming enterprises (12%), cash remittances (6%), and state pension payments (29%) were the other major sources of revenue (NSA, 2011). Helao Nafidi and only Eenhana only have access to traditional job opportunities. Farmers, herders, and housekeepers in rural areas have access to a wide range of informal employment options, including weeding fields and herding livestock as well as cleaning and washing homes.

6.14.3 Education

Ohangwena Region is Namibia's most impoverished region. Although the Ohangwena Region had one of the lowest life expectancies at birth, the ninth-lowest literacy rate, and the lowest annual average per capita income of Namibia's 14 regions (according to the UNDP Human Development Index), it had the third-highest gross school enrolment ratio (Nakanyete, 2020). Consequently, Ohangwena has the lowest HDI in the country (0.403) (Pohamba-Ndume, 2016)Of the 14 regions, Ohangwena had the seventh-highest illiteracy

rate, the eighth-largest share of the population in homes spending more than 60% of their total income on food, and the highest likelihood at birth of not surviving to the age of 40. Consequently, Ohangwena received the third highest HPI rating (45%) among the 14 regions (Angula, 2016).

6.14.4 Users, Availability, and Accessibility of Water

This section presents findings from the socio-economic study conducted in the project area as part of this ESIA process in order to augment the regional statistical data from Namibia Statistical Agency. At least 300 questionnaires were administered to households within 15 m on either side of the bulk pipeline. The findings pertaining to the availability and accessibility of water follow below.

The greatest proportion of users supplied by the 2 water supply schemes under consideration are is rural communities followed by Eenhana Town Council. The availability of water sources has been taken into consideration with outside tap inside the yard being more dominant (54%) followed by internal tap (19%). This study shows that the availability of water has been connected by NamWater mostly as the dominant water supply. NamWater has been the available source of water that is widely available and reliable. However, only 50.1% of the respondents have access to water every day of the week, followed by 21% having access for 2-5 days a week, 15% for 5-7 days and 12% for less than 2 days a week.

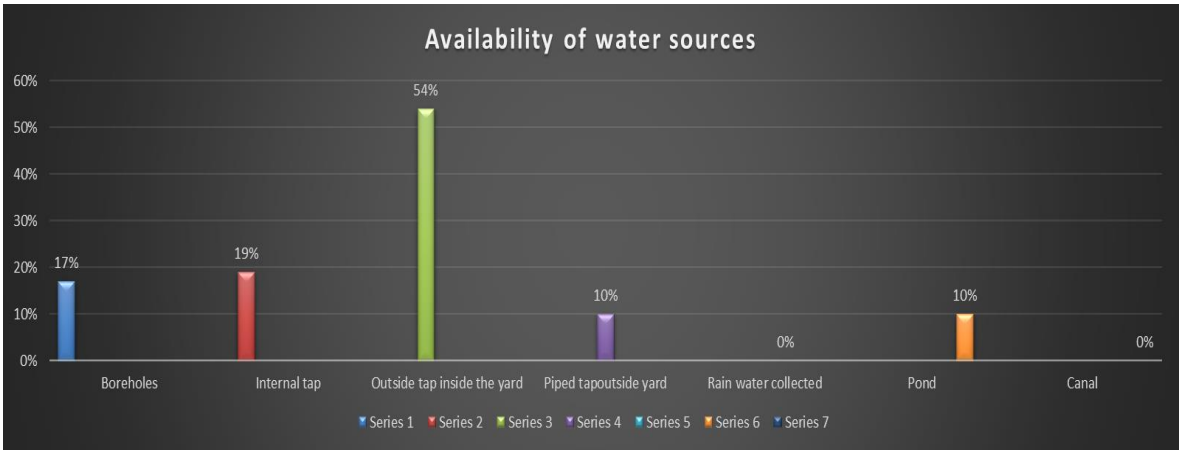


Figure 34: Proportion of respondents against availability of water sources in the project area.

The findings show that respondents strongly agree and support the fact that drinking is the dominant water use followed by laundry with a notable mean of 4.36 and a consistent standard deviation of 0.612. The findings also depict the fact that respondents strongly need water for cooking with a mean of 4.80 and SD of 0. 576. This shows a strong and consistent support from the respondents that water for them is much useful for cooking. The study findings also show that the need of safe water is of much importance due to the frequency of use of water by the respondents.

The use of water for garden was not supported by the respondents as reflected by a mean of 2.32 and a standard deviation of 1.371. The shows that respondents are not into gardening much so they do not see the importance of water in the aspect of gardening although the use of water use for crops was supported heavily

with a mean of 2 and a notable SD of 0.883. This suggested that respondents were aware that water is important for crops. On the other note with regards to livestock, the results show that respondents use water for livestock they keep, although this is not absolutely supported as shown with a mean of 3.04 and a standard deviation of 1.353. The interpretation is that respondents normally do not use water supplied by NamWater for livestock but rather use natural reservoirs or other water sources available in the area.

6.14.5 Energy sources and uses in the project area

Namibia's top energy sources are petroleum, hydropower, imported electricity, and imported coal. The country's own internal resources supply less than one-third of its needed energy requirements. Namibia has high potential for solar, wind and biomass generation. Invade bush is widely spread in the country's northern parts, which allows large-scale bioenergy-based production capacity. In terms of access to electricity, currently on 53% have access against 47%. The main challenges faced in the energy sector in Namibia are:

- The needed technology and engineering skills in the country are limited and underdeveloped.
- The foreign investment in the country's energy sector is very limited.
- The country lacks both incentives and national targets for developing and improving its energy sector.
- No national investments have been carried out during the past 3-4 decades, neither for developing the energy sector, nor for improving and increasing the country's electricity generation capacity.
- The local electricity tariffs, when compared to other nations in the region, are considered to be on the low level.
- The high cost of energy supply.
- The continuous droughts, which decrease the water dispatch in the Ruacana Station (Namibia's main energy supplier), consequently, the energy sector is more often incapable of meeting electric demand.
- There is currently no obvious business model to provide off-grid, small-scale solutions for the rural poor.

In Ohangwena, 81.8 %, 88% of the population relies on wood for heating and cooking purposes. Only 11 % of the population in this region use electricity for lighting purposes.

6.15 Heritage & Archaeology

The project area is historically important with regards to the war of liberation for the Republic of Namibia, as well as culturally rich communities to have existed in the area. The Consultant identified potential historically important areas such as buildings and infrastructure destroyed during the liberation struggle. No publications revealed any heritage site near the project area. There was no physical field identification of archaeological and cultural-historical sites/artefacts, however, the Proponent and its Contractors are bound to comply with the “chance find” procedure to ensure that findings will need to be identified and protected.

7. ENVIRONMENTAL IMPACTS ASSESSMENT

7.1 Impact Assessment Methodology

This section describes the preliminary identification and consideration of issues and concerns that may impact (positively and/or negatively) the biophysical and socio-economic environments. The issues that were identified as potentially significant during the Scoping Phase form the basis on which further studies if necessary will be conducted during the EIA Phase. The identified potential impacts are assessed following a recognized methodology to determine the magnitude of impact and whether or not the impact was considered significant and thus warrants further investigation. The assessment considered all stages of the project's life cycle (project inception, design, construction, operation, and decommissioning).

7.2 Evaluation of identified Potential Impacts

The evaluation of the significance of the impacts was determined using the standard criteria presented below and was guided by Namibia's legal requirements, international best practice and International Finance Corporation (IFC) Performance Standard 1 'Assessment and management of environmental and social risks and impacts as well as the AfDB - Operational Safeguards 1 (OS1).

7.3 Description of Potential Impacts

The potential impacts on environmental and social resources arising from the proposed development include direct and indirect impacts. The table below presents the overview of likely aspects arising from each of the key project activities and considers their likely interaction with socio-economic and environmental resources and receptors.

7.3.1 Identified potential positive impacts

7.3.2.1 Employment

Both skilled and unskilled labour will be required during the construction and operational phases of the project. Construction job opportunities are generally temporary and will include ad hoc activities such as digging trenches, loading and off-loading materials and equipment. Anticipated indirect jobs may include provision of services to construction employees e.g. temporary stalls selling food and drinks or any other convenient goods. Most unskilled temporary jobs will be created during the construction phase, 150 to 200 jobs while about 5 additional permanent jobs (1 skilled and 4 unskilled) are expected for the operation of the RO Plant.

7.3.2.2 Improved water supply

The development of Ohangwena II Wellfield will improve water supply to the rural communities, settlements and towns in the project area. This will positively increase water based domestic and commercial services in the area and eventually improve the well-being of the people.

7.3.2.3 Health

HIV / AIDS awareness campaigns which will be implemented by the Contractor as recommended during the construction phase will also benefit the local community members.

7.3.2.4 Supply of construction materials

Local businesses will benefit through supply of building materials to Contractors. We anticipate most of building materials such as cement will be sourced locally.

7.3.2 Identified potential negative impacts

As aforementioned potential negative impacts emanating from planned project activities at each project phase were identified and are presented in the following table below:

Table 16: Identified potential negative and / or positive impacts emanating from the proposed project.

Inception				
Project activity	**Environmental aspect**	**Identified impact**	**Nature of impact (Positive / Negative)**	**Assessment finding (s)**
Poor communication / misinterpretation of project requirements / Client's needs	Economic	Rework / time loss	Negative	If the project requirements are misunderstood, there will be rework and loss of time which impacts negatively on project costs. This phase was successfully completed and the Inception report approved to pave way into the next phases (Design development and Preliminary design phases).
Design phase (Design development, Preliminary and detailed design phases)				
Project activity	**Environmental aspect**	**Identified impact**	**Nature of impact (Positive / Negative)**	**Assessment finding (s)**
Design of required infrastructure	Occupational health	Hazardous chemicals, equipment or materials	Negative	The choice of technology dictates the nature of associated chemicals and materials some of which may be hazardous to health.

Project activity	Environmental aspect	Identified impact	Nature of impact (Positive / Negative)	Assessment finding (s)
Siting or positioning of infrastructure, pipeline routes, brine drying ponds	Socio-Economic	Loss of private land or encroaching on private land	Negative	The bulk water pipelines will traverse through large distances through villages, settlements and Eenhana town. In some areas it may be unavoidable that it passes through private land.
	Biophysical	Loss of vegetation / land clearing	Negative	Trees may be cut during the construction phase to make way for the pipelines although we have minimal trees along the servitudes and the targeted sites for other infrastructure. The benefit of improving water supply out-weighs the loss of trees and mitigation measures can be put in place to manage the impacts.

Project activity	Environmental aspect	Identified impact	Nature of impact (Positive / Negative)	Assessment finding (s)
Design of the required infrastructure	Socio-economic	Inadequate / Insufficient water	Negative	Poor design due to in inadequate capacity of pump stations, pipelines and reservoirs
	Health	Good quality of water	Positive	Dissolved salts including high fluoride content in the Ohangwena ground water make it unfit for human consumption. This will be addressed by reverse osmosis yielding very good quality water.
	Socio-economic	Disruption of water supply / break downs	Negative	Disruption in water supply / break downs may result from various issues including design components related to: • Lack of spare parts to maintain the chosen technologies; • Lack of knowledge and skills to operate and maintain the chosen technologies; and • Poor quality of chosen technology brands.
Construction phase				
Project activity	**Environmental aspect**	**Identified impact**	**Nature of impact**	**Assessment finding (s)**

			(Positive / Negative)	
Mobilization and camp setup	Biophysical	Loss of vegetation or land clearing	Negative	Trees and shrubs will be cleared to make way for temporary accommodation of the workers; canteen; offices; workshop and above ground fuel storage tanks. Domestic waste will be generated at the campsite. There is potential to spill petroleum products from the storage facilities or from the workshop area during maintenance of construction machinery or equipment which can cause soil and ground water contamination. Further to that petroleum products are highly inflammable making them hazardous to the workers and nearby homesteads.
	Waste management	Indiscriminate dumping of solid and discharge of liquid waste	Negative	
	Occupational hazard	Storage of hazardous substances or materials	Negative	
	Biophysical	Soil and ground water contamination	Negative	
Project activity	**Environmental aspect**	**Identified impact**	**Nature of impact (Positive / Negative)**	**Assessment finding (s)**

Recruitment of workers or employees by contractors	Socio-economic	Influx of people looking for jobs	Negative	High influx of people looking for jobs is usually driven by recruitment of workers onsite and as a result people are motivated to visit in the morning to try their luck. Influx from communities further away from project area disrupts normal social set up of communities living in the project area causing possible decay of morality, increase in school drop-outs due to available unskilled labour, possible child labour and increased HIV/AIDS incidence and communicable diseases.
	Gender	Sexual exploitation and abuse	Negative	This refers to sexual abuse of local community members by project employees especially when there is lack awareness of prohibition of sexual abuse.
Sourcing of construction materials	Socio-economic	Increased cash flow to local businesses	Positive	It is convenient for contractors to source their materials locally leading to increased sales for the local businesses.
	Socio-economic	Increased traffic flow	Negative	There will be specialised equipment and materials that contractors will need to import from major cities and towns or from outside the country. This will lead to increase in traffic flow and sometimes abnormal loads depending on nature of the equipment.
Installation of new water supply	Socio-economic	Disruption of water supply	Negative	Water supply will be put offline in order to so new installations, test and commission and requires shutting down existing water supply.

equipment, water pipes etc				
Earthworks	Air quality	Dust emissions	Negative	Excavation activities during the construction phase results in dust emissions when soil is dry.
	Biophysical	Noise and vibrations	Negative	Heavy machinery, generators and other equipment and machinery used onsite will generate localised noise and vibrations at the area of work.
	Socio-Economic	Loss of private land or encroaching on private land	Negative	The bulk water pipelines will traverse through large distances through villages, settlements and Eenhana town. In some areas it may be unavoidable that it passes through private land.
	Biophysical	Loss of vegetation / land clearing	Negative	Trees may be cut during the construction phase to make way for the pipelines although we have minimal trees along the servitudes and the targeted sites for other infrastructure. The benefit of improving water supply out-weighs the loss of trees and mitigation measures can be put in place to manage the impacts.
Operation phase				
Pump stations, RO plant and Brine drying ponds	Occupational health and safety	Injuries	Negative	Operators may be injured if they lack knowledge and skills to operate water infrastructure equipment. Lack of appropriate personal protective equipment may result in injury to work personnel. Experiences with ponds have shown that people become curious and want to see what happens

				there resulting in injuries or drowning and / or loss of life. Brine is also tasty to livestock and they like licking the crystals which may result in them falling the ponds and getting trapped inside.
Decommissioning phase				
The development of Ohangwena II Wellfield is a medium to long term project and it is not anticipated that the developed infrastructure will be decommissioned in the short-term. As a result, no decommissioning was considered under this ESIA study but should be done at the time of decommissioning in the future. The future environmental conditions under which decommissioning may take place will be different and will only be justifiable to develop a decommissioning plan then. However a generic decommissioning procedure or guideline was developed and forms part of the ESMP for this particular project.				

Table 17: Impact Assessment Criteria (IFC, 2012)

Duration – What is the length of the negative impact?	
None	No Effect
Short	Less than one year
Moderate	One to ten years
Permanent	Irreversible
Magnitude – What is the effect on the resource within the study area?	
None	No Effect
Small	Affecting less than 1% of the resource
Moderate	Affecting 1-10% of the resource
Great	Affecting greater than 10% of the resource
Spatial Extent – what is the scale of the impact in terms of area, considering cumulative impacts and international importance?	
Local	In the immediate area of the impact
Regional / National	Having large-scale impacts
International	Having international importance
Type – What is the impact	
Direct	Caused by the project and occur simultaneously with project activities
Indirect	Associated with the project and may occur at a later time or wider area
Cumulative	Combined effects of the project with other existing / planned activities
Probability	
Low	<25%
Medium	25-75%
High	>75%

7.3.2.5 Impact Significance

Impact significance is determined through a synthesis of the above impact characteristics. The significance of the impact "without mitigation" is the main determinant of the nature and degree of mitigation required. Once the above factors (in **Table 17**) have been ranked for each potential impact, the impact significance of each is assessed using the criteria in **Table 18**. The impact significance will then be rated according to the significance classes (also presented in **Table 18**).

Table 18: Impact significance (IFC, 2012)

Class	Significance	Descriptions
1	Major Impact	Impacts are expected to be permanent and non-reversible on a national scale and/or have international significance or result in legislative non-compliance.
2	Moderate Impact	Impacts are long-term, but reversible and/or have regional significance.
3	Minor	Impacts are considered short-term, reversible, and/or localized in extent.
4	Insignificant	No impact is expected.
5	Unknown	There are insufficient data on which to assess significance.
6	Positive	Impacts are beneficial

The impacts assessment will also be done in conjunction with the AfDB key environmental policies triggered and these are presented in **Table 19** below.

Table 19: AfDB Key Environmental Policies Triggered

No.	AfDB Key Environmental issues triggered	Key	Yes	No
1.	Reversing Land Degradation and Desertification (RLDD)	RLDD	[√]	[...]
2.	Protecting the Coastal Zone (PCZ) etc	PCZ	[...]	[√]
3.	Protecting Global Public Goods	PGPG	[√]	[..]
4.	Improving Public Health	IPH	[√]	[..]
5.	Enhancing Disaster Management Capabilities	EDMC	[√]	[..]
6.	Promoting Sustainable Industry, Mining, and Energy Resources	PSIMER	[√]	[..]
7.	Improving Urban Environmental Management	IUME	[..]	[√]
8.	Environmental Governance	EG	[√]	[..]
9.	Institution and Capacity Building	ICB	[√]	[..]
10.	Increasing Awareness	IA	[√]	[..]
11.	Stakeholder Participation	SP	[√]	[..]

The potential impacts stemming from the proposed project activities are assessed per project component/type of activities.

Table 20: Environmental Impacts Identification and Evaluation.

IMPACT / ACTIVITY	AFFECTED ENVIRONMENTAL AND SOCIAL COMPONENTS														Project phase	Duration	Magnitude with project	Extent / Spatial scale	Type	Probability	Significance without mitigation
	FAUNA AND FLORA	WATER QUALITY	WATER QUANTITY	LAND USE	SOIL AND SLOPE STABILITY	VISUAL INTRUSION	AIR QUALITY	HUMAN SETTLEMENTS	PUBLIC NUISANCE	INFRASTRUCTURE & SERVICEs	AGRICULTURE	ARCHAEOLOGY	PUBLIC HEALTH & SAFETY	SOURCE OF INCOME	CULTURE & HERITAGE							
Vegetation Clearing	√	√	√	√	√	√	√		√		√		√	√	√	CO	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Air pollution	√	√	√	√			√	√	√				√	√		CO	Short	Moderate	Local	Direct	Medium 25 - 75%	Minor (-)
Soil pollution	√	√	√	√	√	√	√		√	√	√			√		CO	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Soil erosion	√	√	√	√	√	√	√		√	√	√			√		CO	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Solid waste Generation	√	√	√	√		√	√	√	√	√	√		√	√		CO	Short	Moderate	Local	Direct	Medium 25 - 75%	Minor (-)
Vehicular Movements	√			√	√		√	√	√				√			C	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Hazardous Substances	√	√			√		√						√			CO	Permanent	Moderate	Local	Direct	Medium 25 - 75%	Minor (+)

IMPACT / ACTIVITY	AFFECTED ENVIRONMENTAL AND SOCIAL COMPONENTS															Project phase	Duration	Magnitude with project	Extent / Spatial scale	Type	Probability	Significance without mitigation
	FAUNA AND FLORA	WATER QUALITY	WATER QUANTITY	LAND USE	SOIL AND SLOPE STABILITY	VISUAL INTRUSION	AIR QUALITY	HUMAN SETTLEMENTS	PUBLIC NUISANCE	INFRASTRUCTURE & SERVICES	AGRICULTURE	ARCHAEOLOGY	PUBLIC HEALTH & SAFETY	SOURCE OF INCOME	CULTURE & HERITAGE							
storage and handling																						
Construction of Brine drying Ponds	√	√	√	√	√	√	√		√	√			√	√		C	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Excavation of pipeline trenches	√	√	√	√	√	√	√		√	√			√	√		C	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Setting-up of construction camps	√	√	√	√	√	√	√		√	√			√	√		C	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Brine treatment	√	√		√		√		√	√				√			CO	Permanent	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Water Supply		√	√	√				√		√	√		√	√		O	Permanent	Moderate	Regional	Direct	Medium 25 - 75%	Beneficial Minor (+)

IMPACT / ACTIVITY	AFFECTED ENVIRONMENTAL AND SOCIAL COMPONENTS															Project phase	Duration	Magnitude with project	Extent / Spatial scale	Type	Probability	Significance without mitigation
	FAUNA AND FLORA	WATER QUALITY	WATER QUANTITY	LAND USE	SOIL AND SLOPE STABILITY	VISUAL INTRUSION	AIR QUALITY	HUMAN SETTLEMENTS	PUBLIC NUISANCE	INFRASTRUCTURE & SERVICES	AGRICULTURE	ARCHAEOLOGY	PUBLIC HEALTH & SAFETY	SOURCE OF INCOME	CULTURE & HERITAGE							
Social Aspects Proliferation						√		√	√	√	√	√	√	√	√	C	Short	Small	Local	Direct	Low <25%	Beneficial Minor (+)
Boost in water reliant activities	√	√	√	√	√	√		√		√	√		√	√	√	O	Permanent	High	Regional	Direct	High >75%	Beneficial Minor (+)
Employment Creation	√			√	√			√		√	√		√	√	√	CO	Permanent	High	Regional	Direct	High >75%	Beneficial Major (+)
Livelihoods Development				√									√		√	O	Permanent	Moderate	Regional	Direct	High >75%	Beneficial Minor (+)
Climate Resilience	√	√	√	√				√			√					O	Permanent	Moderate	Regional	Direct	Medium 25 - 75%	Beneficial Minor (+)
Inclusion of Women and Children	√	√	√								√		√	√	√	CO	Permanent	Moderate	Regional	Direct	Medium 25 - 75%	Beneficial Minor (+)

IMPACT / ACTIVITY	AFFECTED ENVIRONMENTAL AND SOCIAL COMPONENTS															Project phase	Duration	Magnitude with project	Extent / Spatial scale	Type	Probability	Significance without mitigation
	FAUNA AND FLORA	WATER QUALITY	WATER QUANTITY	LAND USE	SOIL AND SLOPE STABILITY	VISUAL INTRUSION	AIR QUALITY	HUMAN SETTLEMENTS	PUBLIC NUISANCE	INFRASTRUCTURE & SERVICES	AGRICULTURE	ARCHAEOLOGY	PUBLIC HEALTH & SAFETY	SOURCE OF INCOME	CULTURE & HERITAGE							
Sanitation and Health Improved		√	√							√	√		√			O	Permanent	High	Regional	Direct	High >75%	Beneficial Major (+)
Developed Water administrative system		√	√								√		√			O	Permanent	High	Regional	Direct	High >75%	Beneficial Minor (+)
Land Use change	√	√	√	√	√	√		√	√		√	√		√	√	CO	Permanent	Medium	Local	Direct	Medium 25 - 75%	Minor (-)
Occupational Hazards													√			C	Short	Small	Local	Direct	Medium 25 - 75%	Minor (-)
Pressure on local services and Resources	√		√	√	√			√	√	√	√			√		CO	Short	Medium	Local	Indirect	Medium 25 - 75%	Minor (-)

Key: I – Inception phase, Design phase, O – Operation phase, CO – Construction and Operation phases, C – Construction phase

7.4 Summary of potential negative impacts considered insignificant

Table 21: Summary of environmental and social impacts considered insignificant.

Environmental / Social Aspect	*Project phase*	*Nature of Impact (Positive / Negative)*	*Potential Impact*	*Assessment findings*
Noise	Construction and Operation	Negative	Noise from operation of pump stations	Minor given that there are existing operations on some sites. Construction noise will be limited to a specific construction period and will end when construction is finished.
Vegetation Clearing	Construction	Negative	Removal of vegetation to make way for infrastructure to be constructed	Not expected since the new infrastructure is planned on existing sites, new lines will follow public servitudes of existing roads. Protected trees may need to be removed and permits should be obtained for such.
Land use change	Operation	Positive	Land use change during operation may be triggered by enhanced access to water resulting increased economic activity. Land use change due to erection of campsites.	Access to water may lead to increase in water based economic activities such as horticulture, poultry and piggery etc. which contributes to increased food security. This triggers land use change as people begin to engage in other activities. Contractors' campsites will be temporary during the construction phase.
Cultural heritage	Construction	Negative	Potential to uncover heritage remains during project activities.	Findings are unlikely, as no known heritage sites are mapped and protected in the project area.
Climate change adaptation	Operation	Negative	The potential for climate change to impact the proposed project – i.e., decreased ground water	The proposed project is unlikely to be affected by potential climate change impacts in the short to medium term, but in the long term.

Environmental / Social Aspect	*Project phase*	*Nature of Impact (Positive / Negative)*	*Potential Impact*	*Assessment findings*
			recharge due to prolonged and perennial droughts.	
Climate change cause / contribution	Construction	Negative	The proposed project contributing to climate change through the emissions of Green House Gasses.	The proposed project is considered to be of a medium term, with construction envisioned to be completed after a few years.

7.5 Potentially Significant Impacts to be scoped into the ESMP and proposed mitigation measures.

The following section describes potentially significant issues based on the findings from the site visit and consultations held with IAPs. Many of these impacts can be adequately addressed through the implementation of appropriate mitigation and management measures and are those inherent to the construction and operation phases of the project cycle.

Table 22: Proposed mitigation / enhancement measures.

Construction phase					
Project activity	**Environmental aspect**	**Identified impact**	**Nature of impact (Positive / Negative)**	**Assessment finding (s)**	**Mitigation measure(s)**
Mobilization and camp setup	Biophysical	Loss of vegetation or land clearing	Negative	Trees and shrubs will be cleared to make way for temporary accommodation of the workers, canteen, offices & workshops and above ground fuel storage tanks.	Locate workers campsite in such a way to avoid cutting trees as much as possible.

	Waste management	Indiscriminate dumping of solid and discharge of liquid waste	Negative	Domestic waste will be generated at the campsite.	Dispose of domestic waste generated at a designated waste disposal site while mobile toilets can be used for sanitation purposes.
	Occupational hazard	Storage of petroleum products such as diesel.	Negative	Further to that petroleum products are highly inflammable making them hazardous to the workers and nearby homesteads.	No naked flames or smoking and open fires should be allowed in the campsite. Fire extinguishers must be kept onsite for use in case of emergency.
	Biophysical	Soil and ground water contamination	Negative	There is potential to spill petroleum products from the storage facilities or from the workshop area during maintenance of construction machinery or equipment which can cause soil and ground water contamination.	Above ground fuel storage tanks must be bund walled with concrete water proof floors to contain and prevent seepage of spilled fuel, workshops should be fitted with oil separators.

Project activity	Environmental aspect	Identified impact	Nature of impact (Positive / Negative)	Assessment finding (s)	Mitigation measure(s)
Sourcing of construction materials	Socio-economic Socio-economic	Increased cash flow to local businesses	Positive	It is convenient for contractors to source their materials locally leading to increased sales for the local businesses.	Encourage the contractors to buy as much as they can locally to improve local cash flow and reduce the carbon foot print as well.
		Increased traffic flow	Negative	There will be specialised equipment and materials that contractors will need to import from major cities and towns or from outside the country. This will lead to increase in traffic flow and sometimes abnormal loads depending on nature of the equipment.	There should be good signage and lighting put along the roads in the project area to control / guide traffic flow in order to avoid accidents and traffic disruptions.
Installation of new water supply equipment, water pipes etc		Disruption of water supply	Negative	Water supply will be put offline in order to so new installations, test and commission and requires shutting down existing water supply.	Stakeholders should be informed earlier of planned / scheduled water supply cuts when there is work in progress.

Project activity	Environmental aspect	Identified impact	Nature of impact (Positive / Negative)	Assessment finding (s)	Mitigation measure(s)
Recruitment of workers or employees by contractors	Socio-economic	Influx of people looking for jobs	Negative	High influx of people looking for jobs is usually driven by recruitment of workers onsite and as a result people are motivated to visit in the morning to try their luck. Influx from communities further away from project area disrupts normal social set up of communities living in the project area causing possible decay of morality, increase in school drop-outs due to available unskilled labour, possible child labour and increased HIV/AIDS incidence and communicable diseases.	Encourage recruiting workers from the locals i.e., nearby town and villages. No workers should be recruited at the work area or campsite. All Contractors should have an HIV / AIDS and gender policy in place and conduct awareness trainings and campaigns targeting their workers.
	Gender	Sexual exploitation and abuse	Negative	This refers to sexual abuse of local community members by project employees especially when there is lack of awareness of prohibition and expected conduct.	

Project activity	Environmental aspect	Identified impact	Nature of impact (Positive / Negative)	Assessment finding (s)	Mitigation measure(s)
Excavations during construction .e.g. laying of water pipes.	Air quality	Noise pollution	Negative	Noisy and vibration are an issue to the workers and public in general. Prolonged exposure to noise especially for the workers is hazardous to health.	Ensure construction equipment and machinery is well serviced and maintained to avoid unnecessary noise and vibrations. Ensure workers are provided with adequate and appropriate personal protective equipment and awareness training on health and safety.
	Occupational health & safety	Injuries	Negative	Heavy mobile construction equipment poses safety hazards to the Operators due to mobility of equipment, moving parts or components of the equipment.	Ensure workers are provided with adequate and appropriate personal protective equipment and that they actually use appropriately during work.
	Air quality	Dust emissions	Negative	Excavation activities during the construction phase results in dust emissions when soil is dry.	Ensure workers are provided with adequate and appropriate personal protective equipment (dust masks) and that they actually use appropriately during work. Encourage wetting surfaces when working on dry soil.
Operation					

Operation of the developed water infrastructural equipment such as RO plant, brine drying ponds and pump stations etc.	Occupational health and safety	Injuries	Negative	Operators may be injured if they lack knowledge and skills to operate the equipment. Lack of appropriate personal protective equipment may result in injury to work personnel.	This can be mitigated through capacity building and training. Workers should also be given adequate and appropriate personal protective equipment. Infrastructure should be fenced off to avoid unwanted access.
Operation of RO Plant	Waste management	Waste	Negative	The operation of RO plant will generate brine. We expect 85% recovery and the remaining 15% will be brine	Evaporate the brine concentrate and explore the value of the recovered salts.

7.6 Mitigation Measures

Mitigation measures focuses on reducing the effects of the potential environmental and social impacts identified and to ensure that an acceptable measure of mitigation can be maintained when an impact cannot be avoided completely. An ESMP has been developed and it sets out the management plans/actions (that will ensure that all proposed mitigation measures are implemented), responsible parties for implementation, monitoring and enforcement, monitoring indicators and indicators for the respective impacts.

7.7 Plan of study / proposed action plan

7.7.1 Public Participation during ESIA Phase

The final ESR will be submitted to MEFT for review and feedback will be communicated to the Client and all registered stakeholders. The ESR and ESMP will be shared with the Client for comments before being shared with stakeholders for review. Registered stakeholders will be notified of the availability of the draft ESR and ESMP and allowed 14 days to comment. Notices will be published at the venues in the region, print media and the national Oshiwambo radio. A series of stakeholder disclosure meetings will be conducted at the same venues used during the scoping phase to present the ESR and ESMP. Minutes of the meetings will be captured and used to generate a comments and response report. Comments will be moderated and incorporated before submission to the Client for final approval. The database containing registered I&APs will be updated as and when necessary during the progression of the ESIA process.

8. CONCLUSION AND WAY FORWARD

8.1 Conclusion

Through the scoping process, it was found that there were no significant impacts emanating from this project that warrant conducting specialist studies nor detailed Environmental and Social Impact Assessments. This is mainly due to the fact that the project footprint is on previously disturbed land containing existing infrastructure. In the absence of fauna and flora potential impacts are minimal or minor in that respect. The planned pipelines will follow the existing pipeline routes while new offtake pipelines will follow existing roads. Planned associated infrastructure will be located on NamWater's existing sites. Potential negative biophysical impacts identified were temporary and moderate and can be significantly reduced through implementation of the proposed mitigation measures. No potential loss of land nor private assets was identified for the reason that existing sites are being used as well as existing public servitude. The land for the brine drying ponds will be bought from the town council. Therefore, it is concluded that all possible environmental aspects associated with the proposed activities can be mitigated through management actions implemented during the planning, construction, operation and decommissioning phases of the project. The ESMP developed for the project must be implemented during all the project phases. It is the opinion of the EAP that the scoping process was done in and objective manner and the ESR and the EMP contain all necessary control, mitigation and monitoring measures formulated to meet statutory requirements. Therefore, it is recommended that the project be granted an Environmental Clearance, assuming the ESMP is implemented.

9. REFERENCES

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10. ANNEXURE 1: CONSULTANTS' CVS

Republic of Namibia

African Development Bank

NAMWATER
Namibia Water Corporation Ltd

CV for Josiah T. Mukutiri



1. **Proposed Position:** Lead Environmental Assessment Practitioner
2. **Name of Firm:** Outrun Consultants cc
3. **Name of Staff:** Josiah T. Mukutiri
4. **Date of Birth:** **28 March 1976**
5. **Nationality:** Zimbabwean

Membership in Professional Bodies:

Member of International Association for Impact Assessment (IAIA)

Member of Environmental Assessment Professional of Namibia (EAPAN)

Key Qualifications:

Institution [Period]	**Degree(s) or Diploma(s) obtained:**
Namibia University of Science and Technology, (01/2018 – 11/2019) (Candidate)	MSc Geoinformation Science and Earth Observation (Natural Resources Management)
Aldersgate College (Philippines)	Master in Business Administration (MBA)
University of Zimbabwe (UZ), (01/2000 – 12/2003)	BSc Honours in Applied Environmental Science (HAES)

Additional Qualifications:

i. Assessing and Valuing Ecosystem Services For Policy Impacts in The Context Of A Biodiversity Economy-GIZ Resource Mobilisation Project, Namibia
ii. Leadership skills, Kellogg Foundation – Southern Africa
iii. Training and Facilitation skills, African Intellectual Resources
iv. Research Skills, Woburn Business School
v. Waste Management and Pollution Control, University of Zimbabwe

PROFESSIONAL EXPERIENCE

Employment record relevant to the assignment:		
Period	**Employing organization and your title/position. Contact info for references**	**Summary of activities performed relevant to the Assignment**
04/1997 – 07/1999	Broken Hill Proprietary (BHP)- Full time employment **Senior Process Controller**	*Base Metal Refinery process control* Efficient recovery of base metals and platinum group of metals. Waste management and pollution control Updating sampling protocols Implementation occupational health, safety and environmental standards Conducting internal occupational health, safety and environmental audits.

outrun consultants

01/2000 – 12/2003	Undergraduate Student	Student pursuing Bachelor's degree in Applied Environmental Science Honours.
01/2003 – 12/2006	**University of Zimbabwe** **Research and Teaching Assistant** **References** Professor S. Mpepereki Dept. of Soil Science & Agricultural Engineering Faculty of Agriculture Email: smpepe@agric.uz.ac.zw	*Research and Teaching Assistant* Conducting first and second year lectures, field and laboratory practicals Grading examinations, assignments and practicals Invigilating exams
2010 – 12 / 2013	**USAID-Medical Sciences for Health (MSH) contract.** **Outrun Consultants cc** **Lead Environmental Consultant** For references: Benjamin Ongeri / Evans Sagwa, USAID- MSH Management Tel.: +264 61 228 016 Email: esagwa@msh.org.na / bongeri@na.pfscm.org	The design and installation of new waste management facilities at Katutura hospital Intermediate, Windhoek, Namibia. Characterisation and developing a waste management plan for Intermediate Hospital Katutura and all other health facilities in Khomas Region. Developing broad specifications of equipment requirements for the proposed waste management facilities. Technical evaluation of bids
2010 – 12 / 2013	**USAID-Medical Sciences for Health (MSH) contract.** **Outrun Consultants cc** **Lead Environmental Consultant** For references: Benjamin Ongeri / Evans Sagwa, USAID- MSH Management Tel.: +264 61 228 016 Email: esagwa@msh.org.na / bongeri@na.pfscm.org	Environmental Impact Assessment for the new incinerators at Intermediate Hospital Katutura. Conducting public consultations. EIA Practitioner responsible for identifying potential impacts and assessing impacts significance. Assessing technological alternatives. Compiling Environmental Management Plan (EMP).
2012	Africa Humanitarian Action (AHA) contract **Outrun Consultants cc** **Lead Environmental Consultant** For references: Ms. Aynalem Tekle-Giogis, Country Representative Tel.: +264 61 235 107 Email:	This was a research-based assignment. Deaths were reported at Osire Refugee Settlement and was suspected to be due to contaminated borehole water causing panic and resulting in refugees abandoning borehole water. I was contracted to assess the potential of groundwater contamination by pit latrines at Osire Refugee Settlement. Activities included geological and hydrological mapping of the area, characterisation of soils, identification of potential sources of microbial

	aha@africaonline.com.na	contaminants and microbial analysis of ground water.
2013	Offshore Development Company (ODC) **Outrun Consultants cc** **Lead Environmental Consultant** For references: Mr. Phillip Namundjebo, Chief Executive Officer Tel.: +264 811 228 222 Email: phillip.namundjebo@odc.com.na	Feasibility study and waste management plan for Omaenena Business Park in Omusati Region.
2013	**Zimbabwe National Water Authority (ZINWA).** **Outrun Investments (Pty) Ltd** **Environmental Consultant – EIA Coordinator** **Mr. C. Dini** **ZINWA Planning Manager** **Email: cdini@zinwa.co.zw / schari@zinwa.co.zw**	**Environmental Impact Assessment for the NATIONAL MATEBELELAND ZAMBEZI WATER PROJECT. The project scope covered land clearing, trenching and construction of; Gwayi-Tshangani Dam (GTD), twin-pipeline from GTD to Cowdray Park in Bulawayo (245 km), low lift & booster pump stations and a link pipeline from Deka-Zambezi confluence to Kennedy Siding where it would meet the twin-pipes. Consultations were done for all key stakeholders and communities within 60km radius of the pipeline.**
2013	Offshore Development Company (ODC) **Outrun Consultants cc** **Lead Environmental Consultant** For references: Mr. Phillip Namundjebo, Chief Executive Officer Tel.: +264 811 228 222 Email: phillip.namundjebo@odc.com.na	Environmental Impact Assessment for Omaenena Business Park. EIA Practitioner responsible for managing the EIA process, public consultation, assessing impacts significance, compiling EMP.
Since 01/2012	Ministry of Agriculture Water and Forestry **Outrun Consultants cc** **Environmental Consultant** For references: Ms. Nantanga Director of Rural Water Supply Tel.: +264 61 2087 111 Email: nantangat@mawf.gov.na	Capacity building programme:- Developing training manuals and facilitating workshops in Solid and Liquid Waste Management. Trained all Rural Water Extension Officers in 14 Regions of the country.

Since 09/2005	Dreamland Investments (Pty) Ltd **Outrun Consultants cc** **Lead Environmental Consultant** For references: Mr. Lukas Sasamba, Managing Director Tel.: +264 812 783 647 Email: sasamba@yahoo.com	EIA for the granite mining and processing plant at Otjohorongo in Erongo Region. Environmental auditing and development of a waste management plan for Ekungungu granite mine and residency.
2015	**Client: MAWR** **Environmental Consultant** **For references:** **Timo David** **D&P Engineers and Environmental Consultants** **Tel.: +264 812 998 444**	**Okeeholongo via Iitapa Rural Water Supply Scheme in Omusati Region. Environmental Impacts identification to guide the planning and design of the project.**
Since 2017 to date	BH Meat Abattoir **Outrun Consultants cc** **Lead Environmental Consultant** For references: Ms. Meriam Hauwanga, Managing Director Tel.: +264 816 110 307 Email: bhmeat@hotmail.com	Environmental auditing and compiling of waste management plan.
2017 – 2018	Ministry of Land Reform and Resettlement – Programme for Communal Land Development (PCLD) funded by EU – Basket Fund **Socio-Economist Consultant** For References: Jericho Mulofwa Programme Manager Tel: +264 812 706 404 Email: jericho.mulofwa@gmail.com	Assessing the socio-economic status and benefits of small-scale commercial farming units in Oshikoto Region. This involved designing data collection tools, socio-economic baseline data collection, analysis and report writing.
2018 - 2021	**Client: MAWF** **Environmental Consultant** **For references:** **Timo David**	**Environmental Impacts identification for the Braunfels – Khorixas Water Scheme Upgrade.**

	D&P Engineers and Environmental Consultants Tel.: +264 812 998 444	
2019 - 2020	Client: Kunene Regional Council Reference: Quixmux Nujoma Vero Group CC Tel: +264 817 114 016	Okanguati Water Supply Scheme Phase 1. Environmental Impacts identification and formulation of mitigation measures.

Languages:

Language	Reading	Speaking	Writing
English	Excellent	Excellent	Excellent
Shona	Excellent	Excellent	Excellent
Afrikaans	Poor	Poor	Poor

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experience and me.



25 October 2022

Signature **Date (Day/Month/year)**

Form TECH-6:CV for Fredrika N. Shagama



1. **Proposed Position:** Environmental Assessment Practitioner & Hydrogeologist
2. **Name of Firm:** Outrun Consultants cc
3. **Name of Staff:** Fredrika N. Shagama
4. **Date of Birth:** 19 October 1990
5. **Nationality:** Namibian

Membership in Professional Bodies:

-International Association of Hydrogeologists - Full Member, No.139790

-Namibian Hydrogeological Association - Member, http://namhydro.com/wp/members/

-Environmental Assessment Professionals of Namibia (EAPAN) - Ordinary member practitioner, No. 183, https://eapan.org/registered-members

Key Qualifications:

Institution [Period]	**Degree(s) or Diploma(s) obtained:**
VSB – Technical University of Ostrava, Czech Republic, Faculty of Civil Engineering, (September 2019 to date)	PhD Student: Civil Engineering (Geotechnics & Environmental Hydrogeology):
VSB – Technical University of Ostrava, Czech Republic, Faculty of Mining & Geology, (2013-2015)	MSc. Geological Engineering (cum laude) with a primary focus in Hydrogeology
VSB – Technical University of Ostrava, Czech Republic, Faculty of Mining & Geology, (2010-2013)	BSc. Geological Engineering

Publications:

-Not yet (under reviews)

Additional Qualifications:

N/A

Professional Trainings:

-Training on the problems in Geotechnics: Landslide and Groundwater issues on highways in the Czech Republic – April 2020

-Academic& Scientific writing Workshop by the Department of Languages and Technical Reporting of VSB Technical University of Ostrava, Czech Republic (July 2020)

-Scientific Presentation, Writing and Speaking Workshop, sponsored by GeoUS and presented by the University of Vaasa (Finland) – May 2020

-Groundwater Flow Modelling with GMS (MODFLOW, MODPATH) by AQUAVEO at the VSB-Technical University of Ostrava - June 2015

PROFESSIONAL EXPERIENCE

Employment record relevant to the assignment:		
Period	**Employing organization and your title/position. Contact info for references**	**Summary of activities performed relevant to the Assignment**
January 2022 to date	**Environmental Assessment Practitioner & Hydrogeologist** **Outrun Consultants** Mr. Josiah T. Mukutiri: Director Outrun Consultants E: outrungreeninfo@gmail.com	▪ Conducting Environmental Scoping Assessments and developing Environmental Management Plans ▪ Conducting Groundwater (Hydrogeological) studies, Environmental Impact Assessments, Groundwater Monitoring, application for Environmental Clearance Certificates ▪ Environmental monitoring and compliance auditing.
January 2019 to date	**Technical Advisor: Environmental and Groundwater Consultant** **Mr. Nerson Tjelos** Excel Dynamic Solutions Pty Ltd E: ntjelos@edsnamibia.com	▪ Conducting Groundwater (Hydrogeological) studies, Environmental Impact Assessments ▪ Groundwater Monitoring ▪ Public & Stakeholders engagement and consultation ▪ Project Management & Staff management ▪ Proposal and Technical compilation of Groundwater studies and EIA reports ▪ Development of Environmental Management Plans (EMPs) ▪ Training and mentoring of young Consultants.
August 2015 to December 2018	**Country Hydrogeologist, Environmental Assessment Practitioner Safety, Health & Environmental (SHE) Officer** **GCS Water Environmental Engineering Namibia (Pty) Ltd (GCS Namibia), Windhoek** **Mrs. Eloise Carstens** Country Manager E: eloise@ec-it.org	▪ Conducting Groundwater (Hydrogeological), Geological & Geochemical studies ▪ Geotechnical investigations ▪ Groundwater Monitoring ▪ Air Quality Monitoring ▪ Project Management ▪ Proposal and Technical Report writing and Environmental Impact Assessments & Environmental Management Plans ▪ Further responsibility included training of junior geologists and environmental assessment practitioners and ensuring health and safety implementation in the office.
July 2014 – September 2013	**Intern Geologist / Hydrogeologist in the Environmental Department (under the Supervision of GCS Water & Environmental Consultants (Pty) Ltd)** E: eloise@ec-it.org	▪ Measuring Groundwater Levels ▪ Water Sampling and Preservation

PROJECT EXPERIENCE

Year	EIA/EMP Projects: Client, Project Name and Location
2022	▪ Desktop Hydrological & Hydrogeological Assessment Study for the Construction (Establishment) and Operation of a Bulk Fuel Storage Facility at the Eros Airport, Windhoek in the Khomas Region, Namibia. Client: Central Oil Namibia (Pty) Ltd. Responsibilities: Compilation of the Water Resources Impact Assessment Report. ▪ Socio-economic Impact Assessment (and Action Plan) for B2Gold Otjikoto Mine (current status and mine closure preparation) in the Otjozondjupa Region, Namibia. Client: Southern African Institute for Environmental Assessment (SAIEA) for B2Gold Namibia. Responsibilities: Conducting Employee Interviews (One-on-One) / Socio-Economic Surveys with the B2Gold Namibia (Otjikoto Mine) employees from the Mining, and Environmental Departments / Sections (for the representative sample of 330 employees). ▪ Hydrogeological Impact Assessment Report for the Proposed Establishment of a Mixed Residential and Commercial Property Development (Avis Ridge) at Avis Dam of the Klein Windhoek Suburb, Windhoek – Khomas Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants cc for KHD Investments CC. Responsibilities: Site visit, Data collection & analysis, compilation of the Groundwater Assessment Report. ▪ Comprehensive Draft Environmental Management Plan (EMP) for the Operations and Maintenance of the Existing 3-Megawatt (MW) Solar Photovoltaic (PV) Park within the Townlands of Arandis in the Erongo Region, Namibia: An Application for Environmental Clearance Certificate (ECC). Client: OLC Arandis Solar Energy Pty Ltd. Responsibilities: Site Visit & Auditing, Compilation of the Comprehensive EMP and Project Management. ▪ Feasibility Study: Upgrading Scenario for MR033 Mata-Mata Border Post - Gochas - Stampriet (291 Km) in the Hardap Region and small part of //Karas Region, Namibia. Client: Archetype Project Consultants, D&P Consulting Engineers & Amir Consulting Services (ADA-Joint Venture) for Roads Authority. Responsibilities: Site Visit & Assessment, Hydrogeological Impact Assessment, Co-Author of the Environmental & Social Impact Assessment (ESIA) Report & Management Plan (ESMP). ▪ Environmental Scoping Assessment Study for the Proposed Mineral Prospecting & Exploration Activities on five (5) Exclusive Prospecting Licenses (EPLs) No. 8655, 8656, 8664, 8671 & 8672 located northeast of Gobabis in the Omaheke Region, Namibia. Client: Noronex Exploration and Mining Company Pty Ltd, under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Site visit & Assessment, Facilitation of Public Participation & Engagement and Compilation of Environmental Assessment Report & EMP. ▪ Comprehensive Environmental Management Plans (EMPs) for the Existing Solid Waste Dumpsites: Rehoboth in the Hardap Region and Rundu in the Kavango East Region, Namibia. Client: Rehoboth Town Council & Rundu Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Site Visits & Assessments, Data Collection & Analysis, Compilation of Comprehensive EMPs, Project Supervision of the interns / environmental trainees on the projects, and Project Documents Review. ▪ Environmental Impact Assessment (EIA) Study and Development of an Environmental Management Plan (EMP) for the Proposed Oniipa Town Solid Waste Dumpsite in the Oshikoto Region, Namibia. Client: Oniipa Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Site Selection, Visit & Assessment, Facilitation of Public/Stakeholders Consultation & Engagement (including Consultation Meetings), Compilation of the EIA Report & EMP, Project Supervision of the intern / environmental trainee on the project, and Project Documents Review. ▪ Environmental Management Plan (EMP) for the Existing Rehoboth Solid Waste Dumpsite in Hardap Region, Namibia. Client: Rehoboth Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Project Supervision of 4 interns / graduates working on the projects, Site Visit and Assessment, Data Collection, and Project Documents Review. ▪ Environmental Impact Assessment (EIA) Study for the Oxidation Ponds and Sewage Treatment Plant in Eenhana Town, Ohangwena Region, Namibia. Client: Eenhana Town

Year	EIA/EMP Projects: Client, Project Name and Location
	Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Project Supervision of 4 interns / graduates working on the projects, Site Visits and Assessments, Project Documents Review. ▪ Development of the Environmental Management Plan (EMP) for the Existing Effluent Treatment Plant in Lüderitz, //Karas Region, Namibia. Client: Lüderitz Town Council under Excel Dynamic Solutions (Pty) Ltd. Responsibilities: Project Supervision of 4 interns / graduates working on the projects, Site Visits and Assessments, Project Documents Review. ▪ Environmental Scoping Assessment (ESA) Study for the Construction, Operation and Decommissioning of a New Waste Dumpsite for the Helao Nafidi Town Council, Ohangwena Region, Namibia. OMAVI Geotechnical & Geo-Environmental Consultants CC (O. B. O Helao Nafidi Town Council). Responsibilities: Compilation of the ESA Report and Environmental Management & Rehabilitation Plan (EMRP). ▪ Environmental Assessment for the proposed prospecting and exploration activities on Exclusive Prospecting Licenses (EPLs) No. 8234 & 8323 near Aus, EPL 8350 between Tses & Asab and Gibeon in the //Karas Region and Hardap Region, respectively. Client: Dwyka Investment CC. Responsibilities: Site visits & Assessments, Facilitation of Public Participation & Engagements and Compilation of Environmental Assessment Reports & EMPs and Project Management. ▪ Renewal, Amendment and Transfer of the Environmental Clearance Certificate (ECC) for the Continued Operation of the Existing Walvis Bay Stone Processing Facility on Farm No. 38 and Reclamation / Rehabilitation of an Abandoned Quarry within the Walvis Bay Rural Constituency, Erongo Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants CC (O. B. O BC Stone Products Namibia (Pty) Ltd). Responsibilities: Compilation of the ECC Renewal, Transfer & Amendment Applications, Environmental Overview, Management & Rehabilitation Plan (EMRP), Public/Stakeholder Updated & Consultation Facilitation, and Site visit & assessment.
2021	▪ Environmental Assessment for the Proposed Construction and Operation of Four Oxidation Ponds in the Tses Village, //Karas Region. Client: Dunamis Consulting Engineers & Project Managers (Pty) Ltd. Responsibilities: Site visit & Assessment, Facilitation of Public Participation and Compilation of Environmental Assessment Report & EMP. ▪ Renewal of an Environmental Clearance Certificate (ECC) for the 22.80 Mega-Watt (MW) Trekkopje Solar (Photovoltaic) Park and ongoing Bi-Annual Environmental Auditing near Arandis in the Erongo Region, Namibia. Client: Sertum Energy Namibia Pty Ltd a subsidiary of Enertronica Santerno Group (Italy)). Responsibilities: Compilation of the ECC Renewal Report/Updating the EMP, Site Assessment, Project Management, and Continued / Ongoing Bi-Annual Environmental Auditing. ▪ Renewal of the ECC for the ongoing Construction and operational activities of a 5-megawatt (MW) Solar (Photovoltaic) Power Plant and ongoing Bi-Annual Environmental Auditing in Okatope, Oshikoto Region, Namibia. Client: Unisun Energy (Pty) Ltd (Enertronica Santerno Group (Italy)). Responsibilities: Environmental Clearance Certificate Renewal Report, Site Visit, Environmental Compliance Check, Project Management, and Continued Environmental auditing. ▪ Geohydrological Assessment for the Proposed Upgrade to Bitumen Standard of the DR1953 Karibib-Otjimbingwe Road (56km) in the Erongo Region, Namibia: Road Construction Water Supply. Client: Tweya Consulting Engineers for Roads Authority of Namibia. Responsibilities: Data collection & analysis, compilation of the Groundwater Report. ▪ Geohydrological Assessment for the Proposed Upgrade to Bitumen Standard of the DR3616 Tsandi-Onesi-Epalela road (48km) in the Omusati Region, Namibia: Road Construction Water Supply. Client: D&P, Archetype and Tweya (DAT-Joint Venture) Consulting Engineers for Roads Authority of Namibia. Responsibilities: Data collection & analysis, compilation of the Groundwater Report.

Year	EIA/EMP Projects: Client, Project Name and Location
	▪ The Strategic Environmental Assessment for the Windhoek Municipal Council (City of Windhoek) for the period of 2020 to 2030 in the Khomas Region, Namibia. Client: Windhoek Municipal Council (under Excel Dynamic Solutions (Pty Ltd). Responsibilities: Groundwater Baseline & Assessment Component and Legal Framework Review. ▪ Detailed Environmental Assessment for the proposed exploration and mining of dimension stone on Mining Claims No. 71609 to 71617 near Arandis in the Erongo Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants CC (O.B.O Okonde Mining and Exploration CC). Responsibilities: Facilitation of Public Participation, Compilation of Environmental Assessment Report & EMP and incorporating specialists' input into the Report and EMP.
2020	▪ Desktop Geohydrological Assessment (DGA): Proposed Groundwater Abstraction for Agricultural activities along the Orange River between Oranjemund (Namdeb Mining area) and Rosh Pinah in the Oranjemund Constituency, //Karas Region, Namibia. Client: KPM Environmental Consulting (O.B.O Oranjemund Constituency Office). Responsibilities: Baseline Geohydrological Assessment, Data Analysis and Compilation of the Report. ▪ Hydrogeochemical Data Management for the Kladno District Project in the Central Bohemian Region, Czech Republic. Client: Green Gas DPB a.s (under the VSB Technical University of Ostrava). Responsibilities: Groundwater and soil chemistry Data Analysis in Preparation for Reporting & Database entry. ▪ Groundwater Data Management for the Prackovice D8 (highway) Landslide Project in the Litoměřice District, Ústí nad Labem Region of the Czech Republic. Client: Czech Geological Survey under VSB-Technical University Ostrava projects. Responsibilities: Borehole Data Analysis in Preparation for Reporting & Numerical Modelling. ▪ Environmental Scoping Assessment (ESA) Studies for the Proposed Exploration Activities of Dimension Stone and Industrial Minerals on Exclusive Prospecting Licenses (EPLs) 6139 and 7008 near Karibib in the Erongo Region, Namibia. Client: OMAVI Geotechnical & Geo-Environmental Consultants CC (O.B.O Agulhas Mineral Resources CC & Naris Mineral Resources CC, respectively). Responsibilities: Facilitation of Public Participation and Engagements, Site visits & assessments, Compilation of Environmental Assessment Reports & EMPs. ▪ Desktop Water Resources Assessments as part of the two Environmental Impact Assessments (EIAs) for the Embankment of Muzii and Nankuntwe Combined School Platforms in the Zambezi Region, Namibia. Client: I.N.K Enviro Consultants (O.B.O Zambezi Regional Council). Responsibilities: Baseline Assessment of surface & groundwater resources and Compilation of Water Resources Risk Assessment Reports. ▪ Desktop Geohydrological Assessment (DGA) as part of the Environmental Impact Assessments (EIA) - The Proposed Eco-Friendly Seawater Desalination Plant in Henties Bay, Erongo Region, Namibia. Client: Namib Eden Trading CC. Responsibilities: Desktop Study and Compilation of the Water Impact Resources Report.
2019	▪ Desktop Geohydrological Assessments as part of the Environmental and Social Impact Assessments (ESIAs) for the Proposed Pilot Desalination Plants in Bethanie Town and Grünau Settlement in the //Karas Region, Namibia. Client: KPM Environmental Consulting (O.B.O NamWater). Responsibilities: Baseline Geohydrological Assessment, Data Analysis and Compilation of the two Reports. ▪ A Strategic Environmental and Social Assessment (SESA) / Environmental and Social Management Framework (ESMF) for the Namibia Water Sector Support Program (NWSSP), Namibia. Client: African Development Bank Group (AfDB) with the Ministry of Agriculture, Water and Land Reform (MAWLR). Responsibilities: Baseline Hydrogeological and Environmental Assessment, Reports & Framework Compilation, Key Stakeholders Engagement, and Internal Documents Review. ▪ Environmental Assessment (EA) for the proposed Construction and Operation of a Wastewater Treatment Plant for Linus Shashipapo Secondary School in the Kavango East

Year	EIA/EMP Projects: Client, Project Name and Location
	Region, Namibia. Client: Dunamis Consulting Engineers & Project Managers. Responsibilities: Project Management, Site visit & Assessment, Facilitation of Public Participation (including public meeting) and Compilation of Environmental Assessment Report & EMP. ▪ Environmental Scoping Assessment for the Proposed Construction of a 5-Megawatt (MW) Solar Photovoltaic (PV) Plant on Sollum Farm No 251 Alleem Kamp near Aranos, Hardap Region, Namibia. Client: Climate Dynamics cc (O.B.O. Sollum Solar Power CC). Responsibilities: Site visit, Compilation of the Environmental Report and EMP, Co-Facilitation of Public Engagement (as per IFC Standards) and Lead Environmental Assessment Practitioner and Advisor. ▪ Hydrogeological Assessment and Groundwater Abstraction and Use Permit Application & Environmental Scoping Assessment for the proposed Lucerne Irrigation Scheme on Farm Klein Nabas 137 (Marlo Portion) near Stampriet, Hardap Region, Namibia. Client: Green Team Consultants (O.B.O Jonkheer Boerdery Pty Ltd). Responsibilities: Site visit and assessment, Compilation of Desktop Groundwater Report and Technical Report for Groundwater Permit application and Environmental Assessment Report & EMP.
2018	▪ Hydrogeological Study for the Expansion of Tsumeb Smelter Monitoring network (new boreholes) in the Oshikoto Region, Namibia. Client: Dundee Precious Metals Tsumeb (DPMT). Responsibilities: Borehole siting (geophysical survey), Drilling & borehole construction supervision& data analysis. ▪ National Environmental Assessment for the MTC Namibia 100% Population Coverage: Proposed new 554 network towers / sites in all the Regions of Namibia. Client: Mobile Telecommunications Limited (MTC Namibia). Responsibilities: Facilitation of (Northern Regions) Regional Focused Consultation Meetings, Compilation of 14 Draft & 14 Generic EMPs, Site visits, Landscape (soil, topography, hydrology, and geohydrology) specialist, and Environmental Assessment Reports. ▪ Environmental Assessments of two 66 kV powerlines for the Solar PV sites near Keetmanshoop, //Karas Region and Mariental, Hardap Region, Namibia. Client: GreeNam Electricity (Pty) Ltd. Responsibilities: Compilation of Environmental Assessment Reports & EMPs and Public Consultation. ▪ Updating of the Numerical Groundwater Flow Model for the Lower Kuiseb River Aquifers near Walvis Bay, Erongo Region, Namibia. Client: Namibia Water Corporation Limited (NamWater). Responsibilities: Co-Training of NamWater Project Staff (Modelling) and Data Collection & Collation, assisted with the updating of the numerical model, and overall Model Update Report Compilation. ▪ Groundwater Monitoring as part of Environmental Audit and Groundwater abstraction & use permit license renewal for Okatji Mine, Erongo Region, Namibia. Client: Okatji Marble Mine cc. Responsibilities: Training of mine personnel on EMP implementation and groundwater level measurement & sampling and Environmental monitoring report.
2017-2015	▪ Oranjemund Water Sustainability Study Phase 1 & 2, //Karas Region, Namibia. Client: Freedthinkers. Responsibilities: Data Analysis, Hydrogeochemical Component & Report Compilation (contributing author). Year: 2017 ▪ Geohydrological Investigation of the Groundwater Resources at Outjo and the Possible Impact of the Development of 60 New Residential Plots in the Kunene Region, Namibia. Client: Municipality of Outjo. Responsibilities: Field Investigation, Project Management, Data collection & Analysis Technical Report Compilation and Client Liaison. Year: 2016 ▪ Groundwater Quality Assessment for Sambyu Village Water Supply Scheme, Kavango East Region, Namibia. Client: Iliso Consulting Namibia O.B.O NamWater. Responsibilities: Groundwater sampling, Site visit, Groundwater impact assessment, Compilation of groundwater quality report and Project management. Year: 2017.

Year	EIA/EMP Projects: Client, Project Name and Location
	▪ Groundwater Monitoring and Sampling for the De Brochen Project in the Limpopo Province, South Africa. Client: Anglo American Platinum. Responsibilities: Groundwater Level measurement, Surface water sampling. Year: 2016 ▪ Environmental Hydrocarbon Contamination Assessment Phase 1 for Interchain Logistics and Nulaid Fuel Stations in Johannesburg, Guateng Province, South Africa. Client: SASOL. Responsibilities: Site Inspection, Measurement of water levels in tank observation wells, Soil Augering and sampling. Year: 2016 ▪ Groundwater Pollution and Level Monitoring and Sampling. Client: Dundee Precious Metals Tsumeb (DPMT) in the Oshikoto Region, Namibia. Responsibilities: Hydrocensus, Borehole profiling and Data analysis. Year: 2015 to 2017 ▪ Skorpion Zinc Mine Closure Plan in the //Karas Region, Namibia. Client: Skorpion Zinc (Pty) Ltd. Responsibilities: Compilation of Mine Closure Report, Geochemical and Groundwater input, Integrating specialists' inputs in EIA report. Year: 2015

Languages:

Language	Reading	Speaking	Writing
English	Excellent	Excellent	Excellent
Oshiwambo (Native)	Excellent	Excellent	Excellent
Czech	Excellent	Excellent	Excellent

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experience and me.



Signature

07 June 2023

Date (Day/Month/year)

Form TECH-6:CV for Wilbert Manyangadzi



1. **Proposed Position:** **Socio-Economist**
2. **Name of Firm:** Outrun Consultants cc
3. **Name of Staff:** Wilbert Manyangadzi
4. **Date of Birth:** **09 September 1989**
5. **Nationality:** Zimbabwean

Key Qualifications:

Institution [Period]	**Degree(s) or Diploma(s) obtained:**
Great Zimbabwe University	Doctorate in Development Studies (Student)
Women University in Africa (2017-2018)	MSc Gender and Development studies
University of Zimbabwe (2014-2015)	Bachelor of Applied Arts Special Honours in Philosophy
University of Zimbabwe (2011-2014)	Bachelor of Applied Arts General Degree in Philosophy

Additional Qualifications:

PROFESSIONAL EXPERIENCE

Employment record relevant to the assignment:		
Period	**Employing organization and your title/position. Contact info for references**	**Summary of activities performed relevant to the Assignment**

08/2019-04/2020	Ministry of Agriculture Water and Forestry- Environmental and Social Impact Assessment for the Etunda, Katima Farm and Musese Feedlots. **Mafuta Environmental Consultants** For references: Tendai E. Kasinganeti Environmental Assessment Practitioner and Consultant Tel.: +264 813 634 904 Email: ekasinganetie@gmail.com	Specialist Social Impact Assessment
Sept 2019-2020 December	*Dog force Security Services* *Safety and Health Department* **Health, Safety, Social and Environmental (HSSE) Plan**	Developing, implementing, and improving the HSSE, programmes and procedures in the workplace and sites Ensuring compliance with relevant HSSE Legislation Identifying HSSE –related training needs in the workplace
08/2018-04/2019	African Development Bank (AfDB)-Namibia Water Sector Support Programme Strategic Environmental and Social Impact Assessment **Mafuta Environmental Consultants** For references: Tendai E. Kasinganeti **Environmental Assessment Practitioner and Consultant** Tel.: +264 813 634 904 Email: ekasinganetie@gmail.com	Strategic Social Impact Assessment of the Namibia Water Sector Support Programme Stakeholders Consultation Process and I&Aps Register Updating Development of Social Grievance Redressal Programme and Recommendations
2017 – 2018	Ministry of Land Reform and Resettlement – Programme for Communal Land Development (PCLD) funded by EU – Basket Fund Assistant Socio-Economist Consultant For References: Josiah Mukutiri-Social Economist Outrun Consultants outrungreeinfo@gmail.com	-Assessing the socio-economic status and benefits of small-scale commercial farming units in Oshikoto Region. *-This involved designing data collection tools, socio-economic baseline data collection, analysis and report writing.*
Since 12/2019	Dreamland Investments (Pty) Ltd **Outrun Consultants cc** **Environmental Consultant** For references: Mr. Lukas Sasamba, Managing Director Tel.: +264 812 783 647	Specialist Social Impact Assessment for Granite Mining Licence Application. Resettlement and Compensation Plan Culture and Heritage Impact Assessment

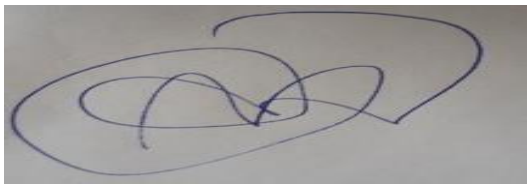
	Email: sasamba@yahoo.com	
2016-2017	***Havering Zimbabwe Pvt Ltd*** ***Project manager***	*Social Impact Assessment of learners benefiting from the Trust* *Developing policies and programs to educate the beneficiaries about sustainable development goals relate to equal education for all*
2014-2017	**University of Zimbabwe** **Post Graduate studies** **References** Dr J Gwara S. Mpepereki Dept. of Religious studies ,Classica and Philosophy Faculty of Applied Arts Email: *Joyandijay71@gmail.com*	*Research Assistant* Assisting in research supervision for Undergraduates

Languages:

Language	Reading	Speaking	Writing
English	Excellent	Excellent	Excellent
Shona	Excellent	Excellent	Excellent
Afrikaans	Poor	Poor	Poor

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experience and me.



07 June 2023

Signature **Date (Day/Month/year)**

11. ANNEXURE 2: BACKGROUND INFORMATION AND INVITATION TO PARTICIPATE DOCUMENT (BID)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: THE UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME

BACKGROUND INFORMATION DOCUMENT

INTRODUCTION

The proponent, Namwater intends to upgrade Ohangwena 2 Well Field with the aim of supplying the Omafo-Eenhana & Omakango-Onambutu-Eenhana Schemes (Project Locality map is shown in Fig.3.)

It is however important to note that the proposed water supply infrastructure schemes upgrade and its associated activities, such as pipelines, pump stations, reservoirs and boreholes are listed activities that cannot be undertaken without an Environmental Clearance Certificate.
In this respect, the need for a project-specific Environmental and Social Impact Assessment (ESIA) is required to comply with Namibia's Environmental Assessment Policy, Environmental Management Act (No. 7 of 2007), the Environmental Assessment Regulations of 2012 as well as the African Development Bank (AFDB) Environmental and Social Assessment Procedures (ESAP) 2015

In this respect, Namwater through Element Consulting Engineers, sub-contracted Outrun Consultants CC to conduct an independent Environmental and Social Impact Assessment for the proposed project to ascertain the potential environmental and social impacts both positive and negative and establish how to improve or mitigate them.

The study will describe the project's biophysical and socioeconomic environments. The description and analysis of the physical and biological shall address relevant environmental, social and climate change issues within this area, including any changes anticipated before project implementation. The description shall also integrate human conditions including population characteristics and trends, revenue disparities, gender differences, health problems, natural resource access and ownership and land use patterns biophysical and socio-economic baseline investigations relating to the proposed project.

All identified impacts will be addressed in the Environmental and Social Management Plan (ESMP) that complies with the Environmental Management Act (No. 7 of 2007), the Environmental Assessment regulations of 2012, the African Development Bank (AfDB) Environmental and Social Assessment Procedures (ESAP) 2015 and the Integrated Safeguards System |

AIMS & OBJECTIVES OF THE ESIA PROCESS

- To comply with Namibia's Environmental Assessment Policy, Environmental Management Act (No. 7 of 2007) with its 2012 EIA Regulations and the African Development Bank (AfDB) Environmental and Social Assessment Procedures (ESAP) 2015 and the Integrated Safeguards System (ISS) 2013.
- Consult all interested and affected parties such as local communities, traditional leadership, directly affected land owners and local authorities to ensure that their inputs are considered;
- Record all comments of I&APs and present such comments, as well as responses provided by communities, in the Comments and Responses Report, which will be included in the ESIA report;
- To set up a grievance redressal system;
- Identify and review the institutional, policy and regulatory framework applicable to the project. This will include national, regional and international policies, legislations and AfDB requirements relevant to the project. This will cover environmental, social, climate change, Health and Safety and other aspects to which the project will have to comply with.
- To identify both negative and positive environmental and social impacts (water supply situation in terms of quantity, quality, access, affordability, brine treatment, livelihood opportunities, land requirements, adequacy and ownership for planned new infrastructure etc.) of the proposed development and assess alternatives (sites, pipeline routes, technological suitability and no-go option).
- To assess the significance of issues and concerns raised;
- Develop a clear, concise and practical Environmental and Social Management Plan (ESMP) addressing the following key areas:
    - Waste Management
    - Grievance procedure
    - Stakeholder Engagement
    - Pollution Prevention and control
    - Ecosystems and Biodiversity

To develop Environmental Control and Monitoring procedures to ensure that the developed ESMP is implemented by the contractors and NAMWATER. The monitoring plan will designate roles and responsibilities, monitoring frequency and indicators for ESMP implementation and compliance enforcement.

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: THE UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME

LISTED ACTIVITIES

In consultation with the MET, the proposed project triggers the Environmental Management Act of 2007 (Act No. 7 of 2007) due to it meeting the thresholds of the following Listed Activities:

WATER RESOURCE DEVELOPMENTS

8.1 The abstraction of ground or surface water for industrial or commercial purposes.
8.2 The abstraction of groundwater at a volume exceeding the threshold authorized in terms of a law relating to water resources.
8.3 Construction of water transfer schemes between water catchments and impoundments.

PROJECT DESCRIPTION

Namwater intends to upgrade the water supply network within the Central Northern Water Supply Area (CNWSA). This upgrade will oversee the following:

Proposed Development: There were many technical options to develop the Ohangwena II Wellfield to solve the water supply problems currently faced in the project area. The Design Team explored all the options as part of the Development Design exercise and Option 4 emerged to be most favorable taking into consideration the capital costs, operation and maintenance costs and environmental considerations. The major component driving both capital and life cycle costs being the reverse osmosis plant for water treatment, bulk water supply pipelines and brine treatment / disposal ponds to be constructed. Detailed Proposed Development entails incorporating the Omafo – Eenhana pipeline to supply rural areas / households along the pipeline. Eenhana Town will be supplied by a blend of water from Oshakati Water Treatment Plant (OWTP) via a new offtake from the new Omakango – Onambutu pipeline and water from the Eenhana boreholes. The new Omakango – Onambutu bulk pipeline will supply the rural areas along the line. Ondobe will be supplied from the Omakango-Onambutu line via a new offtake. The proposed development and the RO plant are illustrated on Figure 1.

Borehole Sites

Four borehole sites were identified for drilling new boreholes and the coordinates are presented in the table below and the locality maps at Eenhana and Oshandi are shown in fig 4 and fig 5 respectively.

BH 1-Oshandi	BH2-Oshandi	BH3-Eenhana	BH4-Eenhana
Lat: -17.454590 Long: 16.148304	Lat: -17.454813 Long: 16.157094	Lat: -17.483401 Long: 16.337762	Lat: -17.483990 Long: 16.339012

THE PUBLIC PARTICIPATION PROCESS

The Public Participation Process (PPP) is an integral part of the Environmental and Social Impact Assessment process by providing a platform for all Interested and Affected Parties (I&APs) to obtain information about the proposed project, to review project documentation, to provide input and voice any concerns regarding the project.

A series of public meetings will be conducted and these meetings will avail an opportunity to comment, ask questions and raise any concerns regarding the project implementation. All comments will be recorded and considered in the Scoping Report? Environmental Management Plan that will be submitted to the Ministry of Environment for review. In addition, conditions for environmental compliance monitoring will also be derived from the public meeting and stakeholders' recommendations.

HOW TO PARTICIPATE?

This Public Consultation process forms an important component of the Environmental Assessment process. It is defined in the EIA Regulations (2012), as a "process in which potential interested and affected parties are given an opportunity to comment on, or raise issues relevant to, specific matters" (S1).

You can participate through the following:

- Responding to the newspaper adverts, radio announcements and social media notifications for public meeting, availability of scoping report and decision made by METF.
- Attending consultation meeting as scheduled:

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: THE UPGRADE OF THE OHANGWENA II WELL FIELD WATER SUPPLY SCHEME

PUBLIC CONSULTATION MEETINGS

Date and Time	Activity	Venue/Place
26 July 2022 - 1000hrs	Consultative Meeting	Oshandi (Ondobe Constituency Office Hall)
26 July 2022 - 1430hrs	Consultative Meeting	Ondobe Grant Payout Hall
27 July 2022 - 1000hrs	Consultative Meeting	Onambutu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

ENVIRONMENTAL ASPECTS AND IMPACTS

POTENTIAL IMPACTS	ASSESSMENT TO BE UNDERTAKEN
NEGATIVE IMPACTS	
Land Use Change (Aesthetic value)	Baseline Assessment and Sensitive Receptors Mapping
Impacts on fauna and Flora	Vertebrate fauna (wildlife) and flora (vegetation) baseline assessment.
Impacts on surface and groundwater resources (abstraction, discharge and spillages)	Surface and Groundwater Assessment
Waste generation	Baseline assessment
Culture, heritage and archeological impacts	Baseline assessment
Health and Safety hazards	Baseline assessment
Displacement of properties	Displacement, Resettlement and Compensation Plan
Cumulative impacts of the project Operation	Environmental Compliance Monitoring and Reporting
POSITIVE IMPACTS	
Water Infrastructure development	Temporary employment creation
Boost in local economy and investment capacity	Improved Sanitation

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

Environmental and Social Management Plan (ESMP): Is a tool utilised to mitigate and/ or enhance the potential impacts of the proposed water supply scheme. A project specific and practical Environmental and Social Management Plan (ESMP) will be developed by the environmental consultant.

Environmental Control and Monitoring (ECM): To ensure strict compliance to the developed ESMP, the client will ensure stakeholder consultation, grievance redressal and community-Namwater liaison, periodic compliance monitoring, auditing and reporting will be conducted by the Environmental Consultant, together with the appointed Environmental Control Officer (ECO) for the contractor.

HOW CAN YOU REACH US?

You can send all your comments and enquiries to:

Environmental Consultants
Mr. Josiah T. Mukutiri (LEAD EAP)
Cell: +264 812683578, Email: outrungreeinfo@gmail.com

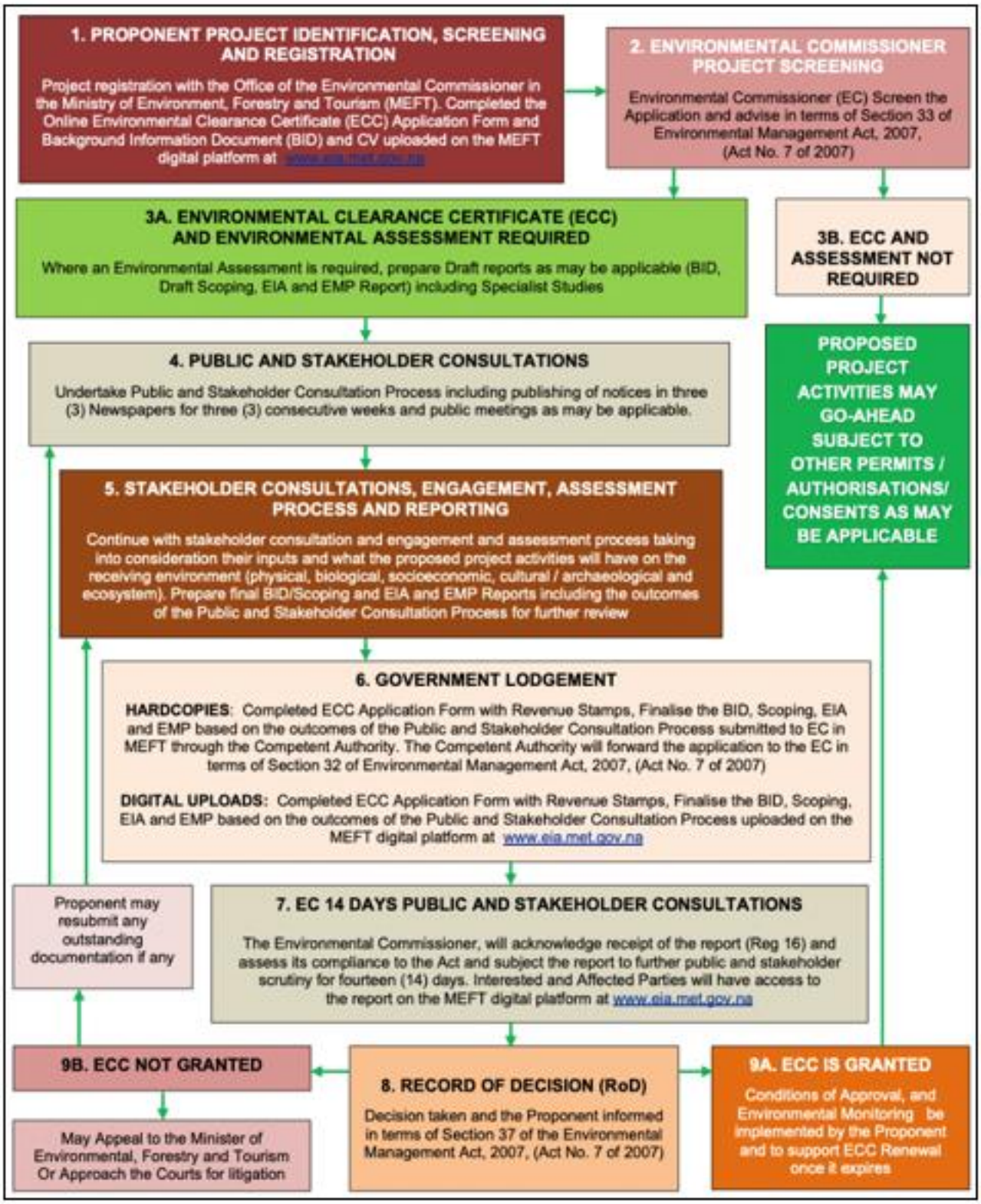
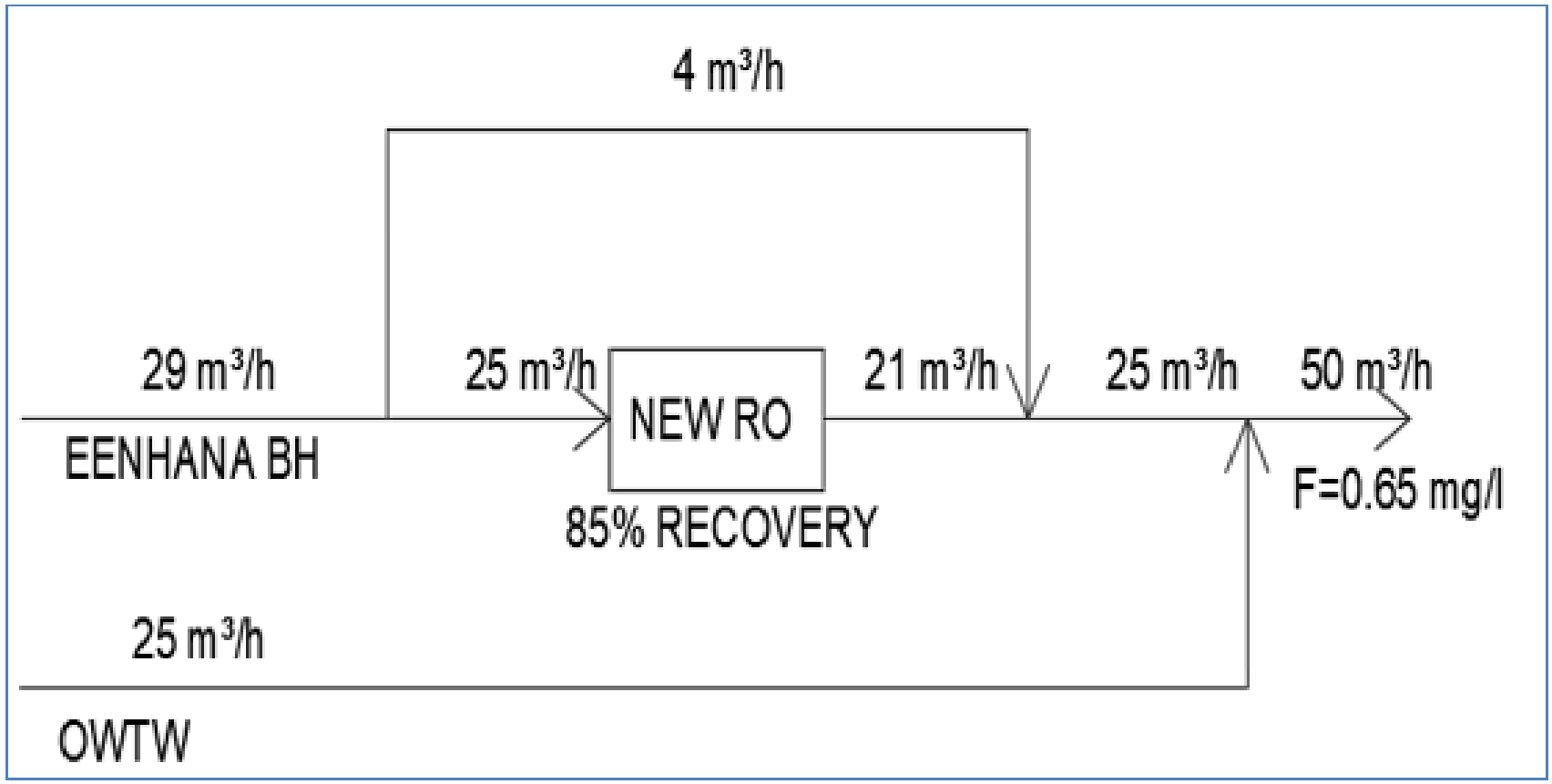

1. PROPONENT PROJECT IDENTIFICATION, SCREENING AND REGISTRATION
Project registration with the Office of the Environmental Commissioner in the Ministry of Environment, Forestry and Tourism (MEFT). Completed the Online Environmental Clearance Certificate (ECC) Application Form and Background Information Document (BID) and CV uploaded on the MEFT digital platform at
2. ENVIRONMENTAL COMMISSIONER PROJECT SCREENING
Environmental Commissioner (EC) Screen the Application and advise in terms of Section 33 of Environmental Management Act, 2007, (Act No. 7 of 2007)
3A. ENVIRONMENTAL CLEARANCE CERTIFICATE (ECC) AND ENVIRONMENTAL ASSESSMENT REQUIRED
Where an Environmental Assessment is required, prepare Draft reports as may be applicable (BID, Draft Scoping, EIA and EMP Report) including Specialist Studies
3B. ECC AND ASSESSMENT NOT REQUIRED
PROPOSED PROJECT ACTIVITIES MAY GO-AHEAD SUBJECT TO OTHER PERMITS / AUTHORISATIONS/ CONSENTS AS MAY BE APPLICABLE
4. PUBLIC AND STAKEHOLDER CONSULTATIONS
Undertake Public and Stakeholder Consultation Process including publishing of notices in three (3) Newspapers for three (3) consecutive weeks and public meetings as may be applicable.
5. STAKEHOLDER CONSULTATIONS, ENGAGEMENT, ASSESSMENT PROCESS AND REPORTING
Continue with stakeholder consultation and engagement and assessment process taking into consideration their inputs and what the proposed project activities will have on the receiving environment (physical, biological, socioeconomic, cultural / archaeological and ecosystem). Prepare final BID/Scoping and EIA and EMP Reports including the outcomes of the Public and Stakeholder Consultation Process for further review
6. GOVERNMENT LODGEMENT
HARDCOPIES: Completed ECC Application Form with Revenue Stamps, Finalise the BID, Scoping, EIA and EMP based on the outcomes of the Public and Stakeholder Consultation Process submitted to EC in MEFT through the Competent Authority. The Competent Authority will forward the application to the EC in terms of Section 32 of Environmental Management Act, 2007, (Act No. 7 of 2007)
DIGITAL UPLOADS: Completed ECC Application Form with Revenue Stamps, Finalise the BID, Scoping, EIA and EMP based on the outcomes of the Public and Stakeholder Consultation Process uploaded on the MEFT digital platform at www.eia.met.gov.na
Proponent may resubmit any outstanding documentation if any
7. EC 14 DAYS PUBLIC AND STAKEHOLDER CONSULTATIONS
The Environmental Commissioner, will acknowledge receipt of the report (Reg 16) and assess its compliance to the Act and subject the report to further public and stakeholder scrutiny for fourteen (14) days. Interested and Affected Parties will have access to the report on the MEFT digital platform at www.eia.met.gov.na
9B. ECC NOT GRANTED
May Appeal to the Minister of Environmental, Forestry and Tourism Or Approach the Courts for litigation
8. RECORD OF DECISION (RoD)
Decision taken and the Proponent informed in terms of Section 37 of the Environmental Management Act, 2007, (Act No. 7 of 2007)
9A. ECC IS GRANTED
Conditions of Approval, and Environmental Monitoring be implemented by the Proponent and to support ECC Renewal once it expires

FIGURE 1: PROPOSED DEVELOPMENT



Other planned infrastructure includes: Omafo Pump station, Omakango Reservoir and Pump station, Ondobe Reservoir and an additional RO plant and Treatment Ponds at Eenhana

FIGURE 3: PROJECT LOCATION

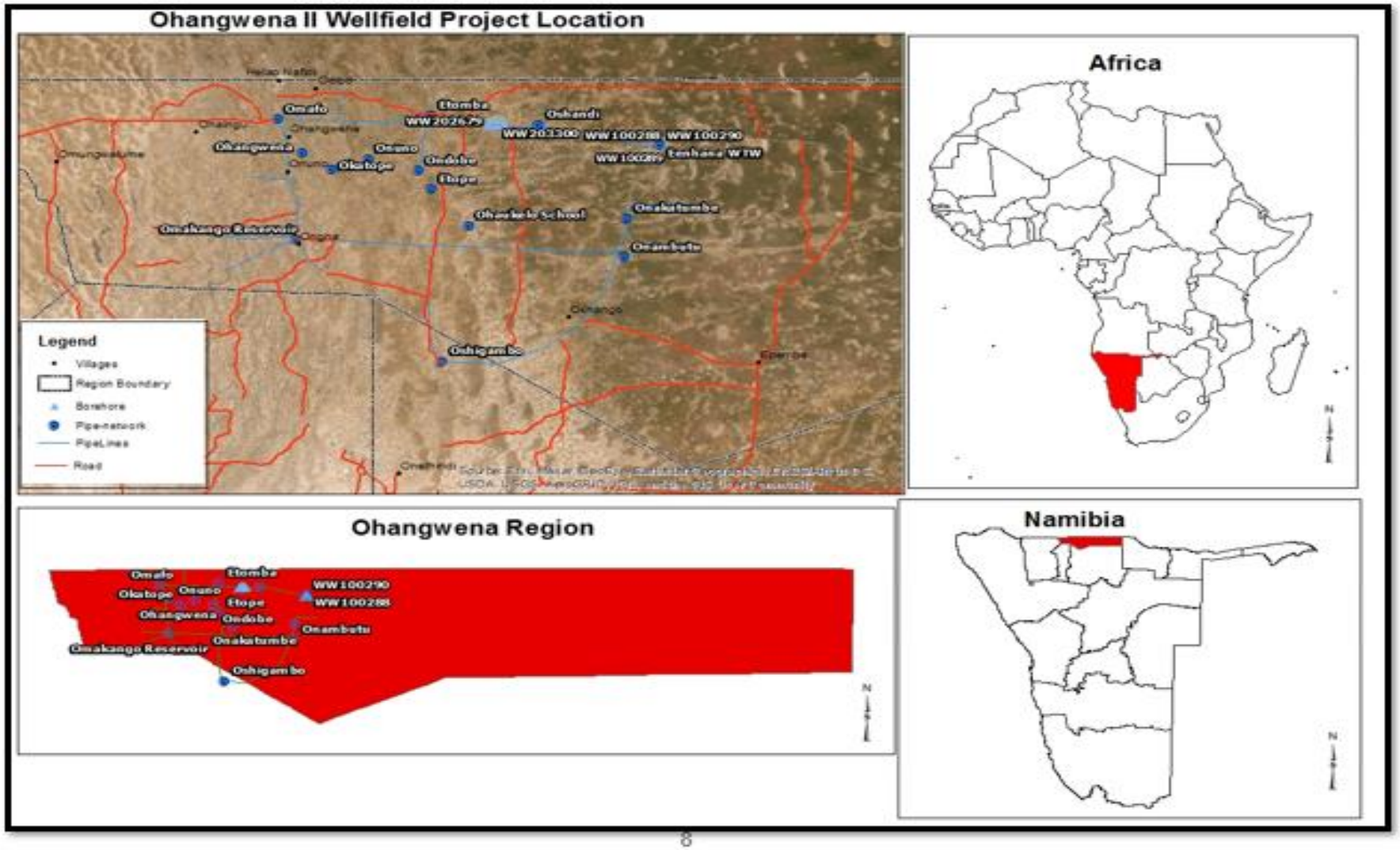


FIGURE 4: REVERSE OSMOSIS PLANT, EENHANA BOREHOLES AND PROPOSED BRINE TREATMENT PONDS

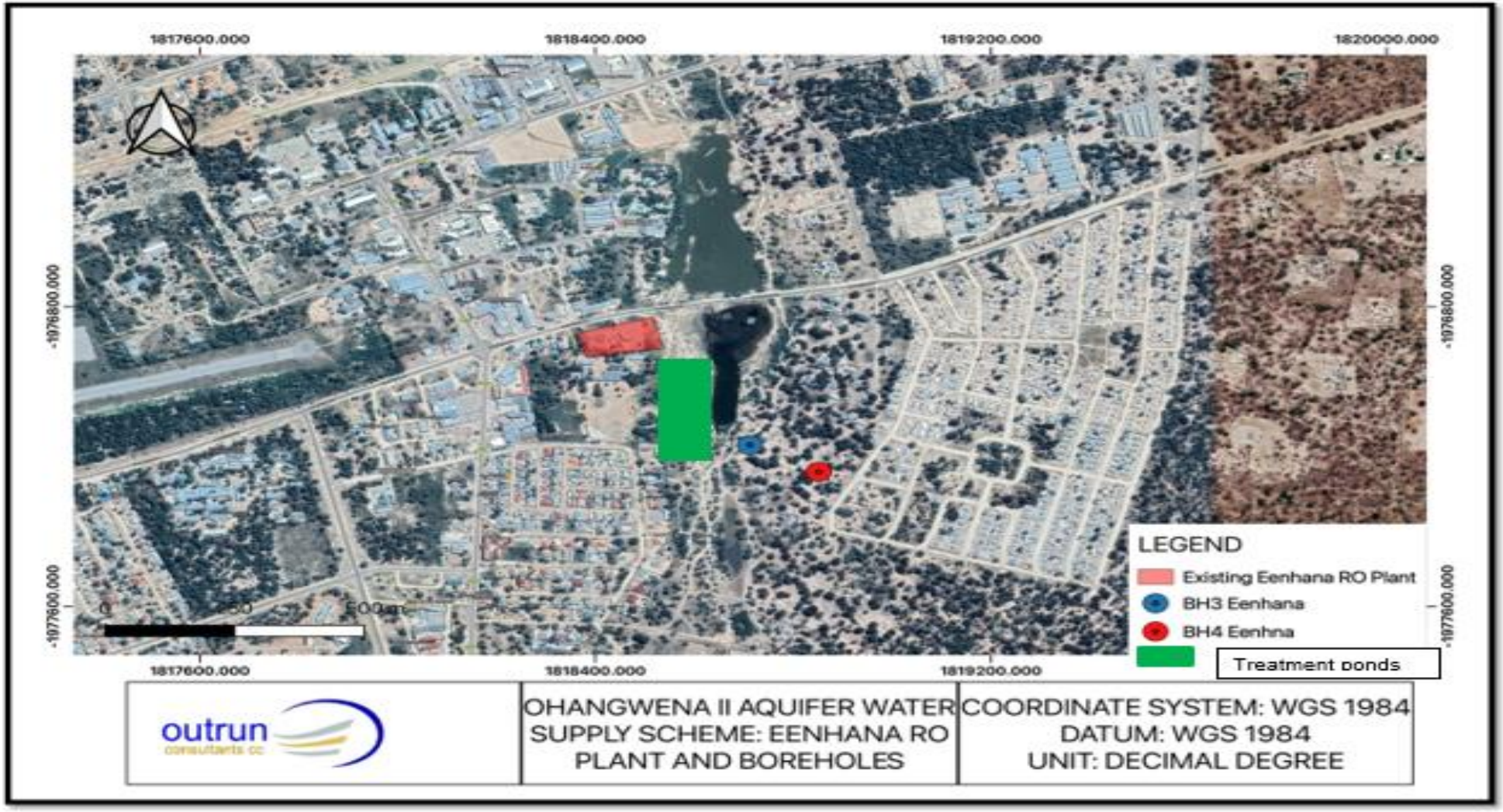
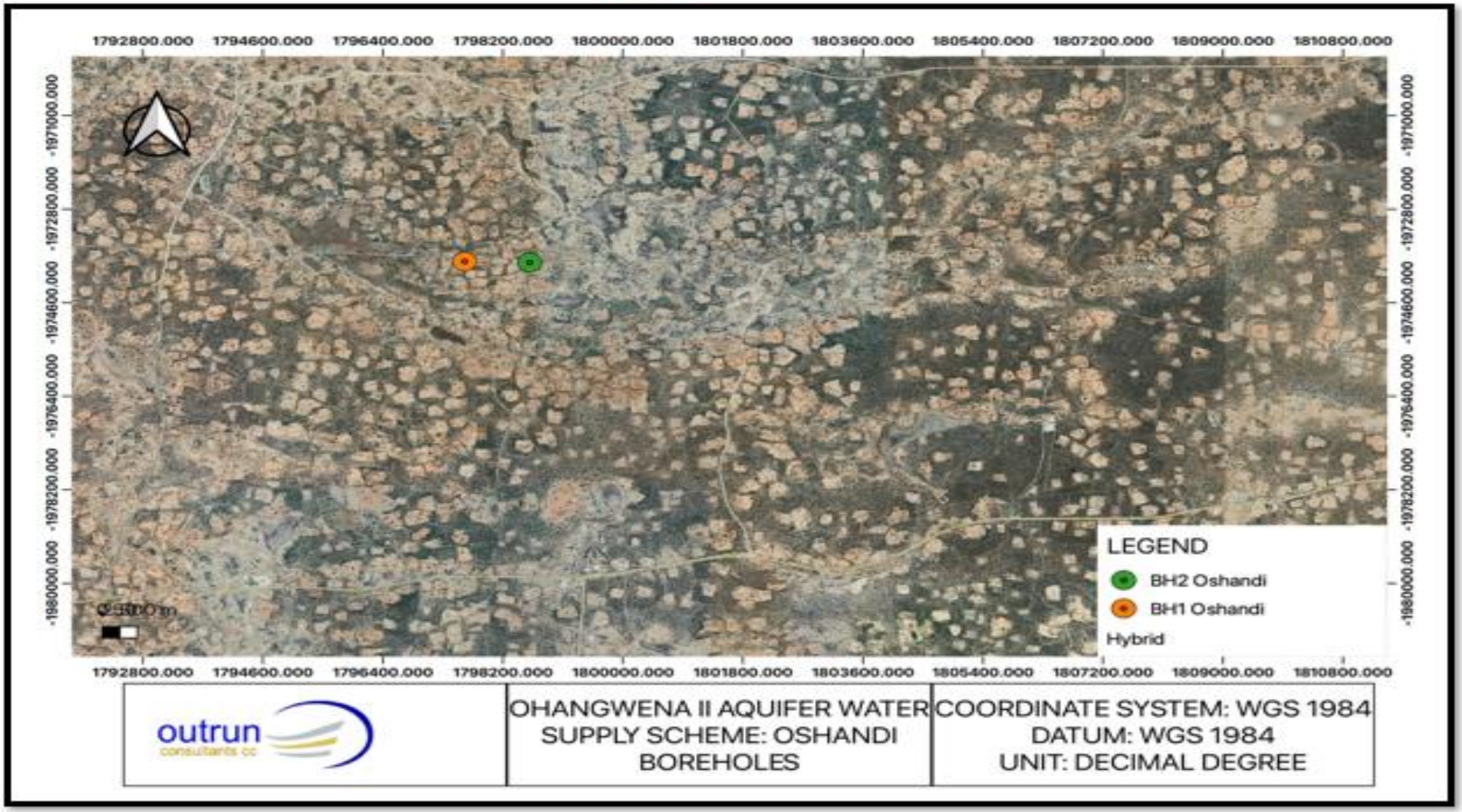


FIGURE 5: OSHANDI BOREHOLES LOCATION



REGISTRATION AND COMMENTS FORM

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: THE UPGRADE OF THE OHANGWENA II WELLFIELD II WATER SUPPLY SCHEME

KINDLY COMPLETE THIS FORM IN DETAIL AND RETURN TO:

Outrun Consultants CC
Telephone: +264 812 683 578
Email: outrungreeinfo@gmail.com

PERSONAL DETAILS

Name & Surname……

Postal Address……Email ……

Town…… Phone Number ……

Does the proposed project affect you in any way?

……
……
……
……
……
……

Do you have any points of concern or support regarding the proposed projects?
If "yes", please briefly list these in point format: YES / NO

……
……
……
……
……
……
……
……
……

Do you wish this project to proceed? YES / NO

SIGNATURE:

12. ANNEXURE 3: PROOF OF PUBLIC CONSULTATION DOCUMENTS

12.1 ADVERTISEMENTS

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outrun consultants cc

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

Outrun Consultants cc hereby gives notice to all potential Interested and Affected Parties (I&APs), that an application for E
nvironmental Clearance certificate will be made to the Environmental Commissioner in terms of the Environmental Management Act (No. 7 of 2007) as follows:

Proponent: NamwaterFinancier: African Development Bank
Project reference: P-NA-E00-005
Environmental Assessment Practitioner: Outrun Consultants cc
Project Description: Namwater intends to upgrade the water supply network within the Central Northern Water Supply Area (CNWSA). The Ohangwena aquifer is a largely unexploited aquifer with huge potential of supplying potable groundwater to the North of Namibia. This upgrade will oversee the following:

- Omafo-Eenhana Extension
- Omakango – Onambutu-Eenhana Scheme Upgrade

In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations No. 12 of 2012, Namwater has appointed Outrun Consultants cc as an Independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the envisaged development project.

Project Location: The Project is located in Ohangwena Region (Map is provided in the BID).

Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venue/Place
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27 July 2022 - 1000hrs	Consultative Meeting	Onambutu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 14 August 2022

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given: https://forms.gle/wdrs7mc4unbk2wFH6

Outrun Consultants:
Josiah T. Mukutiri
Phone: +264 812 683 578 **Email:** outrungreeninfo@gmail.com

outrun consultants cc NAMWATER ELEMENT Consulting Engineers





VACANCY

Covisure Diagnostic Center is looking for the services of a laboratory technician

Requirements

1. Must have 5 to 10yrs experience in medical laboratory including covid19 testing
2. Must be registered with HPC Nam as a medical laboratory technician
3. Must have a certificate or diploma in medical laboratory technology from a recognized institution
4. Knowledgeable of LIS as Ata is an added advantage

In return we offer market related remuneration and generous leave days
Send your application to covisurediagnosticcenter2021@gmail.com not later than 19th July 2022

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27 July 2022 - 1000hrs	Consultative Meeting	Onambutu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

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Josiah T. Mukutiri
Phone: +264 812 683 578 **Email:** *outrungreeninfo@gmail.com*

outrun consultants cc

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Project reference: P-NA-E00-005
Environmental Assessment Practitioner: Outrun Consultants cc
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In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations No. 12 of 2012, Namwater has appointed Outrun Consultants cc as an Independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the envisaged development project.

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Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venue/Place
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26 July 2022 - 1430hrs	Consultative Meeting	Ondobe Grant Payout Hall
27 July 2022 - 1000hrs	Consultative Meeting	Onambulu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 14 August 2022

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given; https://forms.gle/edrs7mcHunbK2wPH8

Outrun Consultants:
Josiah T. Mukutiri
Phone: +264 812 683 578 **Email:** outrungreeninfo@gmail.com

outrun consultants cc | NAMWATER | ELEMENT



PUBLIC NOTICE:

ENVIRONMENTAL IMPACT ASSESSMENT FOR THE PROPOSED EXPLORATION ACTIVITIES & INVITATION TO A PUBLIC MEETINGS

In accordance with the Environmental Management Act (No. 7 of 2007) and its regulation, notice is hereby given to all Interested and Affected Parties (I&APs) that an application will be made to the Environmental Commissioner for environmental clearance as follows:

Project: Exploration Activities For Base, Rare Metals, Industrial Minerals And Precious Metals on EPLs 6547 and 6643
Project Area: Between Grootfontein and Tsumeb, Otjozondjupa Region
Proponent: Epangelo Mining Pty (Ltd)
Farms Affected:
EPL 6547: Khusib I, Westerwald, Sarogosa/Fortuna Khusib III
EPL 6643: Cleveland (766), Doornfein, Sternberg, Kasuntas Rest, Duluth (713), Duneichen (716), Auitsab (708)
Public Meetings: 6th August 2022 Farm Khusib 1 @ 13H00pm – 15H00pm
6th August 2022 Farm Sternberg @ 16H00pm – 18H00pm
Deadline for submission of comments: 20th August 2022
Register as I&Aps @: reddunes18@gmail.com or Call +264 81 147 7838

PUBLIC NOTICE

ENVIRONMENTAL IMPACT ASSESSMENT

HEH Urban Nest Creations hereby gives notice to all potentially interested and affected parties (I&APS) that an application will be made to the Environmental Commissioner in terms of the Environmental Management Act 2007(Act No. 7 of 2007) and the Environmental Impact Assessment Regulations for the proposed construction and operation of a service station in Gcamade.

PROJECT NAME: **Environmental Impact Assessment for proposed construction and operation of a service station in Gcamade, Kavango West Region**

PROJECT LOCATION: **Gcamade, Mburuza, Kavango-West Region**

PROJECT DESCRIPTION: **The project involves conducting an Environmental Impact Assessment (EIA) for the establishment of a service station. The proponent intends to operate a service station.**

PROJECT INVOLVEMENT:
Proponent: **Callop Investments (Pty) Ltd**
Environmental Assessment Practitioner (EAP): HEH Urban Nest Creations

REGISTRATION OF I&AP AND SUBMISSION OF COMMENTS: **In line with the Environmental Management Act (no. 7 of 2007) and Environmental Impact Assessment regulations, all I&AP are hereby invited to register and submit their comments, concerns, or questions in writing via: Email; info@urbannest-na.com on or before 16 August 2022.**

PUBLIC MEETING TO BE HELD AS FOLLOWS:
Meeting Venue: **Rundu, Gcamade Village**
Time: **14:00**
Date: **20 August 2022**

For questions and comments:

Contact: **HEH Urban Nest Creations**
Tel: **+264 64 226 275**
Email: **info@urbannest-na.com**

URBAN NEST

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Good Investments opportunity in Ondangwa!

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- 5767m2 business plot in Ondangwa for 2.9m suitable for small complex and a service station.
- 5000m2 business plot in Eenhana for 2.7m suitable for service station.
- Okahandja business plot 2384m2 for 2m suitable for small complex.

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

Outrun Consultants cc hereby gives notice to all potential Interested and Affected Parties (I&APs), that an application for E
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Project reference: P-NA-E00-005
Environmental Assessment Practitioner: Outrun Consultants cc
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- Omafo-Eenhana Extension
- Omakango – Onambutu-Eenhana Scheme Upgrade

In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations No. 12 of 2012, Namwater has appointed Outrun Consultants cc as an Independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the envisaged development project.

Project Location: The Project is located in Ohangwena Region (Map is provided in the BID).

Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venue/Place
26 July 2022 - 1000hrs	Consultative Meeting	Oshandi (Ondobe Constituency Office Hall)
26 July 2022 - 1430hrs	Consultative Meeting	Ondobe Grant Payout Hall
27 July 2022 - 1000hrs	Consultative Meeting	Onambutu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 14 August 2022

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given; *https://forms.gle/wdrs7mc4unbk2wFH6*

Outrun Consultants:
Josiah T. Mukutiri
Phone: +264 812 683 578 **Email:** *outrungreeninfo@gmail.com*

CLASSIFIEDS

outrun consultants cc

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

Outrun Consultants cc hereby gives notice to all potential Interested and Affected Parties (I&APs) that an application for Environmental Clearance certificate will be made to the Environmental Commissioner in terms of the Environmental Management Act (No. 7 of 2007) as follows:

Proponent: Namwater
Financier: African Development Bank
Project reference: P-NA-E00-000
Environmental Assessment Practitioner: Outrun Consultants cc

Project Description: Namwater intends to upgrade the water supply network within the Central Northern Water Supply Area (CNWSA). The Ohangwena aquifer is a largely unexploited aquifer with huge potential of supplying potable groundwater to the North of Namibia. This upgrade will oversee the following:

- Omafo/Eenhana Extension
- Omakango – Omuntele/Eenhana Scheme Upgrade

In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations (No. 12 of 2012), Namwater has appointed Outrun Consultants cc as an independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the envisaged development project.

Project Location: The Project is located in Ohangwena Region (Map is provided in the ESIA).

Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venue/Place
26 July 2022 – 10:00hrs	Consultative Meeting	Eenhana Grandeur Conference/Guesthouse (Office Park)
26 July 2022 – 10:00hrs	Consultative Meeting	Onakale Event Palace Hall
27 July 2022 – 10:00hrs	Consultative Meeting	Onamhindi Community Hall
27 July 2022 – 10:00hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 10 August 2022.

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given: https://forms.gle/3qmLSmbbbqEdLTJ9

Outrun Consultants:
Jonah T. Mbahoh
Phone: +264 61 248 516 Email: outrunconsult@gmail.com

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CALL FOR PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT FOR PROPOSED MINERAL PROSPECTING AND EXPLORATION

This notice serves to inform interested and affected parties that an application for the environmental clearance certificate will be launched with the environmental commissioner in terms of the Environmental Impact Assessment Management Act (No.7 of 2007) and Environmental Regulations (GN 30 of 6 February 2012) for the proposed activity:

Project: Proposed mineral prospecting and exploration activities on EPL 8397.
Location: The project is located in Erongo Region, approximately 23 km southwest of the town of Usi. EPL 8397 covers state land and EPL's northern portion covers Okombahe Reserve

Proponent: Orango River Exploration and Mining CC
Project description: Mineral prospecting and exploration on EPL 8397.

In accordance with Namibia's Environmental Management Act (No. 7 of 2007) and Environmental Regulations (GN 30 of 6 February 2012), all interested and affected parties (I&APs) are invited to register and submit comments, concerns and questions in writing to the emails given below on or before **23/07/2022.**

Moreover, all interested and affected parties (I&APs) are invited for a public meeting.
Date meeting: 09/07/2022
Venue: Deputy Daman Traditional Authority, Community Hall in Okawahuhu
Time: 10h00

Tel: +264 85 761 4750
Email address: [illegible]

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CLASSIFIEDS

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

Outrun Consultants cc hereby gives notice to all potential Interested and Affected Parties (I&APs), that an application for Environmental Clearance certificate will be made to the Environmental Commissioner in terms of the Environmental Management Act (No. 7 of 2007) as follows:

Proponent: Namwater

Financier: African Development Bank

Project reference: P-NA-E00-005

Environmental Assessment Practitioner: Outrun Consultants cc

Project Description: Namwater intends to upgrade the water supply network within the Central Northern Water Supply Area (CNWSA). The Ohangwena aquifer is a largely unexploited aquifer with huge potential of supplying potable groundwater to the North of Namibia. This upgrade will oversee the following:

- Omafo-Eenhana Extension
- Omakango – Onambutu-Eenhana Scheme Upgrade

In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations No. 12 of 2012, Namwater has appointed Outrun Consultants cc as an Independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the envisaged development project.

Project Location: The Project is located in Ohangwena Region (Map is provided in the BID).

Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venue/Place
26 July 2022 - 1000hrs	Consultative Meeting	Oshandi (Ondobe Constituency Office Hall)
26 July 2022 - 1430hrs	Consultative Meeting	Ondobe Grant Payout Hall
27 July 2022 - 1000hrs	Consultative Meeting	Onambutu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 14 August 2022

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given; https://forms.gle/wdrs7mc4unbk2wFH6

Outrun Consultants:
Josiah T. Mukutiri
Phone: +264 812 683 578 **Email:** outrungreeninfo@gmail.com

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outrun consultants cc

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

Outrun Consultants cc hereby gives notice to all potential interested and affected Parties (I&APs), that an application for Environmental Clearance certificate will be made to the Environmental Commissioner in terms of the Environmental Management Act (No. 7 of 2007) as follows:

Proponent: Namwater

Financier: African Development Bank

Project reference: P-NA-FA0-005

Environmental Assessment Practitioner: Outrun Consultants cc

Project Description: Namwater intends to upgrade the water supply network within the Central Northern Water Supply Area (CNWSA). The Ohangwena aquifer is a largely unexploited aquifer with huge potential of supplying potable groundwater to the North of Namibia. The upgrade will involve the following:

- Omuthiya-Eenhana Extension
- Omakango – Onamhoko Eenhana Scheme Upgrade

In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations (No. 12 of 2012), Namwater has appointed Outrun Consultants cc as an independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the proposed development project.

Project Location: The Project is located in Ohangwena Region (Map is provided in the BID)

Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venues/Places
26 July 2022 - 10:00hrs	Consultative Meeting	Eenamati (Onhoko Constituency Office Hall)
26 July 2022 - 14:00hrs	Consultative Meeting	Endola Grant Payout Hall
27 July 2022 - 10:00hrs	Consultative Meeting	Eheke/Ikola Community Hall
27 July 2022 - 14:00hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 16 August 2022

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given above. Ohangwena Public Participation Form

Outrun Consultants:
Josiah T. Munyeri
Phone: +264 61 420 374 **Email:** outrunconsult@gmail.com

outrun consultants cc | NAMWATER | ELEMENT Consulting Engineers

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CALL FOR PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT FOR PROPOSED ESTABLISHMENT OF LITHIUM MINING OPERATIONS

This notice serves to inform interested and affected parties that an application for the environmental clearance certificate will be launched with the environmental commissioner in terms of the Environmental Impact Assessment Management Act (No.7 of 2007) and Environmental Regulations (GN 30 of 6 February 2012) for the proposed activity:

Project: Environmental Impact assessment for the proposed establishment ofLithiummining operations on mining claims 73409 to 73418.
Location: The project is located in Erongo Region, approximately 50 km southwest of the town of Usi. The mining claims are situated on state land.

Proponent: Long Fizz Investment (Pty) Ltd.
Project description: Establishment of lithium mining operations on mining claims 73409 to 73418.

In accordance with Namibia's Environmental Management Act (No. 7 of 2007) and Environmental Regulations (GN 30 of 6 February 2012), all interested and affected parties (I&APs) are invited to register and submit comments, concerns and questions in writing to the emails given below on or before **30/07/2022.** The date of the meeting to communicated to registered parties.

Tel: +264 85 761 4750
Email address: info@minera-xplore.com or frank@minera-xplore.com

Minera-Xplore Consultancy cc

CALL FOR PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT FOR PROPOSED MINERAL PROSPECTING AND EXPLORATION

This notice serves to inform interested and affected parties that an application for the environmental clearance certificate will be launched with the environmental commissioner in terms of the Environmental Impact Assessment Management Act (No.7 of 2007) and Environmental Regulations (GN 30 of 6 February 2012) for the proposed activity:

Project: Proposed mineral prospecting and exploration activities on EPL 8397.
Location: The project is located in Erongo Region, approximately 23 km southwest of the town of Usi. EPL 8397 covers state land and EPL's northern portion covers Okombahe Reserve

Proponent: Orange River Exploration and Mining CC
Project description: Mineral prospecting and exploration on EPL 8397.

In accordance with Namibia's Environmental Management Act (No. 7 of 2007) and Environmental Regulations (GN 30 of 6 February 2012), all interested and affected parties (I&APs) are invited to register and submit comments, concerns and questions in writing to the emails given below on or before **23/07/2022.**

Moreover, all interested and affected parties (I&APs) are invited for a public meeting.
Date meeting: 09/07/2022
Venue: Daures Damara Traditional Authority, Community Hall in Okombahe
Time: 10h00

Tel: +264 85 761 4750
Email address: info@minera-xplore.com or frank@minera-xplore.com

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CLASSIFIEDS

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

Outrun Consultants cc hereby gives notice to all potential Interested and Affected Parties (I&APs), that an application for Environmental Clearance certificate will be made to the Environmental Commissioner in terms of the Environmental Management Act (No. 7 of 2007) as follows:

Proponent: Namwater

Financier: African Development Bank

Project reference: P-NA-E00-005

Environmental Assessment Practitioner: Outrun Consultants cc

Project Description: Namwater intends to upgrade the water supply network within the Central Northern Water Supply Area (CNWSA). The Ohangwena aquifer is a largely unexploited aquifer with huge potential of supplying potable groundwater to the North of Namibia. This upgrade will oversee the following:

- Omafo-Eenhana Extension
- Omakango – Onambutu-Eenhana Scheme Upgrade

In accordance to the requirements of the Environmental Management Act (No. 7 of 2007) and the Environmental Assessment Regulations No. 12 of 2012, Namwater has appointed Outrun Consultants cc as an Independent Environmental Assessment Practitioner to undertake a detailed Environmental and Social Impact Assessment (ESIA) and to obtain an Environmental Clearance Certificate (ECC) for the envisaged development project.

Project Location: The Project is located in Ohangwena Region (Map is provided in the BID).

Public participation process: Interested and affected parties are hereby notified that public participation meetings will be held as follows:

Date and Time	Activity	Venue/Place
26 July 2022 - 1000hrs	Consultative Meeting	Oshandi (Ondobe Constituency Office Hall)
26 July 2022 - 1430hrs	Consultative Meeting	Ondobe Grant Payout Hall
27 July 2022 - 1000hrs	Consultative Meeting	Onambutu Community Hall
27 July 2022 - 1430hrs	Consultative Meeting	Ohangwena Regional Council

The participation and commenting period is effective until 14 August 2022

To register or request for documents submit your details in writing to the Environmental Consultant or alternatively fill the online form, link and contact details given; https://forms.gle/wdrs7mc4unbk2wFH6

Outrun Consultants:
Josiah T. Mukutiri
Phone: +264 812 683 578 **Email:** outrungreeninfo@gmail.com

12.2 ATTENDANCE REGISTERS

STAKEHOLDERS CONSULTATION REGISTER:

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS: THE UPGRADE OF THE OHANGWENA WELLFIELD NO2 WATER SUPPLY SCHEME.

VENUE: Eenhana Constituency Office **TIME:** 09h00 for 10h00

DATE: 28/02/2022

NAME AND SURNAME	ORGANISATION/ LOCATION	PHONE	EMAIL ADRESS	SIGNATURE
Fredrka Shagama	Outrun Consultants cc	0814075536	fshagama@gmail.com	
Tendai G. Kasuyana	Outrun Consultants cc	[illegible]	[illegible]	
JOSIAH T. MUKUTIRI	OUTRUN CONSULTANTS cc	0812663576	outrunneeninfo@gmail.com	
LEBBEUS N. HAMUKWAYA	DNSSC	0812562570	lebbeusnhamukwaya@gmail.com	
Paulina N. Dumeni	ORC	0812186562	paulinadumeni@gmail.com	
FILEMON MANDJOLO	DWSSC	08120 90 586	mandjolofilemon@gmail.com	
Magdalena Kashuna	N.R.C	0814317045	—	

NAME AND SURNAME	ORGANISATION/ LOCATION	PHONE	EMAIL ADRESS	SIGNATURE
Natalia N Ndaitwa	Ohangwena RC	0811244343	nndaitwa@ohangwenarc.gov.na	
Julia Kakwambi-Nakale	Ohangwena RC	0812610947	jkakwambi@ohangwenarc.gov.na	
LAZARUS T SHILONGOLO	OhangwenaRC/MAWF	0816760955	Lasarus.Shilongolo@mawlr.gov.na	
GABRIEL MWANINGA	EENHANA TC	0812558629	mwaningagabriel@gmail.com	
STEVE K MWANINGANGE	EENHANA TC	0818286900	mwaningangeS@eenhanatc.na	
Paul N Shilongo	Eenhana TC	0814330407	shilongopp@eenhanatc.na	
Ester N Kavela	Ohaihana	0812447028	esterndagwa@gmail.com	
Hilalia Shipena	Eenhana Const office	~~Office~~ 0812884712	hilaliashipena@gmail.com	
Albina HAPULILE	Onaulyadi	0813968300		
Nikanor Simon	Onambutu	0812623872		
Shoongela David	ombaladila	0811452967		
Isaak Abraham	Otunganga	0818498795	N/A	

STAKEHOLDERS CONSULTATION REGISTER:

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS: THE UPGRADE OF THE OHANGWENA WELLFIELD NO2 WATER SUPPLY SCHEME.

VENUE: Ohandi, Ondobe constituency office Hall **TIME:** 12:42

DATE: 08-02-2022

NAME AND SURNAME	ORGANISATION/ LOCATION	PHONE	EMAIL ADRESS	SIGNATURE
Tendai Elias Junebi	Outnow	[illegible]	ekasingareth[illegible]gmail.com	
Efraim M Kaushimingwa	Ohangwena RC	0812867202 emhaikupula@gmail	emhaikupula@gmail.com	
Israel Jesaya	OHETI B	0812214870	-	IS. J
Haimbodi Josephina	OHETI B	0812892496	-	Mrs Josephina
Meriam Nghitewa	Ondangwa	-	-	Mr Nghitewa
Natasha Gabriel	Ohandi	-	-	
Eddy Kapunda	Onanghulo	0817419434	-	E/Kapunda

NAME AND SURNAME	ORGANISATION/ LOCATION	PHONE	EMAIL ADRESS	SIGNATURE
Petrus K. Hendjila	OShandi	081 6008377	—	PHila
Victoria Veripata	Oheti A	081 653 2221 081 85 18208	—	VIKTORIA
Lukas PHILIPPUS	Omhedi	75-196-19		
N - JACKSON	-	0813689484	—	JACKSON
Fredrika Shagama	Outrun Consultants	0814075536	fshagama@gmail.com	

STAKEHOLDERS CONSULTATION REGISTER:

NOTICE OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT AND PUBLIC PARTICIPATION PROCESS: THE UPGRADE OF THE OHANGWENA WELLFIELD NO2 WATER SUPPLY SCHEME.

VENUE: ONDOBE **TIME:** 0950HRS

DATE: 01/03/2022

NAME AND SURNAME	ORGANISATION/ LOCATION	PHONE	EMAIL ADRESS	SIGNATURE
JOSIAH MUKUTIRI	OUTRUN CONSULTANTS	0812683578	outrungreeninfo@gmail.com	
SEBBY HANGULA	OnOobe BWSSC	0812555984	PHAS.gg mail com	
Fredrika Shagama	Outrun Consultants	0814075536	fshggama@gmail.com	
Tendai E. Kasinganeti	Outrun Consultants	0815649604	ekasinganeti@gmail.com	
STEVEN. NGHIMUSHI	ACWSSC-ONDOBE	0812560964	STEVNNGhumushi2	
Efraim M Kauthiningwa	Ohangwena RC	0812867200	emhaikupulo@gmail.com	
Gabriel mathews	Ohangwena BWSSC	0812523891	Gabriel.mail.com	

NAME AND SURNAME	ORGANISATION/ LOCATION	PHONE	EMAIL ADRESS	SIGNATURE
Nelson Nghinyengwasha	DWSSC (Omafo)	0811476087	justusnelson@gmail.com	

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA 2 WELLFIELD WATER SUPPLY SCHEME, OHANGWENA REGION

PUBLIC AND STAKEHOLDERS' CONSULTATION MEETING ATTENDANCE REGISTER

Date: 27 JULY 2022 **Venue:** ONAMBUTU COMMUNITY HALL **Time:** 1120 HRS

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
JOSIAH T. MUKUTIRI	OUTRUN CONSULTANTS cc	0812683578	outrungreeninfo@gmail.com	
Fredrika Shagama	Outrun Consultants	0814075536	fshagama@gmail.com	
Paulina N. Dumeni	Ohangwena Regional Council	0812186562	Paulinadumeni@gmail.com	
Lebbeus N. Hamatwi	DWSSC Onambutu - Ohangwena	0812562570	lebbeushamatwi@gmail.com	
Natalia Mvula	ONambutu	08124734404	nmvula956@gmail.com	
A Nangolo	Onambutu	0814009250	A Nangolo	K A Nangolo

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Nicanor Sha	Onambutu	0812623872		
Amon Shimbanda	ONAmugo/o	0816844407		
FOIBE N.M NGHIDIMBUA	OMATHIA	0812322584	foibenamupa79@gmail.com	
Emilia Wapota	Onambutu	0812352066		EWapota
P Haindongo	Onambutu	0812838611		
Kristophina Iyambo	Onambutu	0814668558		
Rebecka Lucas	Onambutu	0812729437	rebeckandalepungi kamberg@gmail.com	
Ruusa Naanda	onambutu	0813180695		
RAPHAEL ENDJALA	NAMWATER OSHAKATI	0811245597	Endjalar@namwater.com.na	
Ashipala AA	Namibia Water - Oshakati	0812994483	Ashipalaa@namwater.com.na	

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA 2 WELLFIELD WATER SUPPLY SCHEME, OHANGWENA REGION

PUBLIC AND STAKEHOLDERS' CONSULTATION MEETING ATTENDANCE REGISTER

Date: Wednesday, 27 July 2022 **Venue:** Ondobe DWSSC Ofhia open space **Time:** .....

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Fredrika Shagama	Outrun Consultants cc	0814075536	fshagama@gmail.com	
Josiah T. Mukutin	Outrun Consultants cc	081 2683578	outrungreening@gmail.com.	
Penehafo N Nghalipo	Okauva MHSS Ondobe Constituency	081 3123820	Penehafonghalipo@gmail.com Penehafonghalipo@gmail.com	
Shapangeannalis	Ondobe	081 739 4263 081 73 94263		A Shapange
Shikonda Penaupifo Sh.	Ondaanya-Ondobe	081 3935134		P. Sh.
Cecilia Shikenga	Ondobe	0812585441		Shikenga

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Delemina. K	Omungekadi	0817856608		D. Kalomula
BOMI Nabolo	OMUNSEKandi	0812988524		Bem
LIKIUS SHIVENGA	Omunyakadi	057 2754802	likiusshivenga33@gmail.com	
Simion Cambabic	Omungekadi	0812096353		Cambabic
HESTUS SHAFOKUTA	OMUNGEKADI	0812812149		
Pombili Abel	Omungekadi	0812221059		
Helena Has	ondamija	0812124947		He
Hamungeka	phillipus	081628222 74		F. Hamungeka
Fillemon	MARCH	0812566257		F. MARCH
Filipus Shikongeka	oilyatako	0812972298		

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA 2 WELLFIELD WATER SUPPLY SCHEME, OHANGWENA REGION

PUBLIC AND STAKEHOLDERS' CONSULTATION MEETING ATTENDANCE REGISTER

Date: Wednesday 27 July 2022 **Venue:** Ohangwena Regional Council Boardroom **Time:** 14h30

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Fredrika Shagama	Outrun Consultants cc	0814075536	fshagama@gmail.com	
RAPHAEL ENOJAKA	NAMWATER - OSHAKATI	0811245597	Enojakar@namwater.com.na	
Julia Katuambi	Ohangwena Reg. Council	0812610947	jkatuambi@ohangwenarc.gov.na	
A Askipala	Namwater - Oshakati	0811299483	AskipalaA@namwater.com.na	
Ethiole Haimbili	Ohangwena R/C	0811270464	ethaimbili@ohangwenarc.gov.na	
Lazarus Shilongo	ORC - DWSSC	0811678095	Shilongolazarus tuhafeni@gmail.com	

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA 2 WELLFIELD WATER SUPPLY SCHEME, OHANGWENA REGION

PUBLIC AND STAKEHOLDERS' CONSULTATION MEETING ATTENDANCE REGISTER

Date: Tuesday, 26 July 2022 Wednesday, 27 July 2022 **Venue:** Ondobe Constituency Office Boardroom, Ohangwena **Time:** 10:00 Time: 15:45

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Fredrika Shagama	Outrun Consultants	0814075536	fshagama@gmail.com	
Raphael Endjala	Namwater - Oshakati	0811245597	Endjalar@namwater.com.na	
A Abraham AA	Namwater	0811299487	AshipalaA@namwater.com.na	
Pombili Shimbashike	Communal	0812919508	shikeconstruction@gmail.com	
Hongshowe P. Abraham	Namwater	0811474866		
Efraim M Kaushiningwa	Ohangwena R Council	0812867200	emhaikupula@gmail.com	

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Mwahafa Haimbodi	Community	0813014961	—	MH
Julia S. Ndilula	Oshandi	081 3075762	Uiashahafrange gmail.com	JS Nd.
Hiwenikazarus	Oshandi	0815818645	—	H-h
Erasmus Filemon	Oshandi	0812728976	erasmusfilemon@gmail.com	
Hamukoto Hendrik	OHeti	081 2419909	—	H-m
M. Shuumbili	Oheti	0816151165		MS
Joram H	oShandi	0812615883	oShandi Namibert.	J. Haikali
Ester Nambahu	Oshandi	081 3311168	esternyanga gmail.com	Hester
Emilia Nghitotelwa	Oshandi	0813053517	emilianghitotelwa1@gmail.com	
Justine Sakaria	oshandi	0813310528	—	
Ndapewa Joseph	oShandi	081291920 69	—	N. Joseph
Penexupifo N. Nhinda	Oshandi	0813720909		P N Nhinda

Name and Surname	Organisation / Location	Telephone / Mobile No.	Email Address	Signature
Lineekela Fabian	Oheti	0817805207	-	L Fabian
Peneyambeko Kafty	Oshandi Nol	0812232816	-	K P
Foibe Hangula	Oshandi No1	0813918086	-	F-H.
Delemina Moses	OShandi NO1	0812951749	-	D.M
Nghishongwa.S	OShandi No2	081 2210067	-	
NAKASHINDBA.E	EEPDAXU	0812177283	-	
Moses E ONHEDI		0812001364	-	
Salama - Iiokotoo		0812285		
Beronsline N. Pinehi	Oshandi x2	081 2923971		
Fransina Nomwandi	OShandi x1	0815577502		FNomwandi
Penehafo M.	OShandi x1	0812229905		
Ehrenim.Nd	OShandi 1	0812631228		


Figure 35: Consultation meeting in Eenhana (Ohangwena Regional Council) and Onambutu on 28 February 2022


Figure 36: Consultation meeting with the Omafo DWSSC Official on 01 March 2022


Figure 37: Consultation meeting with the community in Oshandi Settlement on 28 February 2022



Figure 38: Consultation meeting in Eenhana (Ohangwena Regional Council) on 27 July 2022 at 14h30



Figure 39: Consultation meeting in Oshandi Settlement on 27 July 2022 at 15h30



Figure 40: Consultation meeting in Ondobe Settlement on 27 July 2022 at 12h30

12.3 LIST OF REGISTERED INTERESTED AND AFFECTED PARTIES (I & APs)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

PROPONENT: NAMIBIA WATER CORPORATION LIMITED (NAMWATER)

No	Name and Surname	Institution / Location & Position (if known)	Telephone Number	Email Address
1.	Mr. Josiah T. Mukutiri	Outrun Consultants cc: Lead Environmental Assessment Practitioner (EAP)	+264 81 268 3578	outrungreeninfo@gmail.com
2.	Mr. Evidence T. Kasinganeti	Outrun Consultants cc: Assistant EAP	+264 81 363 4904	ekasinganeti@gmail.com
3.	Ms. Fredrika Shagama	Outrun Consultants cc: Assistant EAP	+264 81 407 5536	fshagama@gmail.com
4.	Mr. James Turner	Element Consulting Engineers: Design Engineer		james@element.com.na
5.	Mr. Arthur B. Loftie-Eaton	Element Consulting Engineers: Design Engineer		loftie@element.com.na
6.	Ms. Ndiyakupi Nghituwamata	Ministry of Agriculture, Water and Land Reform (MAWLR): Executive Director	+264 61 208 764 9	ED@mawf.gov.na / ED@mawlr.gov.na
7.	Mr. Lebbeus N. Hamalwah	MAWLR: DWSSC Eenhana	+264 81 256 2570	lebbeusnhamalwah@gmail.com

No	Name and Surname	Institution / Location & Position (if known)	Telephone Number	Email Address
8.	Ms. Martha L. Hangula	MAWLR: Technical Assistant - Namibia Water Sector Support Program		Martha.Hangula@mawlr.gov.na hangulamarthal123@gmail.com
9.	Mr. Chimwang'a Maseka	MAWLR: Technical Assistant / Program Coordinator - Namibia Water Sector Support Program		cmaseka@gmail.com
10.	Mr. Steven Nghuushi	MAWLR: DWSSC Ondobe	+264 81 256 0964	stevnnghuushi2@gmail.com
11.	Mr. Nicolaas Du Plessis	NamWater – Windhoek: Environmental Manager		PlessisN@namwater.com.na
12.	Mr. Fillemon Aupokolo	NamWater – Windhoek: Environmentalist		AupokoloF@namwater.com.na
13.	Mr. Hieronymus Goraseb	NamWater – Head: Business Unit Northwest		gorasebh@namwater.com.na
14.	Mr. Abraham Ashipala	NamWater – Oshakati: Water Supply Manager	+264 81 129 9483	Ashipalaa@namwater.com.na
15.	Mr. Raphael Endjala	NamWater - Oshakati	+264 81 124 5597	Endjalar@namwater.com.na
16.	Mr. Fillipus Shilongo	Ohangwena Regional Council: Chief Regional Officer	+264 65 264 300	info@ohangwenarc.gov.na

No	Name and Surname	Institution / Location & Position (if known)	Telephone Number	Email Address
17.	Ms. Julia Kakwambi-Nakale	Ohangwena Regional Council: Director of Planning & Development	+264 81 261 0947	jkakwambi@ohangwenarc.gov.na
18.	Mr. Etuhole Haimbili	Ohangwena Regional Council: Deputy Director of Planning & Development	+264 81 127 0464	ethaimbili@ohangwenarc.gov.na linhoinvest78@gmail.com
19.	Ms. Natalia Ndaitwa	Ohangwena Regional Council: Deputy Director of Rural Services	+264 81 124 4343	nnndaitwa@ohangwenarc.gov.na
20.	Mr. Lazarus T. Shikololo	Ohangwena Regional Council: DWSSC	+264 81 167 6095	Lazarus.Shikololo@mawlr.gov.na shikolololazarustuhafeni@gmail.com
21.	Hon. Olivia Hanghuwo	Eenhana Constituency: Councillor	+264 81 141 2299	
22.	Ms. Paulina N. Dumeni	Eenhana Constituency: Officer	+264 81 218 6562	paulinadumeni@gmail.com
23.	Hon. Hilaria Ndjuluwa	Ondobe Constituency: Councillor	+264 81 141 2615	
24.	Mr. Efraim Kaushiningwa	Ondobe Constituency: Officer	+264 81 286 7200	emhaikupula@gmail.com

No	Name and Surname	Institution / Location & Position (if known)	Telephone Number	Email Address
25.	Hon. Erickson Ndawanifa	Omulonga Constituency: Councillor	+264 81 147 6174 / 413 5141	
26.	Mr. Filemon Mandjolo	DIWSSC	+264 81 209 0586	mandjolofilemon@gmail.com
27.	Ms. Magdaleena Kashuna	Namibia Red Cross Society (NRCS)	+264 81 431 7045	
28.	Mr. Gagriel M. Benjamin	Eenhana Town Council: Chief Executive Officer	+264 65 90 600	benjaming@eenhanatc.na
29.	Mr. Gabriel Mwaninga	Eenhana Town Council	+264 81 255 8629	mwaningag@eenhanatc.na
30.	Mr. Steve K. Mwaningange	Eenhana Town Council	+264 81 828 6900	mwaningange@eenhanatc.na
31.	Mr. Paul N. Shilongo	Eenhana Town Council	+264 81 433 0400	shilongop@eenhanatc.na
32.	Ms. Ester N. Kavela	Ohaihana	+264 81 247 7028	esterndapwa@gmail.com
33.	Ms. Hilalia Shipena	Eenhana Constituency office	+264 81 288 4712	hilaliashipena@gmail.com
34.	Ms. Albina Hapulie	Onaundunda	+264 81 396 8300	

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35.	Mr. Nikanor Simon	Onambutu	+264 81 262 3872	
36.	Mr. Shoonyeke David	Ombalandila	+264 81 452 9679	
37.	Mr. Isak P. Abraham	Otunganga	+264 81 849 8795	
38.	Mr. Ismael Jesaya	Oheti B	+264 81 221 4870	
39.	Ms. Josephina Haimbondi	Oheti B	+264 81 289 2496	
40.	Ms. Meriam Nhitewa	Ondaandaa		
41.	Ms. Natasha Gabriela	Oshandi		
42.	Mr. Eddy Kapunda	Onanghulo	+264 81 741 9434	
43.	Mr. Petrus H. Hendjila	Oshandi	+264 81 600 8377	
44.	Mr. Victoria Veriputa	Oheti A	+264 81 653 2251 / +264 81 851 8208	
45.	Mr. Lukas Phillipus	Omhedi	+264 81 751 9519	
46.	Mr. N. Jackson		+264 81 360 8984	
47.	Ms. Natalia Mvula	Onambutu	+264 81 247 3404	Nmvula956@gmail.com

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48.	Mr. A Nangolo	Onambutu	+264 81 400 9250	
49.	Mr. Amon Shimbanda	Onamugolo	+264 81 684 4407	
50.	Ms. Foibe N. M. Nghidimbwa	Omatha	+264 81 232 2584	foibenamupa79@gmail.com
51.	Ms. Emilia Wapota	Omatha	+264 81 235 2066	
52.	P. Haindongo	Onambutu	+264 81 283 8611	
53.	Ms. Kristophina Iyambo	Onambutu	+264 81 466 8558	
54.	Ms. Rebecka Lucas	Onambutu	+264 81 272 9437	rebeckandahepanghikambe@gmail.com
55.	Ms. Ruusa Naanda	Onambutu	+264 81 318 0695	
56.	Ms. Penehafo N. Nghalipo	Okauva MHSS Ondobe Constituency	+264 81 312 3820	penehafonghalipo@gmail.com
57.	Ms. Annalisa Shapange	Ondobe	+264 81 739 4263	
58.	Ms. Penexupifo Shikonda	Ondaanya-Ondobe	+264 81 393 5134	
59.	Ms. Cecilia Shitenga	Ondobe	+264 81 258 5441	
60.	Ms. Delemina K.	Omunyekadi	+264 81 785 6608	
61.	Mr. Boni Naholo	Omunyekadi	+264 81 298 8524	

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62.	Mr. Likius Shitenga	Omunyekadi	+264 81 275 4884	likiusshitenga33@gmail.com
63.	Mr. Simon Kambonde	Omunyekadi	+264 81 209 6333	
64.	Mr. Festus Shafokuda	Omunyekadi	+264 81 281 2149	
65.	Ms. Pombili Abel	Omunyekadi	+264 81 222 1009	
66.	Ms. Helena Has	Ondaanya	+264 81 212 4947	
67.	Mr. Philipus Hamunyela		+264 81 628 2274	
68.	Mr. Fillemon Martin		+264 81 250 6251	
69.	Mr. Ililus Shikonekeni	Oilyateko	+264 81 297 2298	
70.	Mr. Hanghome P Absalom		+264 81 147 4866	
71.	Mr. Pombili Shiimbashike	Communal	+264 81 291 9508	shikeconstruction@gmail.com
72.	Mr. Mwahafa Haimbodi		+264 81 301 4961	
73.	Ms. Julia S. Ndilula	Oshandi	+264 81 307 5752	juliashahafifange@mail.com
74.	Mr. Hiweni Lazarus	Oshandi	+264 81 581 8645	
75.	Mr. Erasmus Filemon	Oshandi	+264 81 420 8976	erasmusfilemon@gmail.com

No	Name and Surname	Institution / Location & Position (if known)	Telephone Number	Email Address
76.	Ms. Mirjam Hendjala	Oheti	+264 81 249 1909	
77.	M. Shuunduli	Oheti	+264 81 615 1165	
78.	Mr. Joram M	Oshandi No. 1	+264 81 261 5883	
79.	Ms. Ester Nambahu	Oshandi	+264 81 331 1168	esternyanyu@gmail.com
80.	Ms. Emilia Nghitotelwa	Oshandi	+264 305 3517	emilianghitotelwa1@gmail.com
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82.	Ms. Ndapewa Joseph	Oshandi	+264 81 291 92069	
83.	Ms. Penexupifo	Oshandi	+264 81 372 0909	
84.	Mr. Lineekela Fabian	Oheti	+264 81 780 5207	
85.	Ms. Penyambeko Kafita	Oshandi No. 1	+264 81 223 2816	
86.	Ms. Foibe Hangula	Oshandi No. 1	+264 81 391 8056	
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88.	S. Nghishongwa	Oshandi No. 2	+264 81 221 0067	
89.	E. Nakashimba	Eembaxu	+264 81 217 7283	

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90.	E. Moses	Omhedi	+264 81 200 1364	
91.	Ms. Bernadine N. Pineas	Oshandi No. 2	+264 81 292 3971	
92.	Ms. Fransina Namwadi	Oshandi No.1	+264 81 557 7502	
93.	Ms. Penehafo M	Oshandi No. 1	+264 81 222 9905	
94.	Mr. Efraim Ndove	Oshandi No.1	+264 81 263 1228	

12.4 RECORD OF SOME OF THE CORRESPONDENCE WITH REGISTERED IAPS



outrun consultants cc

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Windhoek, Namibia
Cell: +264 81 268 3578
Email:outruninvest@hotmail.com
support@outrungreenhouses.com

VAT NO: 07211452-015

Office of the Executive Director
Ministry of Agriculture, Water and Land Reform (MAWLR)
Private Bag 13184
Windhoek

21 July 2022

Attention: Ms. Ndiyakupi Nghituwamata

Dear Madam

As the appointed Environmental Consultants for the EIA Study: The Proposed Ohangwena II Wellfield Water Supply Infrastructure Upgrade in the Ohangwena Region, Outrun Consultants CC hereby invites you to the second round of Stakeholder/Public Consultation Meetings to be held in Ohangwena Region as per the details below. Attached hereto is the merged Minutes from the first round of Consultation Meetings (February/March 2022). Kindly feel free to join any of the Meetings, or alternatively, you can join the Fourth Meeting scheduled on Wednesday, 27 July 2022 in Eenhana.

The details of the new (second round of) Consultation Meetings are as follows:

First Meeting
Date: Tuesday, 26 July 2022
Time: 10h00
Venue: Oshandi (Ondobe Constituency Office Hall)

Second Meeting
Date: Tuesday, 26 July 2022
Time: 14h30
Venue: Ondobe Grant Payout Hall (Etala lyoPenzela yovakulupe), Ondobe

Third Meeting
Date: Wednesday, 27 July 2022
Time: 10h00
Venue: Onambutu Community Hall (Eenhana Constituency Office).

Fourth Meeting (which will include Regional and Local Stakeholders as well as the Proponent, NamWater)
Date: Wednesday, 27 July 2022
Time: 14h30
Venue: Ohangwena Regional Council Office, Eenhana

Should you have any questions or need further clarification on this matter, please do not hesitate to contact us.

Yours Sincerely,

MR. JOSIAH T. MUKUTIRI
LEAD ENVIRONMENTAL ASSESSMENT PRACTITIONER (ENVIRONMENTAL CONSULTANT)
OUTRUN CONSULTANTS CC
MOBILE: +264 812 683 578

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THE REGIONAL OFFICER

Ohangwena Regional Council

P. Bag 88007

Eenhana

31 January 2022

Dear Sir

RE: ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE OHANGWENA 2 WELL FIELD.

I trust our mail finds you in good health and the above referenced subject refers. As you may probably be aware Element Consulting Engineers was appointed by NAMWATER to develop the Ohangwena 2 Well Field and Outrun Consultants CC (subcontractor to Element) was subcontracted to conduct the EIA. Stakeholder consultations of the Interested and Affected Parties are the cornerstone of a successful EIA. It is against this background that we have identified you as a key stakeholder in this project and would like to engage your high office for consultations covering the Constituencies in which the project will take place. We plan to conduct the consultation meetings from the 17th of February 2022 to the 9th of March 2022 and need to engage with the Constituency Offices for planning purposes. Any assistance and guidance will be greatly appreciated.

Yours faithfully



JOSIAH T. MUKUTIRI

+264 812 683 578

From: orcinfo@ohangwenarc.gov.na [mailto:orcinfo@ohangwenarc.gov.na]
Sent: Wednesday, February 09, 2022 3:45 PM
To: ethaimbili@ohangwenarc.gov.na
Subject: FW: PROPOSED DATES FOR THE PUBIC CONSULTATION MEETINGS - EIA OHANGWENA 2 WELL FIELD

Good afternoon Mr Mukutiri,

My apologies for a delayed reply. Mr colleague Ms Natalia Ndaitwa will attend to your request, and I have forwarded all the info to her. She is lso copied in on this mail for ease reference. Her mobile number is 0811244343.

Regards,

Mr. Etuhole I. Haimbili
Deputy Director:
Planning and Development
Ohangwena Regional Council
Private Bag 88011, Eenhana
Tel: 065 264 314
Mobile: 0811270464

From: Natalia N Ndaitwa <nnndaitwa@ohangwenarc.gov.na>
Sent: Wednesday, 23 February 2022 8:38 AM
To: orcinfo@ohangwenarc.gov.na
Subject: RE: EIA PUBLIC CONSULTATION POSTERS / NOTICES

Good day Mr Mukutiri,

I acknowledge receipt of the posters sent and they were distributed accordingly to concerned constituencies for further distributions.

Regards

N N Ndaitwa

Invitation to the Public & Stakeholders Consultation Meeting for the Proposed Ohangwena II Wellfield Water Supply Infrastructure Upgrade, Ohangwena Region - An Environmental & Social Impact Assessment Study

Inbox

Outrun Consultants cc <outrungreeninfo@gmail.com> 19 Jul 2022, 11:12

to lebbeusnhamalwah, paulinadumeni, mandjolofilemon, Natalia, jkakwambi, Lasarus.Shikolol o, mwaningag, mwaningange, shilongop, esterndapwa, hilaliashipena, emhaikupula, Tendai, F redrika, James, Arthur, Martha.Hangula, hangulamarthal123, du, Aupokolo, Ashipala

Dear Stakeholder,

Following the communication we started with you earlier this year (late February and early March 2022) regarding the ESIA of the proposed upgrade of the Ohangwena II Wellfield Water Supply Infrastructure Upgrade, we are hereby inviting you to the second round of Stakeholder/Public Consultation Meetings. Attached hereto is the merged Minutes from the first round of Consultation Meetings (February/March 2022).

The details of the new (second round of) Consultation Meetings are as follows:

First Meeting
Date: Tuesday, 26 July 2022
Time: 10h00
Venue: Oshandi (Ondobe Constituency Office Hall)

Second Meeting
Date: Tuesday, 26 July 2022
Time: 14h30
Venue: Ondobe Grant Payout Hall (Etala lyoPenzela yovakulupe), Ondobe

Third Meeting
Date: Wednesday, 27 July 2022
Time: 10h00
Venue: Onambutu Community Hall (Eenhana Constituency Office).

Fourth Meeting
Date: Wednesday, 27 July 2022
Time: 14h30
Venue: Ohangwena Regional Council Office, Eenhana

We kindly request the respective Honorable Constituency Councilors of the affected communities/areas to assist us with announcing the Consultation Meetings on the radio.

Kind regards,

Mr. Josiah T. Mukutiri
LEAD EIA Practitioner
Outrun Consultants
Mobile: +264 812 683 578

12.5 ISSUES AND RESPONSE TRAIL ACCORDING TO THE CONSULTED PUBLIC/STAKEHOLDERS BETWEEN FEBRUARY 2022 TO AUGUST 2022:

PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
	Issues and Responses from February to March 2022	
1.	**Mr. Lebbeus N. Hamalwah (Directorate of Water Supply and Sanitation Coordination):** (a) Some growth points north of Onakatumbe are without water. There is an agricultural centre with salty water. An owner of a filling station that side drilled his own borehole, but the water was salty. He was not allowed to drill further because he needed to obtain a permit. (b) there is Omakango and Onambutu. In Onambutu, there is a small reservoir constructed during the colonial times. There has been a proposal to upgrade it, but looking at the new works' preliminary drawings, it looks different and does not speak of that proposal. Onambutu is a growth centre and foresees a population increase in few years to come. Upgrading the reservoir would help in case of water failure at one supply point, the community would still have water from the reservoir. (c) **Question:** There are 2 monitoring boreholes in Ondilinawa/Oshivale west of Onambutu. Will there be new boreholes drilled for the scheme to augment the scheme?	**Mr. Josiah Mukutiri (Lead Environmental Assessment Practitioner from Outrun Consultants):** (a) and (b) Noted. **(c) Mr. Josiah Mukutiri:** There will be new boreholes drilled to augment the existing water supply. The boreholes will be utilized based on the sustainable yields and water quality (whether the water will require treatment or not). There are existing boreholes in the area and not currently utilized. These will be tested to determine if they can be incorporated into the scheme supply. The ESIA is aimed at addressing the options and decision will be finalized once the ESIA is completed.
2.	**Mr. Eddy Kapunda (Onanghulo Village):** (a) Oshitayi-Oilyateko and Onanghulo water supply line (scheme number 417338) is experiencing water pressure issues because for almost 5 months there has not been water flow in the villages. There is water but the flow is limited due to the pressure. **Issue: Water flow (very low pressure).** (b) The people assigned to open water supply points/taps for the communities are failing the people because sometimes there is an assigned young person who is given the keys, but they are usually not around. What can be done to solve this?	**Ms. Fredrika Shagama (Assistant Environmental Assessment Practitioner from Outrun Consultants): (a**) the issue has been noted for consideration and addressing. **Ms. Fredrika Shagama:** (b) This is really a concern. Perhaps the community leaders should reconsider this and reassign the key holding responsibility to someone who is more in the community, maybe a middle-aged community member or three of them, in case the other person have commitment outside the community on certain days. Young people may sometimes go to schools in cities and towns, or to look for better opportunities, which would make it difficult to be available in the community and ensure that the people have unlimited access to water.
3.	Ms. Mirjam Nghifekwa (Ondaanda Village): (a) I have a personal water pipeline; however, this pipeline has been damaged by the local children. The water meter is no longer there, and it was only installed last year (2021). What can be done to help the us with such issues of water infrastructure vandalism and theft? (b) The pipelines burst a lot that we even wish to have small gardens, but the water supply issues are discouraging us.	**Ms. Fredrika Shagama:** The issue has been noted for consideration and addressing.
4.	**Mr. Lukas Phillipus (from Omhedi Village):** (a) The pipeline from Okamwandi get damaged so often that we submit complaints to the office of the councillor but no feedback. It has been 2 years now. (b) We have a water tap that does not have a water trough for animals in Omhedi. How can we get assisted here? **(c)** There are 12 houses in Omhedi that do not have access to water that the people travel about 5km to other villages to get water. The issue was submitted to the office of the councillor.	**Ms. Fredrika Shagama:** The issues have been noted for consideration and addressing

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
5.	**Mr. Israel Jesaya (Oheti B Village):** Water supply issue – Between Ondobe and Omundaungilo, Oheti B and Omutwewondjamba (a) The pipeline from Oshandi-Ondobe, Omhedi and Oheti B, a pipeline from Oheti B to a kindergarten is small that sometimes the water does not reach the area on time. (b) The road from Etomba was constructed after the water pipeline was already put there. The water is there but the villages towards the borders have no water (Omutwewondjamba-Oheti B issue) (c) Water application forms take even 5 years for some people while others take a short time. We need to know what causes this or why? Possible nepotism and corruption in the water application and allocation among communities/offices. (d) The community concerns by the locals should be heard and considered especially during construction that some contractors would claim that they are just doing their job.	**Ms. Fredrika Shagama: (a) and (b)** The issues have been noted for consideration and addressing. **Ms. Fredrika Shagama: (c)** The issues have been noted for consideration and addressing, which would also be conveyed to the offices responsible for private water supply line applications. **Ms. Fredrika Shagama: (d)** The issues have been noted for consideration and addressing, and incorporation into the Environmental & Social management Plan (ESMP) for implementation.
6.	**Ms. Natalia Wilbard (Oheti A Village):** (a) the issue of water supply from the source to her home because of her health condition. Sometimes, the community members (children) assist her to carry the water to her home, but the children are not always available to help. Therefore, she submitted a plea to get assistance with her own water line. (b) There is a conflict in the communities regarding application for water supply line that some community members would prefer that certain people are assisted or given preference over others.	**Ms. Fredrika Shagama:** The issues have been noted for consideration, addressing and conveying to the responsible offices.
7.	**Mr. Jackson Nghikelwa (Village not indicated):** There are old reservoirs including the one here in Oshandi next to the church. Can this reservoir not be upgraded to be used to store water for the locals? We are advised to just get water from the pipelines with existing water meters (the pipelines pass near the reservoir)	**Ms. Fredrika Shagama:** The issue has been noted for consideration and incorporation. Please note that the old reservoir is also part of the infrastructures considered for the planned upgraded
8.	**Mr. Petrus Hendjila (Oshandi Village):** There is a water shortage just southwest of Oshandi Settlement before reaching the main road (Ondobe-Eenhana) that we heavily rely on hand dug wells. We really need help.	**Ms. Fredrika Shagama:** The issue has been noted for consideration and incorporation
9.	**Mr. Lazarus Shikololo (Directorate of Planning: MAWLR):** (a) The blending of water (boreholes and the Oshakati Water Treatment Plant, what will be the difference considering that this is already the current situation? (b) The most affected people by the water shortage/supply issue are on the eastern side of Eenhana but the project is just focused on the western side and south of Eenhana. (c) From Oshikoto side and Eenhana to the east, there is really a big shortage of water, and it is part of the Ohangwena Regional Council Priority List.	**Ms. Fredrika Shagama: (a)** The plan is to increase or augment/strengthen the current supply which will include the new boreholes to the scheme. **Mr. Josiah Mukutiri: (b)** The comments to the ESIA are crucial to help influence the design. This project is just for the two sides of Eenhana, and we are not sure if there are other projects targeting these areas with ESIA Studies done by other consultants or planned in future. **Mr. Tendai Kasinganeti (Assistant Environmental Assessment Practitioner from from Otrun Consultants): addition - (b)** The comments from the ESIA and economic point would help in influencing the design to cater for the comments and areas in need. **Mr. Tendai Kasinganeti (addition): (c)** The issue has been noted for consideration and conveying to the Proponent.

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
10.	**Mrs. Natalia Ndaitwa (Ohangwena Regional Council):** Skills transfer for local youth – The consultants should try to train the local unemployed youth in assisting with such studies (EIAs/ESIAs) and not just people from Windhoek.	**Mr. Josiah Mukutiri: (b)** Well noted. At some point we would maybe need local youth to assist as enumerators to collect data for the social environment. The local youths were employed to undertake the social survey (distribution and explanation of social survey questionnaires to the community homesteads within the proposed upgrade of water infrastructure).
11.	**Mr. Steven Nghuushi (Ondobe DWSSC):** (a) The request for a booster pump at Oshigambo for the Oshigambo-Etope-Ondobe line. Currently, there is a pump at Iindangungu and it is not really serving the purposes and the population between these areas (the pressure does not reach the intended water users at the end line in the northern part of the scheme). (b) Rehabilitation of Etomba to Ondobe with at least a 160mm pipeline (there is currently 200mm). (c) Ondobe-Okahenge: there is a 63mm but should be upgraded to 90mm at least. There are about 110 houses in the Omunyekadi and Oilyateko/Etope served by this line. (d) There is no water pressure between Omafo and Oshandi, but the real issue is from Oshandi to the eastern side (villages like Uushake). (e) A concern about taking water from Oshandi westward. This does not make sense.	**Mr. Josiah Mukutiri: (b)** The comments have been noted for incorporation and we can arrange for an online meeting with the design engineer now. An online meeting was held between the Environmental Consultants, DWSSC Officers and Element Consulting / Design Engineers (represented by the Lead Engineer James Turner). Engineer Turner presented the proposed upgrade to Mr. Nghuushi and discussed the way forward. Mr. Nghuushi presented the same issues/concerns raised earlier in the meeting with the Outrun Consultants to the Engineer. Mr. Josiah Mukutiri clarified that the aim is to upgrade the Oshandi-Eenhana line so that more water is pumped towards the east. Mr Nghuushi to send all their existing and proposed pipeline layouts to Eng. Turner.
12.	**Mr. Nelson Nghinyengwasha (Omafo DWSSC**): (a) Endola northwest has issues with water pressure -Eenhana-Omafo has been experiencing water pressure issues -Onambutu: the issues of pressure that is can be linked to Eenhana-Omafo lines (this was a proposal back then). -Etope - Oshigambo: the water flow is very low (water pressure issue) (b) Mr. Nghinyengwasha thinks that the pressure is influenced by the design. The steel design (diameter) of the pipeline feeding from the main line to supply a big line. (c) The community pipeline is designed in an expectation that the communities would manage their own lines. There have been efforts to replace the small diameter pipes with better ones to change/improve the flow (160mm (main line)-15mm (galvanized steel)-110mm -On advice to increase the pressure, NamWater indicated that the high pressure would affect the communities at the very beginning of the supply line, or the pipes would start breaking/bursting due to very high pressure because the pipes are designed to withstand a specific pressure level/limit.	**Mr. Josiah Mukutiri: (b)** The comments have been noted for incorporation.
13.	**Mr. Steve Mwaningange (Eenhana Town Council)**: (a) Onambutu-Omakango: will these 4 options be considered? Is this project to only fix current water supply issues or new ones also? (b) Will there be a reservoir at Onakatumbe? (c) Onakatumbe-Eenhana is crucial to have a link between the two areas. There is a good water supply when there is a ring connection in the system.	**Mr. Tendai Kasinganeti: (a)** The current ESIA/project focuses on the existing issues, and the plan is to expand to other areas, because currently expanding to other areas when the infrastructure is already struggling to supply pressure issues/sufficient water to current water users. Therefore, the best option is to first upgrade the infrastructure. (b) According to the preliminary drawings, there is no planned reservoir, but we will confirm from the Design Engineer.

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
		(c) Noted.
14.	**Mrs. Ester Kavela (Ohaihana Village):** There are villages with water supply issues about 4 km north Eenhana Town. They need help.	**Ms. Fredrika Shagama: t**he issue has been noted for consideration.
15.	**Mr. Isak Abraham (Otunganga Village):** (a) There is a water pressure issue in our village of Otunganga, between Oshigambo and Oshaango. The water flow is very slow. (b) The water pressure is only good from February to April and from May to December, is it bad. This is causes us to not have tap water even for 3 months.	**Ms. Fredrika Shagama: t**he issue has been noted for consideration. **Addition by Mr. Lebbeus Hamalwah: (a)** this is another low-pressure issue. There is already one water supply in the area from the Oshigambo-Etope line. There is an offtake to the Otunganga Village which is about 20 km, and the pipeline is a 200 mmm UPVC line. **Mr. Lebbeus Hamalwah (DWSSC): (b)** the reason could be that during the first months of the year is that because some people rely on rainwater more than tap water. Therefore, the pressure is bound to be good because few people are using tap water.
16.	**Mr. Lebbeus Hamalwah (DWSSC):** A proposal for a small pump station at the Omulonga Constituency for the eastern side needs.	**Ms. Fredrika Shagama: T**he has been noted for consideration.
17.	**Mr. David Shoonyeka (Ombaladila Village):** The pipelines in our village are new and currently we do not have any water issues. We do experience water supply sometimes due to repairs which is normal but everything else is good for now.	**Ms. Fredrika Shagama:** Noted.
18.	**Mr. Nikanor Simon (Onambutu Village):** Can Onambutu get the existing old reservoir repaired or upgraded to store water? When the water pipeline is damaged in other areas, our side does not get water at all. Onambutu has been a centre for growth all these years and given that the Eenhana Constituency Office is also here. We are foreseeing a bigger population (population increase) in the next 3 to 4 years. Therefore, it is important to at least consider upgrading the old reservoir for water security in the area. **Mr. Lebbeus Hamalwah (DWSSC):** To add to Mr. Simon comment, Onambutu pipeline is also very small.	**Ms. Fredrika Shagama**: The point has been noted for consideration.
Issues and Responses from July to August 2022		
19.	**Mr. Lebbeus Hamalwah (DWSSC):** I am concerned by the fact that there is no provision for a pump station on the Omakango-Onambutu-Eenhana route given that there is a low-pressure issue on the existing routes.	**Mr. Abraham Ashipala (NamWater Oshakati)** explained the schematic drawing (layout) of the proposed water infrastructure upgrades attached to the distributed background information document (BID). He also indicated that the plan is to upgrade the pump station at Iindangungu / Omakango side that will be able to provide the necessary pressure along the route.
20.	**Mr. Nicanor Simon (Onambutu Community and representing the Village Headman):** (a) Will there be a reservoir at Onambutu? There is a foreseeable population increase and development and this is a growth point, hence my question to make sure there will be sufficient water supply to cater for this growth? -(b) Should it come to light that the pipeline crosses someone's field, what will be done?	**Mr. Josiah Mukutiri (Outrun Consultants):** (a) Currently, there is no reservoir planned nor approved for Onambutu. The plan to upgrade the existing reservoir has however been considered but has not yet been approved. Should it be approved, the this will be communicated at a later stage. **-(b) Ms. Fredrika Shagama (Outrun Consultants):** before the work commences, NamWater will communicate to the affected landowner and local leadership (headman) for proper consultation and agree on the compensation of land use as per the National Compensation Policy to compensate for land loss. This will not apply to the land use due to the pipe crossing but also on fruit trees that may need to be removed to allow the pipeline installation.

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
		-(b) Mr. Abraham Ashipala (NamWater Oshakati): NamWater experiences the challenges of existing pipelines crossing fields whereby landowners (field owners) lock their gates and they do not want anyone entering their fields. Therefore, we believe that it is the responsibility of the leaders (headmen and councillors) to enlighten the communities that the main reason the pipelines passing through their fields is to take water to other communities on the other side. There are also water meter readings on the fields and someone from the community would want to take water from here to their homesteads and the pipeline passes through fields even for 10km. hence, we ask for consent from the landowners to enable NamWater to install the infrastructure such as wate meter reading stations where neighbouring landowners can easily access the station for their own water lines without delays or having to pay more due to the distance from their homes to the water meter stations.
21.	**Mr. Lebbeus Hamalwah (DWSSC):** Community members are intentionally erecting their structures on top of the pipelines or very close to the pipelines. On the issue of compensation, some people would want to be compensated for their structures such as buildings, although they already found the water infrastructure there. Maybe NamWater should also make it clear to the public on the issue of building on top of pipelines or too close to them.	**Mr. Abraham Ashipala (NamWater Oshakati):** The point has been noted. We will also incorporate this into the annual community engagement meetings we are planning to hold and create awareness on this with communities.
22.	**Ms. Natalia Mvula (Onambutu Community):** (a) We appreciate the fact that NamWater together with DWSSC are embarking on this good journey of making water supply easy for us, particularly on the upgrading of water pipeline and improve the pressure because sometimes the pressure is very low and there is no water flow. -(b) Just a suggestion on next community meetings, please consider sending the meeting invitations to the churches too because I do not think everyone got the honourable councillor's announcement in the radio. -(c) I think village headmen should be informed of the distance on both sides of the pipeline / servitude, if someone wants to put up their structure near the pipeline.	**Ms. Fredrika Shagama (Assistant Environmental Assessment Practitioner from Outrun Consultants)**: (a) This is well noted, and we are glad that the water supplier is making efforts to help communities. -(b) the suggestion has been well noted and will be considered for the next meetings (once the actual route of the pipeline is established). **-(c) Mr. Abraham Ashipala (NamWater Oshakati):** The required distance is 7 metres from both sides of the pipeline. This is to ensure that there is enough space for NamWater's machinery and vehicles to move freely without damaging buildings, yards/fences, or poles when maintenance of the pipeline is done.
23.	**Mr. Nicanor Simon (Onambutu Community and representing the Village Headman**): (a) When the project is approved by the Environmental Commissioner and the work is about to start, will the community members be considered for employment, or the construction contractors will bring their own people? -(b) There is also an issue of some community members who do not understand or just playing ignorant on the importance of backfilling their trenches after putting in the pipelines running along the roads. I had raised this issue with some of the community members, but they did not take me seriously. Perhaps, NamWater need to help the traditional authorities to raise awareness in the next meetings when the actual pipe route is established and confirmed.	**Ms. Fredrika Shagama (Outrun Consultants):** When it comes to work that can be done by the locals, these should be given to them. The work can only be done by an outsider if it cannot be done by locals (highly skilled or technical work). This will also be outlined in the Environmental Management Plan (EMP). The employment opportunities will be communicated through the office of the constituency councillor for the capable locals to register or submit their CV's. **-(b) Mr. Abraham Ashipala (NamWater Oshakati):** This has been noted and well consider it in the next community meetings prior to commencement of work.
24.	**Mr. Lebbeus Hamalwah (DWSSC):** A question to NamWater, Ms. Mvula indicated that their water pressure is low. The pipelines connected from Oshaango are new, but maybe the question would be if there will be additional pipelines at Oshaango?	**Mr. Abraham Ashipala (NamWater Oshakati):** The Oshaango scheme is under a different project, as the Onambutu upgrades are part of what is called ''critical scheme upgrading''

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
25.	**Ms. Paulina Dumeni (Eenhana Constituency Office):** There is an issue of low water pressure during summer months and the pressure is very good during rainy months / season. Why is this?	**Ms. Fredrika Shagama (Outrun Consultants):** The issue of low-pressure during summer months could be associated with many people relying on tap water, compared to rainy months when some people prefer rainwater from oshanas and less from the taps. This leaves few people relying on the taps and hence, the pressure is good (the lesser the people on the system, the higher, the pressure/good tap water flow and vice versa). We are hoping that the new upgrade of the pump station will also solve the pressure issue.
26.	**Mr. Raphael Endjala (NamWater: Oshakati)**'s request to the members of the community to please report burst pipes on time so that they can be attended to on time. This is because such unreported incidents greatly affect the water supply operations too.	
27.	**Mr. Fillemon Martin (Oilyateko Village):** Water flow issue (very low pressure). The water does not flow and if it does, only from 07h00 or 08h00 in the morning and there would be no water for the whole day.	**Ms. Fredrika Shagama (Outrun Consultants): (a) t**he issue has been noted for consideration and NamWater representatives are also sitting among us to note this and see where improvements need to be done.
28.	**Ms. Secilia Shitenga (Ondobe Village):** (a) We have water, but it is not enough, due to extremely low pressure. Some community members would like to take their own lines from the existing line, but the pipes are small. -(b) Sometimes, our water rates are too high that we do not know if it is our fault, aging infrastructure, or errors in meter readings.	**Mr. Abraham Ashipala (NamWater Oshakati):** We have taken note of this, and we kindly ask that you submit these issues to Mr. Nghuushi here at the DWSSC Office in Ondobe for further investigations and possible solutions.
29.	**Ms. Penehafo Nghalipo (Okauva MHSS / Ondobe Constituency):** We reported the damaged / broken water meter but no solution yet since May 2022. There is even an elderly in the house and there is no water.	
30.	**Mr. Delemina K (Omunyekadi Village):** (a) There is a community tap but the water is only available for 3 to 4 days and its only flows during the between 1am and 2am -(b) The pipeline is small too because people would like to apply for their own water, but it is impossible due to this challenge.	**Mr. Abraham Ashipala (NamWater Oshakati):** we have taken note of this. The proposed upgrade seeks to change this situation so that everyone has access to better water supply.
31.	**Mr. Likius Shitenga (Omunyekadi Village):** we need water in our house and the pipeline just runs past my house, but it is too small for us to take our own.	**Mr. Abraham Ashipala (NamWater Oshakati):** We have taken note of this. Kindly submit the issue to Mr. Nghuushi at the DWSSC Office.
32.	**Ms. Lucia Kambwa (Ondaanya Village):** Our pipeline was installed in 2002, and the first reading was already N$261 and we do not even use the water often. In 2015, the reading was at N$3000.	**Mr. Abraham Ashipala (NamWater Oshakati):** We have taken note of this. Kindly submit the issue to Mr. Nghuushi at the DWSSC Office for investigation and feedback.
33.	**Mr. Abraham Ashipala (NamWater Oshakati):** The issue of water connection problems due to structures being within the servitudes of water pipelines. The local leadership should advise community members to refrain from erecting structure within the servitudes of water pipelines as this makes it hard for maintenance team to address incidents such as broken pipes and repair damaged pipelines due to accessibility issues.	
34.	**Mr. Steve Nghuushi (Ondobe DWSSC):** The proposal to consider a new line from Etope to Ondobe to cater for the villages between the two, as there is currently no water supply.	
35.	**Mr. Erasmus Fillemon (Oshandi No. 2 Village):** (a) To establish the pipeline distance from fences, how will that agreement be on compensation for displacement of properties to enable the pipeline? -(b) Oshandi should have a pay point for water payments.	**Mr. Abraham Ashipala (NamWater Oshakati:** (a) the compensation agreement will be discussed by NamWater and affected landowners later when the exact pipeline routes are established. -(b) NamWater usually establish pay points depending on the number of clients in an area. NamWater is proposing to make it easy especially for elderly to pay at NamPost and pension pay-out points such as here in Oshandi.

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
36.	**Mr. Pombili Shiimbashile (Oshandi Village):** (a) Will there be a new pipeline or just the upgrading of the old one, regarding the issue of pipeline -(b) in the case that the pipeline passes through a fruit tree, or the tree is within the servitude, and will need to be removed, what will happen? Is there compensation for that?	**Mr. Abraham Ashipala (NamWater Oshakati): (a)** When the old pipeline is under construction or upgraded, the other one will still be there because people will still need water during upgrading period. -(b) **Ms. Fredrika Shagama (Outrun Consultants):** compensation will be facilitated in accordance with the National Compensation Policy on the removal of trees that bear fruits.
37.	**Ms. Foibe Hangula (Oshandi Village):** What would one need to take to along to apply for private water connection and how long would that take?	**Mr. Raphael Endjala (NamWater Oshakati):** You will need to bring the following documents: -Copy of your ID -If you are employed, you bring a 3-month bank statement -Copies of IDs of 2 people who already have private water meters as witnesses -Declaration of where you are getting water from currently -Letter from the Headman -Application fee of N$1457
38.	**Mr. Erickson Nakashimba (Eembaxu Village):** Can we be assisted to have our own connection from that existing line pipeline from Oshandi to the Eenhana RDC?	**Mr. Raphael Endjala (NamWater Oshakati):** that pipeline was only meant for the RDC. Please refer to your nearest DWSSC (Rural Water Supply) office to more information and assistance.
39.	**Mr. Erastus Moses (Omhedi Village):** Can we apply for connections from the Omalangu to Omhedi yaSalom pipeline?	**Mr. Raphael Endjala (NamWater Oshakati):** Please refer to your nearest DWSSC (Rural Water Supply) office to more information and assistance.
40.	**Mr. Efraim Ndove (Oshandi Village):** we are thankful for the project. However, we are requesting that there should be someone to check the progress and status of the pipelines in the communities and how the communities survive on the infrastructure, because the operators do not regularly check the infrastructures, and because of that, some of these infrastructures are old or damaged with no care for a long time.	**Mr. Abraham Ashipala (NamWater Oshakati):** NamWater and the DWSSC has agreed on a plan to hold bi-annual meetings with communities on water issues to keep an open communication and timely update on water related matters
41.	**Ms. Martha Hashondili (Oheti Village):** Can NamWater consider assisting people who cannot afford private water connections (meters)? Alternatively, can there not be pre-paid water cards?	**Mr. Abraham Ashipala (NamWater Oshakati):** The cards are under consideration -On the issue of people who cannot afford private connections, they can communicate this through the constituency office so that the communities can be assisted during project implementation.
42.	**Ms. Delemina Moses (Oshandi No. 1):** Our water meter has been damaged by children and is not working. Where should we go for assistance?	**Mr. Abraham Ashipala (NamWater Oshakati):** it is important as communities to encourage discipline in our children to ensure that they do not play with crucial infrastructures like water meters. NamWater has commencement with the construction of cabins around water meters. However, this is even more of a challenge because of vandalism by adults who use the cabin accessories for grilling meat at parties. Therefore, this should be self-disciplinary behaviour for adults.
43.	**Ms. Bernadine Pineas (Oshandi No. 2):** If we have such a good plan for the project, will there be working opportunities for the locals, or the contractors will have their own employees?	**Mr. Abraham Ashipala (NamWater Oshakati):** Opportunities for work will be given to the locals of the work they can do. Therefore, preference will be given to the local youth. This will be communicated through the office of the councillor.
44.	**Mr. Pombili Shiimbashile (Oshandi Village):** (a) The water connection application points (offices) are extremely far from some communities. Can we not have closer points / offices for NamWater?	**Mr. Abraham Ashipala (NamWater Oshakati): (a)** There is still a NamWater office in Omafo near O-save. -(b) Noted, but it needs to be investigated first for consideration.

S / N	Name of the speaker/commentor & Issue or Comment	Response provided by:
	-(b) At areas where there are two pipelines running parallel to each other and one of the pipes is old. Can that pipe be donated to the community and used to supply untreated water for things like gardening?	
45.	**Mr. Absalom Pohamba (Oshandi No. 2 Village):** Is there a plan for our old livestock troughs? Will they also be upgraded during this project? -(b) Will NamWater relocate water meters and fence them off to be protected from vandalism? -(c) The customer service by NamWater of providing water in the night like at 02h00 or 03h00 in the morning is not good. We are aware of the water flow issue, but this needs to be improved.	**Mr. Josiah Mukutiri (Outrun Consultants: (a)** These are part of the Demand Survey, and not necessarily under the water supplying infrastructure. **-(b) Mr. Abraham Ashipala (NamWater Oshakati):** please let us discipline our children to not play with or damage water infrastructure. Adults who are vandalising infrastructure should self-discipline and understand the importance of the infrastructure to other community members, if not themselves. **-(c) Mr. Abraham Ashipala (NamWater Oshakati):** when there are repair works along a pipeline, the water is pumped for 8 hours but the water struggles to reach people or users at the very end of the supply line. Therefore, the water only reaches the last users in the line very late in the night or early morning hours.
46.	**Ms. Fransina Namwandi (Oshandi No. 2 Village):** There is an elderly who stays in the house with 2 children, but their water rates are high. How does that happen and how can this be rectified?	**Mr. Abraham Ashipala (NamWater Oshakati):** Noted, however, please submit the meter number to the DWSSC to investigate this.
47.	**Ms. Ndapewa Joseph (Oshandi No. 2 Village):** My issue is on the abnormally high-water rates or irregular at times. Can NamWater investigate this?	**Mr. Abraham Ashipala of NamWater Oshakati:** Noted. We will try to investigate the cause of this.
48.	**Ms. Julia Ndilula (Oshandi No. 2 Village):** What is the rate per cubic meter of water?	**Mr. Raphael Endjala (NamWater Oshakati):** The price per cubic meter (one thousand litres) is N$16.28
49.	**Mr. Simon Hishongwa (Oshandi No. 2 Village):** When NamWater puts cabins around the water meter, will the owner have success / key to the cabin, in case the pipe burst, and the owner needs to switch off the meter?	**Mr. Abraham Ashipala (NamWater Oshakati):** there are two valves to turn the meter on and off. One is NamWater's and the other for the owner). Therefore, yes, the owner will have access.
50.	**Mr. Lazarus Shikololo (Ohangwena Regional Council DWSSC**): The project will not cover the area which critically need water. This is area is on the eastern side of Eenhana	**Ms. Fredrika Shagama:** This issue will be forwarded to NamWater provide clarification on the selection of the project area. This can also be attributed to the priority of upgrading the existing water infrastructure which will enable the supplying of water to areas without water. Or the area is considered under a different water supply scheme which does not form part of this ESIA Study.

12.6 MINUTES OF PUBLIC AND STAKEHOLDERS MEETINGS CONDUCTED DURING THE SCOPING PHASE

Date: 11 March 2022

MEETING MINUTES OF THE FIRST ROUND OF PUBLIC/STAKEHOLDERS' CONSULTATION MEETING:

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

A. EENHANA CONSTITUENCY OFFICE IN ONAMBUTU

Date: **Monday, 28 February 2022**

Time: **09h00 for 10h00**

Venue: Eenhana Constituency Office in Onambutu, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Mr. Josiah Mukutiri (the lead Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting by introducing his team, welcomed, and thanked everyone in attendance for making time to attend the meeting. He explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

Some printed copies of the printed Background Information Document (BID) and project area layout were circulated to all attendees for self-reading and orientations, respectively.

The Meeting was attended by 7 people (**Please refer to the attached attendance register**)

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Mr. Tendai Kasinganeti. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Mr. Kasinganeti also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.
- Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultants. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 1** below.

Table 41: Issues, suggestions and comments received during the Consultation Meeting in Onambutu (Eenhana Constituency Office) on 28 February 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Lebbeus N. Hamalwah (Directorate of Water Supply and Sanitation Coordination)	**Comments: (a)** Some growth points north of Onakatumbe are without water. There is an agricultural centre with salty water. An owner of a filling station that side drilled his own borehole, but the water was salty. He was not allowed to drill further because he needed to obtain a permit. (b) there is Omakango and Onambutu. In Onambutu, there is a small reservoir constructed during the colonial times. There has been a proposal to upgrade it, but looking at the new works' preliminary drawings, it looks different and does not speak of that proposal.	Noted. (c) **Mr. Josiah Mutukuri:** There will be new boreholes drilled to augment the existing water supply. The boreholes will be utilized based on the sustainable yields and water quality (whether the water will require treatment or not). There are existing boreholes in the area and not currently utilized. These will be tested to determine if they can be incorporated into the scheme supply.

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
		Onambutu is a growth centre and foresees a population increase in few years to come. Upgrading the reservoir would help in case of water failure at one supply point, the community would still have water from the reservoir. (c) **Question:** There are 2 monitoring boreholes in Ondilinawa/Oshivale west of Onambutu. Will there be new boreholes drilled for the scheme to augment the scheme?	The ESIA is aimed at addressing the options and decision will be finalized once the ESIA is completed.

Another meeting was proposed for Wednesday, 2 March 2022 at 14h30 for Onakatumbe/Onambutu community.

There were no further questions or comments/concerns.

Mr. Kasinganeti concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 11h42.

B. OSHANDI, ONDOBE CONSTITUENCY

Date: Monday, 28 February 2022

Time: 12h30

Venue: Ondobe Constituency Office Hall in Oshandi, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Ms. Fredrika Shagama (the Environmental Assessment Practitioner from Outrun Consultants cc) opened the meeting by introducing herself and colleague in attendance, welcomed, and thanked everyone in attendance for making time to attend the meeting. She explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

Some printed copies of the printed Background Information Document (BID) and project area layout were circulated to all attendees for self-reading and orientations, respectively.

Given the fact that the meeting was attended mostly by the local communities comprising mainly of elders who speak very to no English, the Meeting was conducted in Oshiwambo Language. The comments and questions were raised in Oshiwambo and recorded in English for reporting.

The Meeting was attended by twelve (12) people -**Please refer to the attached attendance register**.

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Ms. Shagama. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, the Environmental Consultant also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.

- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.

The comments, and questions were submitted and raised in Oshiwambo but recorded in English for the purpose of reporting to other non-Oshiwambo speaking project team members, Proponent, etc. The key issues raised were noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultant. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 2** below

Table 42: Issues, suggestions and comments received during the Consultation Meeting in Oshandi (Ondobe Constituency) on 28 February 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Eddy Kapunda (Onanghulo Village)	**Comments:** (a) Oshitayi-Oilyateko and Onanghulo water supply line (scheme number 417338) is experiencing water pressure issues because for almost 5 months there has not been water flow in the villages. There is water but the flow is limited due to the pressure. **Issue: Water flow (very low pressure).** (b) The people assigned to open water supply points/taps for the communities are failing the people because sometimes there is an assigned young person who is given the keys, but they are usually not around. What can be done to solve this?	**Ms. Fredrika Shagama: (a) t**he issue has been noted for consideration and addressing. **Ms. Fredrika Shagama:** (b) This is really a concern. Perhaps the community leaders should reconsider this and reassign the key holding responsibility to someone who is more in the community, maybe a middle-aged community member or three of them, in case the other person have commitment outside the community on certain days. Young people may sometimes go to schools in cities and towns, or to look for better opportunities, which would make it difficult to be available in the community and ensure that the people have unlimited access to water.
2.	Ms. Mirjam Nghifekwa (Ondaanda Village)	**Issue**: (a) I have a personal water pipeline; however, this pipeline has been damaged by the local children. The water meter is no longer there, and it was only installed last year (2021). What can be done to help the us with such issues of water infrastructure vandalism and theft? (b) The pipelines burst a lot that we even wish to have small gardens, but the water supply issues are discouraging us.	**Ms. Fredrika Shagama (FS):** The issue has been noted for consideration and addressing.
3	Mr. Lukas Phillipus (from Omhedi Village)	**Issues: (a)** The pipeline from Okamwandi get damaged so often that we submit complaints to the office of the councillor but no feedback. It has been 2 years now. (b) We have a water tap that does not have a water trough for animals in Omhedi. How can we get assisted here? **(c)** There are 12 houses in Omhedi that do not have access to water that the people travel about 5km to other villages to get water. The issue was submitted to the office of the councillor.	**Ms. Fredrika Shagama (FS):** The issues have been noted for consideration and addressing
4.	Mr. Israel Jesaya	**Comment: Water supply issue** – Between Ondobe and Omundaungilo, Oheti B and Omutwewondjamba (a) The pipeline from Oshandi-Ondobe, Omhedi and Oheti B, a pipeline from Oheti B to a kindergarten is small that sometimes the water does not reach the area on time.	**Ms. Fredrika Shagama: (a) and (b)** The issues have been noted for consideration and addressing. **Ms. Fredrika Shagama: (c)** The issues have been noted for consideration and addressing, which would also be conveyed to the offices responsible for private water supply line applications.

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
		(b) The road from Etomba was constructed after the water pipeline was already put there. The water is there but the villages towards the borders have no water (Omutwewondjamba-Oheti B issue) (c) Water application forms take even 5 years for some people while others take a short time. We need to know what causes this or why? **Possible nepotism and corruption in the water application and allocation among communities/offices.** (d) The community concerns by the locals should be heard and considered especially during construction that some contractors would claim that they are just doing their job: **Grievance mechanism during construction**.	**Ms. Fredrika Shagama: (d)** The issues have been noted for consideration and addressing, and incorporation into the Environmental & Social management Plan (ESMP) for implementation.
5.	Ms. Natalia Wilbard (Oheti A)	**Issue:** The issue of water supply from the source to her home because of her health condition. Sometimes, the community members (children) assist her to carry the water to her home, but the children are not always available to help. Therefore, she submitted a plea to get assistance with her own water line. (b) There is a conflict in the communities regarding application for water supply line that some community members would prefer that certain people are assisted or given preference over others.	**Ms. Fredrika Shagama:** The issues have been noted for consideration, addressing and conveying to the responsible offices.
6	Mr. Jackson Nghikelwa (Village not indicated)	**Comment & question:** There are old reservoirs including the one here in Oshandi next to the church. Can this reservoir not be upgraded to be used to store water for the locals? We are advised to just get water from the pipelines with existing water meters (the pipelines pass near the reservoir)	**Ms. Fredrika Shagama:** The issue has been noted for consideration and incorporation. Please note that the old reservoir is also part of the infrastructures considered for the planned upgraded**.**
7.	Mr. Petrus Hendjila (Oshandi Village)	**Issue**: There is a water shortage just southwest of Oshandi Settlement before reaching the main road (Ondobe-Eenhana) that we heavily rely on hand dug wells. We really need help.	**Ms. Fredrika Shagama:** The issue has been noted for consideration and incorporation
8.	Ms Fredrika Shagama (Environmental Consultant)	**Follow-Up Question**: (a) What are the common or main water uses in the area/villages? (b) How long does the communities wait for water related complaints feedback?	**Meeting attendees: (a)** The water is used for drinking, cooking, and other basic human needs such as washing and then livestock watering. **(b)** Sometimes it takes months for general issues and maybe weeks and even months for water meter related issues.

There were no further questions or comments/concerns.

Ms. Shagama concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 13h50.

C. OHANGWENA REGIONAL COUNCIL (EENHANA CONSTITUENCY) IN EENHANA

Date: Monday, 28 February 2022

Time: 15h30

Venue: Ohangwena Regional Council Boardroom in Eenhana, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Mr. Tenda Kasinganeti (Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting by introducing his team, welcomed, and thanked everyone in attendance for making time to attend the meeting. He explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

Some printed copies of the printed Background Information Document (BID) and project area layout were circulated to all attendees for self-reading and orientations, respectively.

The Meeting was attended by 5 people (**Please refer to the attached attendance register**).

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Mr. Tendai Kasinganeti. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Mr. Kasinganeti also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.
- Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultants. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 3** below.

Table 43: Issues, suggestions and comments received during the Consultation Meeting in Eenhana (Ohangwena Regional Council) on 28 February 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Lazarus Shikololo (Directorate of Planning)	**Comments: (a)** The blending of water (boreholes and the Oshakati Water Treatment Plant, what will be the difference considering that this is already the current situation? (b) The most affected people by the water shortage/supply issue are on the eastern side of Eenhana but the project is just focused on the western side and south of Eenhana. (c) From Oshikoto side and Eenhana to the east, there is really a bog shortage of water, and it is	**Ms. Fredrika Shagama: (a)** The plan is to increase or augment/strengthen the current supply which will include the new boreholes to the scheme. **Mr. Josiah Mukutiri: (b)** The comments to the ESIA are crucial to help influence the design. This project is just for the two sides of Eenhana, and we are not sure if there are other projects targeting these areas with

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
		part of the Ohangwena Regional Council Priority List.	ESIA Studies done by other consultants or planned in future. **Mr. Tendai Kasinganeti (addition): (b)** The comments from the ESIA and economic point would help in influencing the design to cater for the comments and areas in need. **Mr. Tendai Kasinganeti (addition): (c)** The issue has been noted for consideration and conveying to the Proponent.
2.	Mrs. Natalia Ndaitwa	**Comment:** Skills transfer for local youth – The consultants should try to train the local unemployed youth in assisting with such studies (EIAs/ESIAs) and not just people from Windhoek.	**Mr. Josiah Mukutiri: (b)** Well noted. At some point we would maybe need local youth to assist as enumerators to collect data for the social environment.

There were no further questions or comments/concerns.

Mr. Kasinganeti concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 16h30.

D. ONDOBE DWSSC OFFICE IN ONDOBE

Date: Tuesday, 01 March 2022

Time: 09h40

Venue: Ondobe Directorate of Water Supply and Sanitation Coordination (DWSSC) Office in Ondobe, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Mr. Tendai Kasinganeti (Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting by introducing his team, welcomed, and thanked everyone in attendance for making time to attend the meeting. He explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

Some printed copies of the printed Background Information Document (BID) and project area layout were circulated and spread on the table for self-reading and orientations, respectively.

The Meeting was attended by 6 people (**Please refer to the attached attendance register**).

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Mr. Tendai Kasinganeti. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Mr. Kasinganeti also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.

- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.
- Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultants. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 4**.

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Table 44: Issues, suggestions and comments received during the Consultation Meeting in Ondobe (DWSSC Office) on 01 March 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Steven Nghuushi	**Comment: (a)** The request for a booster pump at Oshigambo for the Oshigambo-Etope-Ondobe line. Currently, there is a pump at Iindangungu and it is not really serving the purposes and the population between these areas (the pressure does not reach the intended water users at the end line in the northern part of the scheme). (b) Rehabilitation of Etomba to Ondobe with at least a 160mm pipeline (there is currently 200mm). (c) Ondobe-Okahenge: there is a 63mm but should be upgraded to 90mm at least. There are about 110 houses in the Omunyekadi and Oilyateko/Etope served by this line. (d) There is no water pressure between Omafo and Oshandi, but the real issue is from Oshandi to the eastern side (villages like Uushake). (e) A concern about taking water from Oshandi westward. This does not make sense.	**Mr. Josiah Mukutiri: (b)** The comments to comments have been noted for incorporation.
An online meeting between the Environmental Consultants, DWSSC Officers and Element CE (Design Engineers)		Eng. Turner presented the proposed upgrade to the DWSSC Ondobe Office. Mr. Nghuushi presented the same issues/concerns raised earlier in the meeting with the Outrun Consultants to the Engineer. Mr. Josiah Mukutiri clarified that the aim is to upgrade the Oshandi-Eenhana line so that more water is pumped towards the east. **Mr Nghuushi to send all their existing and proposed pipeline layouts to Eng. Turner.**	

There were no further questions or comments/concerns.

Mr. Josiah Mukutiri concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 11h30.

E. OMAFO DWSSC OFFICE IN OMAFO/HELAO NAFIDI

Date: Tuesday, 01 March 2022

Time: 12h20

Venue: Omafo DWSSC Office in Omafo/Helao Nafidi, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Ms. Fredrika Shagama (Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting by introducing herself and colleague and thanked everyone in attendance for making time to attend the meeting. He explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

The printed copies of the printed Background Information Document (BID) and project area layout were distributed and spread on the Table for self-reading and orientations, respectively.

The Meeting was attended by 4 people (**Please refer to the attached attendance register**).

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Ms. Shagama. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Ms. Shagama also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.
- Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultants. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 5** below.

Table 45: Issues, suggestions and comments received during the Consultation Meeting in Omafo (DWSSC Office) on 01 March 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Nelson Nghinyengwasha	**Comment: (a)** Endola northwest has issues with water pressure -Eenhana-Omafo has been experiencing water pressure issues -Onambutu: the issues of pressure that is can be linked to Eenhana-Omafo lines (this was a proposal back then). -Etope - Oshigambo: the water flow is very low (water pressure issue) (b) Mr. Nghinyengwasha thinks that the pressure is influenced by the design. The steel design (diameter) of the pipeline feeding from the main line to supply a big line.	**Mr. Josiah Mukutiri: (b)** The comments to comments have been noted for incorporation.

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
		(c) The community pipeline is designed in an expectation that the communities would manage their own lines There have been efforts to replace the small diameter pipes with better ones to change/improve the flow (160mm (main line)-15mm (galvanized steel)-110mm -On advice to increase the pressure, NamWater indicated that the high pressure would affect the communities at the very beginning of the supply line, or the pipes would start breaking/bursting due to very high pressure because the pipes are designed to withstand a specific pressure level/limit.	

A short meeting was held with Mr. Elinafye Haimbili: Manager for Infrastructure, Town Planning & Technical Services at the Helao Nafidi Town Council and the Lead Environmental Consultant (Mr. Josia Mukutiri)). The aim was to introduce the project to the Town Council.

There were no further questions or comments/concerns.

Ms. Fredrika Shagama concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 13h00.

F. EENHANA TOWN COUNCIL IN EENHANA

Date: Tuesday, 01 March 2022

Time: 15h30

Venue: Eenhana Town Council Boardroom in Eenhana, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Mr. Tenda Kasinganeti (Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting by introducing his team, welcomed, and thanked everyone in attendance for making time to attend the meeting. He explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

Some printed copies of the printed Background Information Document (BID) and project area layout were circulated to all attendees for self-reading and orientations, respectively.

The Meeting was attended by 5 people (**Please refer to the attached attendance register**).

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Mr. Tendai Kasinganeti. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.

- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Mr. Kasinganeti also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.
- Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultants. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 6** below.

Table 46: Issues, suggestions and comments received during the Consultation Meeting in Eenhana (Eenhana Town Council) on 01 March 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Steve Mwaningange	**Comments: (a)** Onambutu-Omakango: will these 4 options be considered? Is this project to only fix current water supply issues or new ones also? (b) Will there be a reservoir at Onakatumbe? (c) Onakatumbe-Eenhana is crucial to have a link between the two areas. There is a good water supply when there is a ring connection in the system.	**Mr. Tendai Kasinganeti: (a)** The current ESIA/project focuses on the existing issues, and the plan is to expand to other areas, because currently expanding to other areas when the infrastructure is already struggling to supply pressure issues/sufficient water to current water users. Therefore, the best option is to first upgrade the infrastructure. (b) According to the preliminary drawings, there is no planned reservoir, but we will confirm from the Design Engineer. (c) Noted.
		The Eenhana Town Council will submit their comments by Friday, 04 March 2022 once the meeting attendees meet with their colleagues for further comments.	
		The Town Council will also share the old related EIA and Planning Reports with Outrun Consultants (Mr. Mwaningange to share these documents).	

There were no further questions or comments/concerns.

Mr. Kasinganeti concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 16h40.

G. EENHANA CONSTITUENCY OFFICE HALL, ONAMBUTU (2ND MEETING)

Date: Wednesday, 02 March 2022

Time: 14h30 for 15h00

Venue: Eenhana Constituency Office Hall (in Onambutu), Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Ms. Fredrika Shagama (the Environmental Assessment Practitioner from Outrun Consultants cc) opened the meeting by introducing herself and colleague in attendance, welcomed, and thanked everyone in attendance for making time to attend the meeting. She explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to write down their names, contact details and sign to update the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

Some printed copies of the printed Background Information Document (BID) and project area layout were circulated to all attendees for self-reading and orientations, respectively.

Given the fact that the meeting was attended mostly by the local communities comprising mainly of elders who speak very to no English, the Meeting was conducted in Oshiwambo Language. The comments and questions were raised in Oshiwambo and recorded in English for reporting.

The Meeting was attended by ten (10) people -**Please refer to the attached attendance register**.

2. MEETING AGENDA AND PRESENTATION

The agenda of the meeting and presentation were done by Ms. Shagama. The main points of the meeting were as follows:

- **The Explanation of what an ESIA** is, the need for an ESIA with regards to the proposed water infrastructure upgrade, i.e., it is one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders role in the Process.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade) was presented to the attendees, and they were referred to detailed information in the earlier distributed BIDs.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, the Environmental Consultant also presented the potential pre-identified potential positive and negative environmental and social impacts anticipated from the proposed activities.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed infrastructure upgrade activities.

The comments, and questions were submitted and raised in Oshiwambo but recorded in English for the purpose of reporting to other non-Oshiwambo speaking project team members, Proponent, etc. The key issues raised were noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Consultant. Where questions or concerns where beyond the Consultants' capability of answering to (technical issues), these were noted for follow-up with the Consulting Engineers and NamWater (The Proponent) and consideration/inclusion in the ESIA Report. The issues and concerns raised in the meeting were recorded and presented in **Table 7** below.

Table 47: Issues, suggestions and comments received during the Consultation Meeting in Onambutu (Eenhana Constituency Office Hall) on 02 March 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Ester Kavela (Ohaihana)	**Issue:** There are villages with water supply issues about 4 km north Eenhana Town. They need help.	**Ms. Fredrika Shagama: t**he issue has been noted for consideration.
2.	Mr. Isak Abraham (Otunganga Village)	**Comment:** (a) There is a water pressure issue in our village of Otunganga, between Oshigambo and Oshaango. The water flow is very slow. (b) The water pressure is only good from February to April and from May to December, is it bad. This is causes us to not have tap water even for 3 months.	**Ms. Fredrika Shagama: t**he issue has been noted for consideration. **Addition by Mr. Lebbeus Hamalwah: (a)** this is another low-pressure issue. There is already one water supply in the area from the Oshigambo-Etope line. There is an offtake to the Otunganga Village which is about 20 km, and the pipeline is a 200 mmm UPVC line. **Mr. Lebbeus Hamalwah: (b)** the reason could be that during the first months of the year is that because some people rely on rainwater more than tap water. Therefore, the pressure is bound to be good because few people are using tap water.
3	Mr. Lebbeus Hamalwah (DWSSC)	**Suggestion/request**: A proposal for a small pump station at the Omulonga Constituency for the eastern side needs.	**Ms. Fredrika Shagama: t**he issue has been noted for consideration.

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
4.	Mr. Davis Shoonyeka (Ombaladila Village)	**Comment**: The pipelines in our village are new and currently we do not have any water issues. We do experience water supply sometimes due to repairs which is normal but everything else is good for now.	**Ms. Fredrika Shagama:** Noted.
5.	Mr. Nikanor Simon (Onambutu Village)	**Comment**: Can Onambutu get the existing old reservoir repaired or upgraded to store water? When the water pipeline is damaged in other areas, our side does not get water at all. Onambutu has been a centre for growth all these years and given that the Eenhana Constituency Office is also here. We are foreseeing a bigger population (population increase) in the next 3 to 4 years. Therefore, it is important to at least consider upgrading the old reservoir for water security in the area.	**Ms. Fredrika Shagama**: The point has been noted for consideration. **Mr. Lebbeus Hamalwah:** To add to Mr. Simon comment, Onambutu pipeline is also very small.

The names of the villages affected by the project and need to be in the ESIA meeting / Eenhana-Onakatumbe line upgrade are Onakatumbe, Oshiyandja, Ondilinawa, Omhanda, Ondiingwanyama, Otuukondjele, Ohausholo and Oshivale

The elders in attendance from the nearby villages proposed for another meeting where other villages can be represented and present their concerns and submit comments. The meeting was requested to take place during weekends because it is cultivating season in fields and elders are unable to represent their houses in meetings if conducted during the weekdays or during morning hours when children are at school (to help look after livestock while elders go to meetings).

The next meeting was proposed for 19 March 2022. However, this could not happen due to reschedules in the project, A new meeting date will be communicated to the community through the Eenhana Constituency Office.

There were no further questions or comments/concerns.

Ms. Shagama concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

Another meeting will be held, and the information will be communicated through the Constituency Office (announcement by the Constituency Councillor).

The meeting was adjourned at 16h10.

Date: 05 August 2022

SECOND ROUND: MEETING MINUTES OF THE PUBLIC/STAKEHOLDERS' CONSULTATION MEETINGS:

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) AND PUBLIC PARTICIPATION PROCESS FOR THE UPGRADE OF THE OHANGWENA II WELLFIELD WATER SUPPLY SCHEME

H. ONAMBUTU COMMUNITY, EENHANA CONSTITUENCY OFFICE IN ONAMBUTU

Date: Wednesday, 27 July 2022

Time: 10h00

Venue: Eenhana Constituency Office in Onambutu

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Ms. Fredrika Shagama (the Assistant Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting, welcomed, and thanked everyone in attendance for making time for the meeting. She briefly explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations. Ms. Shagama also indicated to the familiar faces in attendance who attended the first meeting early March 2022 that the meeting was an addition to the first meeting and get more comments from the community.

The meeting attendance register was circulated for the attendees to sign (write down their names and contact details) to be added to the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

The Environmental Assessment Practitioners distributed copies of the Background Information Document (BID) for self-reading and to be able to ask questions at the end of the meeting. The Meeting was attended by sixteen (16) people - **Please refer to the attached attendance register**.

Given the fact that the meeting was attended mostly by the local communities where not everyone understands or speaks English language, the Meeting was conducted in Oshiwambo Language. The comments and questions were raised in Oshiwambo and recorded in English for reporting.

2. MEETING AGENDA AND PRESENTATION

Ms. Shagama presented the meeting agenda of the with the main points of the meeting listed below:

- **The Explanation of what an ESIA:** the need for an ESIA with regards to the proposed water infrastructure upgrade and construction of new ones as one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders engagement.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade and construction of new infrastructure to improve the water supply). The attendees were referred to detailed information in the distributed BIDs copies and preliminary layout thereto.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Ms. Shagama also presented the potential negative environmental and social impacts anticipated from the proposed activities, particularly the pipeline that may cross through some community members' properties such as fences / yards.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed project activities.

Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Assessment Practitioners. Where questions or concerns where beyond the Environmental Consultants' capability of answering to (technical issues), these were answered by the two NamWater's Representatives in the meeting (The Proponent). The issues and concerns raised in the meeting were recorded and presented in **Table 1** below.

Table 48: Comments received, and issues raised during the Consultation Meeting in Onambutu on 27 July 2022

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Lebbeus N. Hamalwah (Directorate of Water Supply and Sanitation Coordination)	**Comment**: I am concerned by the fact that there is no provision for a pump station on the Omakango-Onambutu-Eenhana route given that there is a low-pressure issue on the existing routes.	**Mr. Abraham Ashipala (Mr. AA) (NamWater Oshakati)** explained the schematic drawing (layout) of the proposed water infrastructure upgrades attached to the distributed background information document (BID). He also indicated that the plan is to upgrade the pump station at Iindangungu / Omakango side that will be able to provide the necessary pressure along the route.
2.	Mr. Nicanor Simon (Onambutu Community and representing the Village Headman)	-(a) Will there be a reservoir at Onambutu? There is a foreseeable population increase and development and this is a growth point, hence my question to make sure there will be sufficient water supply to cater for this growth? -(b) Should it come to light that the pipeline crosses someone's field, what will be done?	**Mr. Josiah Mukutiri (Mr. JM) of Outrun Consultants:** -(a) Currently, there is no reservoir planned nor approved for Onambutu. The plan to upgrade the existing reservoir has however been considered but has not yet been approved. Should it be approved, the this will be communicated at a later stage. **-(b) Ms. Fredrika Shagama (Ms. FS) of Outrun Consultants:** before the work commences, NamWater will communicate to the affected landowner and local leadership (headman) for proper consultation and agree on the compensation of land use as per the National Compensation Policy to compensate for land loss. This will not apply to the land use due to the pipe crossing but also on fruit trees that may need to be removed to allow the pipeline installation. **-(b) Mr. AA (NamWater Oshakati):** NamWater experiences the challenges of existing pipelines crossing fields whereby landowners (field owners) lock their gates and they do not want anyone entering their fields. Therefore, we believe that it is the responsibility of the leaders (headmen and councillors) to enlighten the communities that the main reason the pipelines passing through their fields is to take water to other communities on the other side. There are also water meter readings on the fields and someone from the community would want to take water from here to their homesteads and the pipeline passes through fields even for 10km. hence, we ask for consent from the landowners to enable NamWater to install the infrastructure such as wate meter reading stations where neighbouring

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
			landowners can easily access the station for their own water lines without delays or having to pay more due to the distance from their homes to the water meter stations.
3.	Mr. Lebbeus N. Hamalwah (Directorate of Water Supply and Sanitation Coordination)	Community members are intentionally erecting their structures on top of the pipelines or very close to the pipelines. On the issue of compensation, some people would want to be compensated for their structures such as buildings, although they already found the water infrastructure there. Maybe NamWater should also make it clear to the public on the issue of building on top of pipelines or too close to them.	**Mr. AA (NamWater Oshakati):** The point has been noted.
4.	Ms. Natalia Mvula (Onambutu Community)	-(a) We appreciate the fact that NamWater together with DWSSC are embarking on this good journey of making water supply easy for us, particularly on the upgrading of water pipeline and improve the pressure because sometimes the pressure is very low and there is no water flow. -(b) Just a suggestion on next community meetings, please consider sending the meeting invitations to the churches too because I do not think everyone got the honourable councillor's announcement in the radio.	**Ms. FS of Outrun Consultants: (a)** This is well noted, and we are glad that the water supplier is making efforts to help communities. -(b) the suggestion has been well noted and will be considered for the next meetings (once the actual route of the pipeline is established)
5.	Mr. Nicanor Simon (Onambutu Community and representing the Village Headman)	When the project is approved by the Environmental Commissioner and the work is about to start, will the community members be considered for employment, or the construction contractors will bring their own people?	When it comes to work that can be done by the locals, these should be given to them. The work can only be done by an outsider if it cannot be done by locals (highly skilled or technical work). This will also be outlined in the Environmental Management Plan (EMP). The employment opportunities will be communicated through the office of the constituency councillor for the capable locals to register or submit their CV's.
6.	Mr. Lebbeus N. Hamalwah (Directorate of Water Supply and Sanitation Coordination)	A question to NamWater, Ms. Mvula indicated that their water pressure is low. The pipelines connected from Oshaango are new, but maybe the question would be if there will be additional pipelines at Oshaango?	**Mr. AA (NamWater Oshakati):** The Oshaango scheme is under a different project, as the Onambutu upgrades are part of what is called ''critical scheme upgrading''
7.	Ms. Natalia Mvula (Onambutu Community)	I think village headmen should be informed of the distance on both sides of the pipeline / servitude, if someone wants to put up their structure near the pipeline.	**Mr. AA (NamWater Oshakati):** The required distance is 7 metres from both sides of the pipeline. This is to ensure that there is enough space for NamWater's machinery and vehicles to move freely without damaging buildings, yards/fences, or poles when maintenance of the pipeline is done**.**

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
8.	Mr. Nicanor Simon (Onambutu Community and representing the Village Headman)	There is also an issue of some community members who do not understand or just playing ignorant on the importance of backfilling their trenches after putting in the pipelines running along the roads. I had raised this issue with some of the community members, but they did not take me seriously. Perhaps, NamWater need to help the traditional authorities to raise awareness in the next meetings when the actual pipe route is established and confirmed.	**Mr. AA (NamWater Oshakati):** This has been noted and well consider it in the next community meetings prior to commencement of work.
9.	Ms. Paulina Dumeni (Eenhana Constituency Office)	There is an issue of low water pressure during summer months and the pressure is very good during rainy months / season. Why is this?	**Ms. FS of Outrun Consultants:** The issue of low-pressure during summer months could be associated with many people relying on tap water, compared to rainy months when some people prefer rainwater from oshanas and less from the taps. This leaves few people relying on the taps and hence, the pressure is good (the lesser the people on the system, the higher, the pressure/good tap water flow and vice versa). We are hoping that the new upgrade of the pump station will also solve the pressure issue.
10.	Mr. Raphael Endjala (NamWater: Oshakati)	Request: we kindly ask you as members of the community to please report burst pipes on time so that they can be attended to on time. This is because such unreported incidents greatly affect the water supply operations too.	

There were no further questions or comments/concerns.

Ms. Shagama concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 11h40.

I. ONDOBE AND SURROUNDING COMMUNITIES IN ONBODE SETTLEMENT

Date: Wednesday, 27 July 2022

Time: 12h30

Venue: Ondobe DWSCC Office Open Space in Ondobe Settlement

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Ms. Fredrika Shagama (the Assistant Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting, welcomed, and thanked everyone in attendance for attending the meeting. She briefly explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to sign (write down their names and contact details) to be added to the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

The Environmental Assessment Practitioners distributed copies of the Background Information Document (BID) for self-reading and to be able to ask questions at the end of the meeting. The Meeting was attended by sixteen (16) people - **Please refer to the attached attendance register**.

Given the fact that the meeting was attended mostly by the local communities where not everyone understands or speaks English language, the Meeting was conducted in Oshiwambo Language. The comments and questions were raised in Oshiwambo and recorded in English for reporting.

2. MEETING AGENDA AND PRESENTATION

Ms. Shagama presented the meeting agenda of the with the main points of the meeting listed below:

- **The Explanation of what an ESIA:** the need for an ESIA with regards to the proposed water infrastructure upgrade and construction of new ones as one of the listed in the 2012 EIA Regulations that cannot be undertaken without an environmental clearance certificate (ECC) from the Environmental Commissioner. This also entailed the ESIA process and the Public/Stakeholders engagement.
- **Brief Description of the Project** A brief description of the planned project activities (infrastructure upgrade and construction of new infrastructure to improve the water supply). The attendees were referred to detailed information in the distributed BIDs copies and preliminary layout thereto.
- **Presentation of Potential Project Impacts** To ensure transparency and that the attendees understand both sides of the proposed project activities, Ms. Shagama also presented the potential negative environmental and social impacts anticipated from the proposed activities, particularly the pipeline that may cross through some community members' properties such as fences / yards.
- **Public Open Discussion (Interactive Session):** At the end of the presentation of the ESIA process, project activities description and potential impacts, the meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed project activities.

Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Assessment Practitioners. Where questions or concerns where beyond the Environmental Consultants' capability of answering to (technical issues), these were answered by the two NamWater's Representatives in the meeting (The Proponent). The issues and concerns raised in the meeting were recorded and presented in **Table 2** below.

Comment by Ondobe DWSSC representative (Mr. Steven Nguushi):

- The Ondobe DWSSC is proposing for a new line from Etope to Ondobe to cater for the villages between Etope and Ondobe, as there is currently no water supply.
- The only need between Omakango and Onambutu is to upgrade and not necessarily a new line.
- Mr. Nghuushi thinks that the additional line between Ondobe and Onambutu will be of no use because there is already a line. Or perhaps NamWater can clarify this need.

Table 49: Comments received, and issues raised during the Consultation Meeting in Ondobe Settlement (27 July 2022)

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Fillemon Martin (Oilyateko Village)	-Water flow issue (very low pressure). The water does not flow and if it does, only from 07h00 or 08h00 in the morning and there would be no water for the whole day.	**Ms. Fredrika Shagama (Ms. FS) of Outrun Consultants: (a) t**he issue has been noted for consideration and NamWater representatives are also

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
			sitting among us to note this and see where improvements need to be done.
2.	Ms. Secilia Shitenga (Ondobe Village)	-We have water, but it is not enough, due to extremely low pressure. Some community members would like to take their own lines from the existing line, but the pipes are small. -Sometimes, our water rates are too high that we do not know if it is our fault, aging infrastructure, or errors in meter readings.	**Mr. Abraham Ashipala (Mr. AA) of NamWater Oshakati:** We have taken note of this, and we kindly ask that you submit these issues to Mr. Nghuushi here at the DWSSC Office in Ondobe for further investigations and possible solutions.
3.	Ms. Penehafo Nghalipo (Okauva MHSS / Ondobe Constituency)	-We reported the damaged / broken water meter but no solution yet since May 2022. There is even an elderly in the house and there is no water.	
4.	Mr. Delemina K (Omunyekadi Village)	-There is a community tap but the water is only available for 3 to 4 days and its only flows during the between 1am and 2am -The pipeline is small too because people would like to apply for their own water, but it is impossible due to this challenge.	**Mr. AA of NamWater Oshakati:** we have taken note of this. The proposed upgrade seeks to change this situation so that everyone has access to better water supply.
5.	Mr. Likius Shitenga (Omunyekadi Village)	-We need water in our house and the pipeline just runs past my house, but it is too small for us to take our own.	**Mr. AA of NamWater Oshakati:** We have taken note of this. Kindly submit the issue to Mr. Nghuushi at the DWSSC Office.
6.	Ms. Lucia Kambwa (Ondaanya Village)	-Our pipeline was installed in 2002, and the first reading was already N$261 and we do not even use the water often. In 2015, the reading was at N$3000.	**Mr. AA of NamWater Oshakati:** We have taken note of this. Kindly submit the issue to Mr. Nghuushi at the DWSSC Office for investigation and feedback.
7.	**Mr. AA of NamWater Oshakati**	-Explanation: The issue of water connection problems due to structures being within the servitudes of water pipelines. -Requested the local leadership to ask community members to refrain from erecting structure within the servitudes of water pipelines as this makes it hard for maintenance team to address incidents such as broken pipes and repair damaged pipelines due to accessibility issues.	

There were no further questions or comments/concerns.

Ms. Shagama concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 13h40.

J. OHANGWENA REGIONAL COUNCIL IN EENHANA

Date: Wednesday, 27 July 2022

Time: 14h30

Venue: Ohangwena Regional Council Boardroom in Eenhana, Ohangwena Region

1. INTRODUCTION, WELCOMING AND ATTENDANCE

Mr. Etuhole Haimbili from the Ohangwena Regional Council opened the meeting and welcomed everyone in attendance. He briefly explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to sign (write down their names and contact details) to be added to the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

The Environmental Assessment Practitioners from Outrun Consultants distributed copies of the Background Information Document (BID) for self-reading and to be able to ask questions at the end of the meeting. The Meeting was attended by six (6) people - **Please refer to the attached attendance register**.

It was found out that there was some miscommunication and the delivery of information to some of the staff at the Regional Council. Therefore, the meeting did not get into details. However, some of the attendees from the Ohangwena Regional Council and Ministry of Agriculture, Water and Land Reform (MAWLR) were aware of the project and the ESIA process from the first consultations in March 2022. Despite that, the lead Environmental Assessment Practitioner (Mr. Josiah Mukutiri) explained the project objectives and the need for the consultations with the stakeholders as part of the ESIA process.

Mr. Haimbili made the following comments:

- Most of the stakeholders such as constituency councillors were attending a workshop during the week and were not available to submit coordinated feedback as regional office.
- The water issue in Ohangwena is a sensitive topic. Therefore, it would be important to have the stakeholders together in one meeting.

Mr. Mukutiri added that there could be a possibility to reschedule the meeting the following week, as the Design Engineers were planning to come to Ohangwena. However, this was to be communicated once it is finalised. Alternatively other means of consultation such as virtual/online meeting or comment sheet would be considered.

The meeting was adjourned at 15h00.

Outcome of the way forward upon consultation with the Design Engineer:

The Design Engineers meeting was called off due to postponement of the trip to Ohangwena. This would mean prolonging the ESIA consultation process. Therefore, the Comments Sheet were sent to the Ohangwena Regional Council including the meeting attendees from the Regional Council and MAWLR on the 2nd of August 2022 for a period of 10 days.

Only one completed Comments Sheet was returned to Outrun Consultants at the end of the provided feedback cut-off date.

K. ONDOBE CONSTITUENCY OFFICE HALL IN OSHANDI

Date: Wednesday, 27 July 2022

Time: 15h30

Venue: Ondobe Constituency Office Hall in Oshandi Settlement

1. INTRODUCTION, WELCOMING AND ATTENDANCE

INTRODUCTION, WELCOMING AND ATTENDANCE

Ms. Fredrika Shagama (the Assistant Environmental Assessment Practitioner / Consultant from Outrun Consultants cc) opened the meeting, welcomed, and thanked everyone in attendance for attending the meeting. She briefly explained to the attendees the purpose of the meeting in reference to the Environmental Management Act No. 7 of 2007's 2012 EIA Regulations.

The meeting attendance register was circulated for the attendees to sign (write down their names and contact details) to be added to the list of interested and affected parties (I&APs) / Stakeholders and receive further information on the ESIA process.

The Environmental Assessment Practitioners distributed copies of the Background Information Document (BID) for self-reading and to be able to ask questions at the end of the meeting. The Meeting was attended by thirty (30) people - **Please refer to the attached attendance register**.

Given the fact that the meeting was attended mostly by the local communities where not everyone understands or speaks English language, the Meeting was conducted in Oshiwambo Language. The comments and questions were raised in Oshiwambo and recorded in English for reporting.

2. MEETING AGENDA AND PRESENTATION

The meeting agenda was presented by Mr. Abraham Ashipala (from NamWater Oshakati Office). He presented the planned project activities (infrastructure upgrade and construction of new infrastructure to improve the water supply). Mr. Ashipala put emphasis on the issue of land use conflicts such as pipelines passing through fields or fences. He also requested for the constituency councillors and headmen to educate the communities on the land use and servitudes, especially people erecting structures along the people.

Public Open Discussion (Interactive Session): The meeting attendees were afforded an opportunity to ask questions and/or raise their concerns with regards to the proposed project activities. Comments, and questions were submitted and raised and noted for incorporation into the ESIA documents. Where possible, responses (to non-technical questions) were provided in the meeting by the Environmental Assessment Practitioners. Where questions or concerns where beyond the Environmental Consultants' capability of answering to (technical issues), these were answered by the two NamWater's Representatives in the meeting (The Proponent). The issues and concerns raised in the meeting were recorded and presented in **Table 3** below.

A note by NamWater representatives regarding Oshandi water infrastructure (old reservoir) land ownership:

- If NamWater is proposing to upgrade the reservoir near the Anglican Church, there are already issues surrounding the land ownership. The Church and NamWater claim ownership of the land, and the Headman is also claiming ownership. Due to this, the reservoir is temporarily on hold / removed from the options.

Table 50: Comments received, and issues raised during the Consultation Meeting in Oshandi Settlement *(*27 July 2022)

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
1.	Mr. Erasmus Fillemon (Oshandi No. 2 Village)	-(a) To establish the pipeline distance from fences, how will that agreement be on compensation for displacement of properties to enable the pipeline? -(b) Oshandi should have a pay point for water payments.	**Mr. Abraham Ashipala (Mr. AA) of NamWater Oshakati:** (a) the compensation agreement will be discussed by NamWater and affected landowners later when the exact pipeline routes are established. -(b) NamWater usually establish pay points depending on the number of clients in an area. NamWater is proposing to make it easy especially for elderly to pay at NamPost and pension pay-out points such as here in Oshandi.
2.	Mr. Pombili Shiimbashile (Oshandi Village)	-(a) Will there be a new pipeline or just the upgrading of the old one, regarding the issue of pipeline -(b) in the case that the pipeline passes through a fruit tree, or the tree is within the servitude, and will need to be removed, what will happen? Is there compensation for that?	**Mr. AA of NamWater Oshakati: (a)** When the old pipeline is under construction or upgraded, the other one will still be there because people will still need water during upgrading period. -(b) **Ms. Fredrika Shagama (Ms. FS) of Outrun Consultants:** compensation will be facilitated in accordance with

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
			the National Compensation Policy on the removal of trees that bear fruits.
3.	Ms. Foibe Hangula (Oshandi No. 1 Village)	-What would one need to take to along to apply for private water connection and how long would that take?	**Mr. Raphael Endjala (Mr. RE) of NamWater Oshakati:** You will need to bring the following documents: *Copy of your ID *If you are employed, you bring a 3-month bank statement *Copies of IDs of 2 people who already have private water meters as witnesses *Declaration of where you are getting water from currently *Letter from the Headman *Application fee of N$1457
4.	Mr. Erickson Nakashimba (Eembaxu Village)	-The pipeline from Oshandi to the RDC, how can we be assisted to have our own connection from that existing line?	**Mr. RE of NamWater Oshakati:** that pipeline was only meant for RDC. Please refer to your nearest DWSSC (Rural Water Supply) office to more information and assistance.
5.	Mr. Erastus Moses (Omhedi Village)	-Can we apply for connections from the Omalangu to Omhedi yaSalom pipeline?	**Mr. RE of NamWater Oshakati:** Please refer to your nearest DWSSC (Rural Water Supply) office to more information and assistance.
6.	Mr. Efraim Ndove (Oshandi Village)	-I am thankful for the project. However, we are requesting that there should be someone to check the progress and status of the pipelines in the communities and how the communities survive on the infrastructure, because the operators do not regularly check the infrastructures, and because of that, some of these infrastructures are old or damaged with no care for a long time.	**Mr. AA of NamWater Oshakati:** NamWater and the DWSSC has agreed on a plan to hold bi-annual meetings with communities on water issues to keep an open communication and timely update on water related matters.
7.	Ms. Martha Hashondili (Oheti Village)	-Can NamWater consider assisting people who cannot afford private water connections (meters)? Alternatively, can there not be pre-paid water cards?	**Mr. AA of NamWater Oshakati:** The cards are under consideration. On the issue of people who cannot afford private connections, they can communicate this through the constituency office so that the communities can be assisted during project implementation.
8.	Ms. Delemina Moses (Oshandi No. 1 Village)	Our water meter has been damaged by children and is not working. Where should we go for assistance?	**Mr. AA of NamWater Oshakati:** it is important as communities to encourage discipline in our children to ensure that they do not play with crucial infrastructures like water meters. NamWater has commencement with the construction of cabins around water meters. However, this is even more of a challenge because of

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
			vandalism by adults who use the cabin accessories for grilling meat at parties.
9.	Ms. Bernadine Pineas (Oshandi No. 2 Village)	-If we have such a good plan for the project, will there be working opportunities for the locals, or the contractors will have their own employees?	**Mr. AA of NamWater Oshakati:** Opportunities for work will be given to the locals of the work they can do. Therefore, preference will be given to the local youth. This will be communicated through the office of the councillor.
10.	Mr. Pombili Shiimbashile (Oshandi Village)	-(a) The water connection application points (offices) are extremely far from some communities. Can we not have closer points / offices for NamWater? -(b) At areas where there are two pipelines running parallel to each other and one of the pipes is old. Can that pipe be donated to the community and used to supply untreated water for things like gardening?	**Mr. AA of NamWater Oshakati: (a)** There is still a NamWater office in Omafo near O-save. -(b) Noted, but it needs to be investigated first for consideration**.**
11.	Mr. Absalom Pohamba (Oshandi No. 2 Village)	-(a) Is there a plan for our old livestock troughs? Will they also be upgraded during this project? -(b) Will NamWater relocate water meters and fence them off to be protected from vandalism? -(c) The customer service by NamWater of providing water in the night like at 02h00 or 03h00 in the morning is not good. We are aware of the water flow issue, but this needs to be improved.	**Mr. Josiah Mukutiri (Mr. JM) of Outrun Consultants: (a)** These are part of the Demand Survey, and not necessarily under the water supplying infrastructure. **-(b) Mr. AA of NamWater Oshakati:** please let us discipline our children to not play with or damage water infrastructure. Adults who are vandalising infrastructure should self-discipline and understand the importance of the infrastructure to other community members, if not themselves. **-(c) Mr. AA of NamWater Oshakati:** when there are repair works along a pipeline, the water is pumped for 8 hours but the water struggles to reach people or users at the very end of the supply line. Therefore, the water only reaches the last users in the line very late in the night or early morning hours.
12.	Ms. Fransina Namwandi (Oshandi No. 2 Village)	-There is an elderly who stays in the house with 2 children, but their water rates are high. How does that happen and how can this be rectified?	**Mr. AA of NamWater Oshakati:** Noted, however, please submit the meter number to the DWSSC to investigate this.
13.	Ms. Ndapewa Joseph (Oshandi No. 2 Village)	-My issue is on the abnormally high-water rates or irregular at times. Can NamWater investigate this?	**Mr. AA of NamWater Oshakati:** Noted. We will try to investigate the cause of this.
14.	Ms. Julia Ndilula (Oshandi No. 2 Village)	-What is the rate per cubic meter of water?	**Mr. RE of NamWater Oshakati:** The price per cubic meter (one thousand litres) is N$16.28
15.	Mr. Simon Hishongwa (Oshandi No. 2 Village)	-When NamWater puts cabins around the water meter, will the owner have success /	**Mr. AA of NamWater Oshakati:** there are two valves to turn the meter on and off. One is NamWater's and the

No.	Name of the speaker/commentor	Comment/Issue/Suggestion	Response provided by:
		key to the cabin, in case the pipe burst, and the owner needs to switch off the meter?	other for the owner). Therefore, yes, the owner will have access.

There were no further questions or comments/concerns.

Mr. Shagama concluded the meeting and thanked the attendees for their participation and informed them that they can still submit their comments through the provided contacts in the copies of the BID given to them to be incorporated into the Draft ESIA Report and Environmental & Social Management Plan (ESMP).

The meeting was adjourned at 17h15.

12.7 Grievance registration form

GIEVANCE REGISTRATION FORM

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: THE UPGRADE OF THE OHANGWENA II WELLFIELD II WATER SUPPLY SCHEME

KINDLY COMPLETE THIS FORM IN DETAIL AND RETURN TO ANY OF THE FOLLOWING INSTITUTIONS EASILY ACCESSIBLE:

NamWater, Ministry of Agriculture, Water and Land Reform Office, Contractor (Construction Foreman onsite / Site Foreman).

Date…….Name & Surname……

Postal / Residential Address:……Email ……..……

Town…….…… Phone Number ……..

Subject of grievance

……

Description of grievance

……
……
……**Date of receipt / acknowledge:……Complainant reference:……..**

Expected time of redressal:.....…….

If time not met:

Reason for delay of redressal……

Action to be taken…….

Updated time of redressal……...

Final redressal……

Action taken……

If Complainant is not satisfied advise on pathway to pursue the matter

SIGNATURE (s):

Complainant:……..Grievance Committee Chairperson……

12.8 GENERAL STANDARDS FOR ARTICLE 21 PERMITS (EFFLUENTS)

DETERMINANTS	MAXIMUM ALLOWABLE LEVELS
Arsenic	0,5 mg/l as As
Biological Oxygen Demand (BOD)	no value given
Boron	1,0 mg/l as B
Chemical Oxygen Demand (COD)	75 mg / l as O
Chlorine, residual	0,1 mg/l as Cl_2
Chromium, hexavalent	50 µg/l as Cr(VI)
Chromium, total	500 µg/l as Cr
Copper	1,0 mg/l as Cu
Cyanide	500 µg/l as CN
Oxygen, Dissolved (DO)	at least 75% saturation**
Detergents, Surfactants, Tensides	0,5 mg/l as MBAS – See also Note 2
Fats, Oil & Grease (FOG)	2,5 mg/l (!gravimetric method)
Fluoride	1,0 mg/l as F
Free & Saline Ammonia	10 mg/l as N
Lead	1,0 mg/l as Pb
Oxygen, Absorbed (OA)	10 mg / l as O*
pH	5,5 – 9,5
Phenolic Compounds	100 µg/l as phenol
Phosphate	1,0 mg/l as P - See also Note 1
Sodium	not more than 90 mg/l Na more than influent
Sulphide	1,0 mg/l as S
Temperature	35°C
Total Dissolved Solids (TDS)	not more than 500 mg /l more than influent
Total Suspended Solids (TSS)	25 mg/l
Typical faecal Coli.	no typical coli should be counted per 100 ml
Zinc	5,0 mg/l as Zn

* Also known as *Permanganate Value* (or *PV*).
** In Windhoek the saturation level is at approx. 9 mg/l O_2.

NAMWATER
Namibia Water Corporation Ltd

C-NOEE108: Ohangwena 2 Wellfield Development

ENVIRONMENTAL & SOCIAL MANAGEMENT PLAN

APPLICATION NO: APP - 00407

ELEMENT
Consulting Engineers

A FIFTH DIMENSION TO ENGINEERING

PREPARED BY
SUB-CONSULTANT

OUTRUN CONSULTANTS CC

DECEMBER 2022

PROJECT INFORMATION SHEET

PROJECT	C-NOEE108: Ohangwena 2 Wellfield Development
Project funding	Africa Development Bank (AfDB)
Project proponent	Ministry of Agriculture, Water & Land Reform
Project Implementing Agency	NamWater
Environmental Assessment Practitioner	Outrun Consultants cc
Location	Ohangwena Region, Namibia
ECC Application Number	APP 00407
Report type	Environmental & Social Management Plan

DOCUMENT CONTROL SHEET

Compiled By:	…….. J T MUKUTIRI - LEAD EIA PRACTITIONER	…….. Date
Reviewed By:	……	…….. Date

Revision	**Description**	**Date Issued**	**Revision By:**
Final Draft	Considered NamWater's comments on First Draft		J T MUKUTIRI
Final			J T MUKUTIRI

DISTRIBUTION LIST

Revision	Description	Date Issued	Revision By:

APPROVAL

This Environmental & Social Management has been completed to the satisfaction of NamWater in accordance with the requirements of the project and I support the recommendations contained in this report.

……..

Chief Executive Officer: NamWater

Date: ……

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LIST OF ABBREVIATIONS

Abbreviation	Full Name
AfDB	African Development Bank
BUN	Business Unit North
CNWSA	Central Northern Water Supply Area
DWSSC	Directorate of Rural Water Supply and Sanitation Coordination
ECC	Environmental Clearance Certificate
ECO	Environmental Controll Officer
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EM	Environemntal Manager
ESIA	Environmental & Social Impact Assessment
ESMP	Environmental & Social Management Plan
GG	Government Gazette
GN	Government Notice
GRM	Grievance Redressal Mechanism
IFC	International Finance Corporation
MAWLR	Ministry of Agriculture, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
NWSSP	Namibia Water Sector Support Programme
OS	Operational Safeguard
OWTP	Oshakati Water Treatment Plant
RO	Reverse Osmosis
SEA	Sexual Exploitation and Abuse

GLOSSARY OF TERMS

"**Competent authority**" is defined as an organ of state which is responsible, under any law, for granting or refusing and authorisation; or the competent authority identified in terms of section 30 of the EMA, Act, 2007.

"**Organ of state**" means any office, ministry or agency of State or administration the local or regional sphere of government or any other functionary or institution: exercising a power or performing a function in terms of the Namibian Constitution, or exercising a public power or performing a public function in terms of any law but does not include a court or judicial officer.

"**Proponent**" means a person who proposes to undertake a listed activity.

"**Listed activity**" means an activity listed in terms of section 27 (1) or 29 of EMA. It refers to any physical work that a proponent proposes to construct, operate, modify, decommission or abandon or and activity that a proponent proposes to undertake.

"Public" refers to the community or people in general.

The **'Stakeholders'** – this refers to the people, organisations, NGOs that are directly or indirectly affected by the project and / or have an interest in the project.

The **'Environment'** – this refers to the ecology, economy, society and politics.

DOCUMENT STRUCTURE / ROAD MAP

The ESMP is intended to meet all requirements as stipulated in environmental management Act (2007) and its Regulations of 2012. In order to provide guidance to the reader, a document roadmap is provided in Table 1 below.

Table 1: Document Roadmap

CHAPTER	TITLE	OVERVIEW
	Purpose of the Environmental and Social Management Plan (ESMP)	N / A
	Document Road Map	N / A
1	Introduction	This section contains the project background description, the objectives of the ESMP and the roles & responsibilities of parties involved.
2	Legal and policy framework	National legislation, AfDB's safeguards, ESMP requirements, and non-compliance or enforcement
3	Management of identified impacts	This section covers the description of the identified potential impacts through the various project life cycle phases and proposed management and mitigation measures.
4	Monitoring Programme	ESMP monitoring and implementation budget.
5	Emergency plans	This section covers emergency plans in case of accidents, grievance handling procedures and method statements.
6	Conclusion and Way Forward	Conclusion based on the proposed ESMP.
7	List of References	List of references quoted in the document.
8	List of Annexures	All annexed documents as presented in the document (Grievance redressal form and NamWater's Environmental Code of Conduct).

1. INTRODUCTION

1.1. PURPOSE OF THE document

This document is an Environmental & Social Management Plan (ESMP). It was compiled as part of the Environmental & Social Impact Assessment (ESIA) for the proposed development of Ohangwena II Wellfield in Ohangwena Region in northern Namibia. It describes the proposed management measures to mitigate the identified impacts, a monitoring plan, indicators and associated implementation costs. The ESMP was shared with registered Interested and Affected Parties (IAPs) and Stakeholders before submission to the competent authority and Ministry of Environment, Forestry and Tourism (MEFT) for approval. It should be read or reviewed together with the accompanying Environmental Scoping Report (ESR) compiled for this project.

1.2. Objective of the ESMP

An ESMP is a detailed plan and schedule of measures necessary to minimize, mitigate any potential impacts identified by the ESIA (Bank, World, 2011). The scope included the preparation of the ESMP with the aim to meet the requirements of the Environmental Management Act, 2007 and its Regulations, 2012 and the African Development Bank's (AfDB) policies and guidelines.

The purpose of the ESMP is to provide a general framework for the Environmental and Social Management System (ESMS) planned to be implemented for the proposed Project. It provides the necessary management tools to ensure legal compliance and environmental best practice. Besides the legal and institutional requirements for the successful implementation of the relevant management plans, ESMP also determines the roles and responsibilities of the implementing agency, the Consultant and the contractor / sub-contractors. Its main objectives are:

- To ensure the project is in compliance with applicable national environmental and social legal requirements and AfDB's safeguards policies and procedures;
- To outline the mitigating/enhancing, monitoring, consultative and institutional measures required to prevent, minimize, mitigate or compensate for adverse environmental and social impacts, or to enhance the project's beneficial impacts; and,
- To address capacity-building requirements to strengthen the implementing agency's safeguards capacities.
- To provide an overview of the environment, health and safety (EHS), socio-economic and cultural heritage policies, standards and legal legislation that the Project should comply with;
- To determine the roles and responsibilities of the Project Promoter, Consultant and Contractors in order to ensure compliance with EHS requirements during project implementation;
- To ensure that project activities are in compliance with EHS policies, standards and legal regulations;

- Ensure reporting systems are developed and streamlined to deliver EHS compliance performance;

1.3. Project background

The Namibia Water Corporation (NamWater), as a custodian of bulk water supply in Namibia, has embarked on a project to improve potable water supply to the Central Northern Water Supply Area (CNWSA). This will be achieved through the upgrading of the Omakango-Onambutu and the Omafo-Eenhana water schemes in Ohangwena Region with support from the African Development Bank (AFDB).

The proposed development project comprises of listed activities and may not be undertaken without environmental clearance from the Ministry of Environment, Forestry and Tourism (MEFT). As a result it requires an Environmental Impact Assessment (EIA) to be conducted and submitted to the MEFT in compliance with the Environmental Management Act No. 7 of 2007 and its 2012 EIA Regulations and, Environmental Policy (1994). This ESMP was generated from the ESIA study conducted for this proposed project.

This Environmental and Social Management Plan (ESMP), is one of the documents which will be submitted together with the ESR to support the application for an ECC from the MEFT. It describes the measures and controls developed in line with the mitigation hierarchy for the management of the impacts identified during the impact assessment process, determines the implementation schedule, roles and responsibilities, reporting and monitoring requirements. The ESMP, defines in detail the environmental and social mitigation measures and management controls to be implemented in order to ensure compliance with the relevant environmental and social issues. The project implementation Agency, NamWater, the Consultant and all contractors / sub-contractors are responsible for the implementation of the ESMP and the general principles presented within the scope of the ESMP.

1.4. Roles and Responsibilities for ESMP Implementation

1.4.1. Institutional arrangement for ESMP Implementation

The proposed project is being undertaken by NamWater, a government-owned commercialized entity established in December 1997. This ESMP was compiled as part of the ESIA being undertaken for the proposed project in accordance with the requirements of the Environmental Management Act (EMA), No.7 of 2007 and the Environmental Impact Assessment Regulations, No. 30 of 2012. The EMA is implemented by various stakeholders, organs of state and agents. The Minister of the Ministry of Environment, Forestry & Tourism (MEFT) through the Environmental Commissioner (EC) is responsible implementation of the act. The EC advises organs of state on the preparation of environmental plans, receives and records applications for ECCs and the overall management, protection, reviewing of the assessment report and enforcement of monitoring and implementation of environmental plans in accordance with the EMA.

NamWater's Environmental Manager is primarily responsible for the implementation of the ESMP during the planning & design, construction, operational and decommissioning phases.

1.4.2. The Implementing agency (NamWater)

NamWater, as the implementing agency, will be responsible for:

- Ensuring that the objectives of the proposed ESMP are achieved at the various project lifecycle phases;
- Ensuring that all identified environmental impacts are managed according to the environmental principles of avoiding, minimizing, mitigating and rehabilitation. This will be achieved by the successful implementation of the ESMP;
- Ensuring that appropriate environmental monitoring and compliance auditing is done and that biannual reports are submitted to the MEFT;
- Ensuring that the environment is rehabilitated to its natural state as far as possible. NamWater shall ensure that all employees attend an Environmental, Awareness Training Course.

This course shall be structured to ensure that delegates are capacitated with appropriate knowledge to:

- Become familiar with the environmental, health, and safety controls contained in the ESMP;
- Be aware of the need to conserve water and minimise waste;
- Be aware of NamWater's Code of Conduct;
- Be aware that a copy of the ESMP is readily available as a reference at the site office and that all staff are aware of the location and have access to the document;
- Are informed that employee information posters, outlining the environmental "do's" and "don'ts" (as per the environmental awareness training course) will be placed at prominent locations throughout the site.

The Contractor and / or its agents will be responsible for environmental management on site during the construction phase of the project. For the purpose of this report:

- *"the Contractor" (and its sub-contractors) refers to construction personnel responsible for construction activities planned for this project.*

A pre-construction meeting is recommended in order to reach agreement on specific roles of the various parties and penalties for non-compliances with the ESMP. In addition surrounding residents, tenants or land owners must be notified in advance of any potentially disturbing activities.

An Environmental Compliance Officer (ECO) will conduct inspections of the upgrade activities; and ESMP implementation throughout the duration of construction. After each inspection, the ECO will produce a monitoring report that will be submitted to the environmental manager (and Ministry of Environment and Tourism (Department of Environmental Affairs) if required). Relevant sections of the minutes of site meetings will be attached to the monitoring report.

Table 1: Summary of roles and responsibilities.

Position / Title	Responsible party	Responsibility
Environmental Manager (EM)	Implementing Agency (NamWater)	Overall environmental management of the project and ESMP implementation; Oversee project environmental work onsite in liaison with the ECO, ESO and Contractor
Environmental Control Officer (ECO)	Consultant (Outrun Consultants cc)	Implementation of the ESMP and liaison between NamWater, MEFT, Contractor and Stakeholders
Environmental Site Officer (ESO)	Contractor (To be appointed)	Implementation of ESMP activities onsite in liaison with ECO, Contractor and stakeholders
Contractor	To be appointed	ESMP implementation and compliance with ECC conditions, appoints ESO and commits resources for ESMP implementation.

NamWater and the Contractor shall provide resources essential for the implementation and control of their respective ESMP obligations including:

- human resources,
- technology and / or equipment, and financial resources.

The general roles and responsibilities of various parties during the various project phases are outlined below.

1.4.3. Roles of the Environmental Manager (EM)

The EM will be responsible for upholding NamWater's environmental policy and has the responsibility to ensure that NamWater's responsibilities are executed in compliance with the relevant legislation. Any decisions regarding environmental management are ultimately the responsibility of the EM. The EM shall assist the ECO where necessary and will have the following responsibilities in terms of the implementation of this ESMP:

- Be fully knowledgeable with the contents of this ESMP;
- Review and authorize updates to the ESMP.
- Ensure adequate and timely allocation and disbursements of resources for implementation of the ESMP requirements.
- Ensure that environmental requirements are integrated into project plans, work method statements, tender and contract documents.
- Ensure necessary support to the ESO for implementation of the ESMP.
- Undertake environmental system reviews, site inspections, audits and other verification activities to assure that the ESMP implementation is at an optimal level.
- Participate in environmental performance verification activities to verify the level of compliance with the ESMP in delivering the legal and environmental obligations.
- Assess the efficacy of the ESMP and identify possible areas of improvement or amendment required within the ESMP.
- Participate in incident investigations (as required).
- Initiate external audits (as required).

1.4.4. Roles of the Environmental Control officer (ECO)

The ECO for the site is an independent environmental consultant (Outrun Consultants CC) to monitor and review the on-site environmental management and implementation of this ESMP on the construction site.
The duties of the ECO:

- Ensure that all construction or decommissioning activities on site are undertaken in accordance with the ESMP;
- Conduct environmental compliance audits and reporting as required by law.
- Provide support and environmental advice to the project team, contractors, and all subcontractors in the implementation of environmental management procedures and corrective actions.
- Report significant incidents internally and externally as required by law and the ECC conditions.
- Ensure that ESMP performance monitoring programs are implemented.
- Assist in incidents and non-conformances investigations and implementation of effective corrective and preventive measures.
- Assess ESMP effectiveness and identify possible areas of improvement.
- Facilitate the amendment of the ESMP in liaison with the Environmental Manager.
- Provide environmental training for key project personnel (in liaison with Environmental Manager).

1.4.5. Roles of the Environmental Site Officer (ESO)

The ESO is expected to administer and control all environmental matters during the construction phase. The ESO will conduct the following:

- Ensure implementation of the ESMP.

- Ensure safe keeping and easy accessibility of correct environmental records at all times.
- Ensure accurate and timely communication of ESMP requirements to relevant project, contractor and sub-contractor personnel as required for ESMP implementation.
- Monitor compliance of ESMP implementation and compliance of all contractors and sub-contractors onsite.
- Facilitate environmental induction of all project staff and either deliver or coordinate delivery of all such training that would be required for the effective implementation of the ESMP. This includes identifying additional project training requirements and implementing the training programme.
- Update and maintain training records for all project personnel including contractors.
- Maintain environmental incidents and stakeholder complaints register.
- Undertake environmental system reviews, site inspections, audits and other verification activities to assure that the ESMP implementation is at an optimal level.
- Report significant incidents internally and externally as required by law and the conditions of authorization.
- Investigate incidents and recommend corrective and preventative actions.
- Provide support and advice to the contractor and all sub-contractors in the implementation of environmental management procedures and corrective actions.
- Ensure that monitoring programs, which assess the performance of the ESMP, are implemented.
- Ensure maintenance of site document control requirements.
- Assess the efficacy of the ESMP and identify possible areas of improvement or amendment required within the ESMP.

1.4.6. Roles of the Contractor

The Contractor will appoint an Environmental Site Officer (ESO) who will be responsible for ensuring that the ESMP requirements are implemented on-site on behalf of the Contractor. The ESO shall:

- Identify non-compliance and recommend corrective measures in consultation with the Project Manager, the EM and the ECO as required;
- Ensure that environmental problems are remedied timeously and to the satisfaction of the Project Manager, the EM and the ECO as required;
- Set up activity based method statements prior to the start of relevant construction activities and submit these to the Project Manager, the EM and the ECO as required;
- Perform ongoing environmental awareness training of the Contractor’s site personnel as and when required.

The contractor shall ensure that all construction staff, sub-contractors, suppliers, etc. are familiar with, understand and adhere to the ESMP. Failure by any employee of the Contractor, Sub-contractor, Suppliers etc. to show adequate consideration to the environmental aspects of this contract shall be considered sufficient cause for the ESO to instruct the EM to have the employee removed from the site. The EM will also

order the removal of equipment from the site that is causing continual environmental damage (e.g. leaking oil and diesel). Such measures will not replace any legal proceedings the NamWater may institute against the Contractor.

The EM shall order the contractor to suspend part or all of the works if the contractor and/or any sub-contractor, suppliers, etc., fail to comply with both the ESMP and the construction procedures supplied by the Contractor. The suspension will be enforced until the offending procedure or equipment is corrected and/or if required remedial measures are put in place. No extension of time will be granted for such delays and all costs will be borne by the Contractor. Under the environmental obligations delegated to the Contractor through the Contract Document, all staff (including subcontractors and staff), suppliers, and service providers appointed for the project would be responsible for:

- Ensuring adherence by providing adequate staff and provisions to meet the requirements of the ESMP;
- Ensuring that Method Statements are submitted to the Environmental Manager for approval before any work is undertaken, and monitor compliance with the ESMP and approved Environmental Method Statements;
- Ensuring that any instructions issued by the ESO and/or EM are adhered to;
- Ensuring the presentation of environmental issues at each site meeting, documenting all incidents that have occurred during the period before the site meeting;
- Undertake daily, weekly and monthly inspections of the work area(s);
- Ensuring that a register of all the transgressions issued by the ESO is kept in the site office;
- Ensuring that a register of all public complaints is maintained; and
- Ensure that all employees, including those of sub-contractors receive training before the commencement of construction so that they can constructively contribute towards the success full implementation of the environmental requirements of the Contract.
- Report and record any environmental incidents caused by the Contractor or due to the Contractor's activities;
- obtain required corrective action within specified time frames and close out of environmental incidents;
- Provide weekly checklists to the EM and ESO.

2. LEGAL REQUIREMENTS

2.1. Environmental framework legislation

As an environmental framework legislation, the Environmental Management Act No. 7 of 2007 (EMA) is an important tool in terms of protection. The supporting Regulations were gazetted on the 6th of February 2012 making it operational and effectively implementable. The Act requires adherence to the principle of optimal sustainable yield in the exploitation of all natural resources. It gives effect to Article 91 (1) of the Constitution by establishing general principles for the management of the environment and natural resources. It promotes the coordinated and integrated management of the environmental and sets out responsibilities in this regard, (Ruppel-Schlichting, 2022).

2.2. Legal instruments compliance requirements and responsible authorities for enforcement

Table 2: Legal instruments compliance requirements and responsible authorities for enforcement.

Legal instrument	Compliance requirement	Enforcement authority
Environmental Management Act No.7 of 2007	All listed activities require environmental authorization and the NamWater should obtain an ECC before implementing the upgrading the Ohangwena II Wellfield.	MEFT
The Water Act (Act No 54 of 1956) and the Water Resources Management Act of Namibia (2004)	NamWater should obtain water abstraction permit.	MAWLR
Hazardous Substances Ordinance 14 of 1974	Transportation and Disposal of brine concentrate	MoHSS and MAWLR

2.3. ESMP Requirements

Based on the definition of “environment” in the EMA, an ESMP should adopt a holistic approach to environmental management and encompass all components of the environment, biophysical, social, cultural, health and economic. The EMA and its regulations stipulate that an ESMP must include the following as a minimum:

- 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;

- As far as reasonably practicable, measures to rehabilitate the environment affected by the undertaking of the project or specified activity to its natural or predetermined state or to a land use which conforms to the generally accepted principles of sustainable development;
- A description of how the applicant intends to modify, remedy, control or stop any action, activity or process which will cause pollution or environmental degradation, remedy the cause of pollution or degradation and mitigation of pollutants.

2.4. Components of Non-compliance or enforcement

The ESMP document is a legally binding document which compels the Proponent to implement a proposed mitigation measures in a manner described herein and form the set of conditions upon which an ECC will be granted by the EC. Contravention is punishable and the extent depends on severity. Environmental Officers in the MEFT are appointed to carry out the provisions of EMA. They are the main persons responsible for enforcement of the EMA. Environmental Officers not only have the specific powers such as the powers of entry and inspection, they can also issue compliance orders to any person who has violated the EMA or a condition of an ECC (sections 19 and 20). Decisions of the EC are subject to appeal to the Minister according to Sections 50 and section 25 of the Regulations. Decisions of the Minister are subject to appeal to the HIGH Court according to Section 51 (Ruppel-Schlichting, 2022).

2.5. Penalties and offences under the EMA Act (2007)

30. (1) A person commits an offence if that person:

(a) knowingly provides false or misleading information in any document submitted in terms of the Act to the EC:

(b) knowingly and without the consent of the EC makes or causes to be made any entry on a document;

(c) destroys or defaces any document; or alters or causes to be altered any entry on a document.

(2) A person who commits an offence in terms of this regulation is on conviction liable to a fine not exceeding N$100 000.00 or to imprisonment for period not exceeding 10 years or to both the fine and imprisonment.

Components contained in this ESMP which should be implemented by the Contractor and do not do as such attract non-compliance and shall be considered sufficient ground for the imposition of a penalty. Possible offences, which should result in the issuing of a contractual penalty, include, but are not limited to:

- Unauthorized damage to natural vegetation;
- Failure to barricade work areas and prevent encroachment of domestic animals or any other unwanted guests;
- Unauthorized camp establishment (including stockpiling, storage, etc.);
- Hydrocarbons, hazardous material: negligent spills or leaks;
- Ablution facilities: non-use, insufficient facilities, insufficient maintenance;
- Insufficient solid waste management (including clean-up of litter, unauthorized dumping etc.);

- Erosion due to negligence, non-performance;
- Excessive cement, concrete spillage, contamination;
- Non-provision of adequate personal protective equipment,
- Insufficient fire control and unauthorized fires;
- Preventable damage to water courses or pollution of water bodies; and
- Non-induction of staff.

2.6. Environmental Register

An environmental register should be kept on site in which incidents related to actual impacts are recorded. This will include information related to incidents such as spillages, dust generation and stakeholders' complaints as well as information relating to remedial actions taken. It is recommended that the EM, ESO and the contractor(s) records and maintains the register.

3. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

The project activities shall be executed on the basis of the legal framework in Namibia especially in compliance with the constitution but also with due consideration of the Bank's requirements and in accordance with other international regulations to which Namibia is a signatory. The ESMP as presented in the table below summarizes the enhancement and mitigation measures proposed.

3.1. Planning and design phase

Table 3: Environmental and Social Management Plan Monitoring framework

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Loss of vegetation or land clearing	- Locate planned facilities such as pump stations, reservoirs, pipe line routes etc where there are no trees or minimum number of trees; - Use NamWater's existing sites for the planned infrastructure and access roads; - Use existing pipeline routes; - Position new pipelines in such a way to follow existing access roads in the project area; - Avoid unique and special habitats or culturally protected areas; - Create buffers from special, sensitive and ecologically important habitats.	Design Engineers	PM	Number of trees cut	Once off during design stage	NamWater

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Ground water pollution from brine generated from the RO Plant	- Size the brine handling ponds adequately to prevent overflows especially during rainfall events;Specify waterproof pond lining to prevent brine from infiltrating into the ground; - Ensure there is a secure fence around the ponds to prevent access; - Specify use of visible signage to discourage collection and use of concentrated brine generated from the brine ponds.	Design Engineers	PM	Specifications of the ponds	Once off during design stage	NamWater
Noise and vibration pollution generated from the pump stations	- Specify variable frequency drives and remove control valves; - Throttle pressure-side valves until noises are eliminated; - Reduce pump speeds etc.	Design Engineers	PM	Specifications of the pumps	Once off during design stage	NamWater
Domestic solid waste management, Soil pollution, Air pollution, Noise pollution, Disruption of water supply, Road	- As a minimum, specify that all contractors should adopt the approved ESMP; - Manage and monitor all the identified environmental impacts as recommended in the ESMP; - All contractors should adhere to the ESMP.	Design Engineers	PM	This ESMP should form part of the Tender documents	Once off	NamWater

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
accidents, Work place injuries	- Ensure contractors have made reasonable budget allocations for ESMP implementation and monitoring.					

3.2. Construction phase

Table 4: Environmental and Social Management Plan monitoring framework

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Loss of vegetation or land clearing	- Avoid or minimize clearing of vegetation, particularly indigenous trees; - Avoid clearing and construction within sensitive habitats such as culturally protected areas, unique and special habitats; - Create buffers from ecologically important or sensitive habitats.	Contractors	ESO	Number of trees cut	Monthly	MEFT
Domestic solid waste generated by workers from campsites	- Provide adequate number of bins for domestic waste disposal; - Dispose of domestic waste generated at the nearest designated waste disposal site.	Contractors	ESO	Amount and type of waste generated	Monthly	MEFT
Soil contamination or pollution from hazardous products such	- Above ground fuel storage tanks must be bund walled with concrete that can contain can contain 200% of the stored fuel and must have water proof floors to contain and prevent seepage of spilled fuel;	Contractors	ESO	Observations and soil tests (Hydrocarbons)	Daily or weekly.	MEFT, MAWLR

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
as petroleum products e.g. oil and fuel as well as waste water from toilets	- Prevent spillages of any chemicals and petroleum products i.e., oils, lubricants, petrol and diesel; - Use drip trays, linings or concrete floors when evidence of leaks are observed on vehicles or equipment; - No major servicing and maintenance of vehicles and/or equipment should be conducted at the site; - All fuelling, storage and chemical handling should be conducted on surfaces provided for this purpose;; - Drip trays, linings or concrete floors must be used when removing oil from machinery; - Spillage control procedures must be in place according to National Oil Spill contingency plan guidelines; - Waste water collection systems should be connected to conservancy tanks that are emptied using honey suckers for disposal to sewer ponds at Eenhana Town;					

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
	- Should portable toilet facilities be necessary, adequate containment systems should be erected at the site for use during the construction phase; - Waste should properly be contained to avoid any leakages and/or spillages, and should regularly be disposed of at a suitable sewage disposal site; - Run-off from these toilets due to overflows should be avoided at all cost; - Proper environmental awareness and remedial response training of operators must be conducted on a regular basis;					
Air pollution from dust, smoke etc.	- Soil or ground excavation works should be done when wind is calm - Dampen surfaces with water during work; - Protect stock piled soil with cover materials such as nets to protect loose soil from being blown away by the wind; - It must be ensured that all vehicles entering the site and machinery used in construction	Contractors	ESO	Dust count	Monthly	MEFT

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
	activities are in good working order to prevent unnecessary emissions; - Trucks transporting sand should be covered by tarpaulin; - Vehicles should not be allowed to idle for unnecessarily long periods of time; - Excavation, handling and transport of materials must be avoided under high wind conditions; - Obey speed limitations on site, 30 km per hour for construction vehicles and 40 km per hour for light and passenger vehicles.					
Noise and vibration pollution	- Construction hours should be limited to during day (07h00 – 17h30), Mondays to Saturdays; - Turn off machinery and equipment when not in use; - Ensure regular maintenance of machinery and vehicles; - Ear plugs must be used when working in noisy areas;	Contractors	ESO	Allowable noise exposure in decibels: 85 dBA as an 8 hr Time Weighted Average)	Monthly	MEFT

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
	- Define and obey speed limitations for construction vehicles; - Carry out relevant trainings and provide instructions to drivers of construction vehicles on the driving speed limits; - Avoid driving of construction vehicles through settlements where possible; - Use of designated access roads; - Evaluate construction of access roads where required to avoid traffic					
Disruption of water supply Switching / cutting off water supply when removing old existing equipment and pipelines	- Communicate and warn stakeholders of the scheduled work program resulting in water cuts.	Contractor	Business Unit North (BUN)	Number of announcements (water cuts)	Monthly	MAWLR

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Road traffic accidents due to increase in traffic flow in the project area	- Drive during day only; - Adhere to speed limits on the national roads; - Adhere to speed limits on construction sites: 30 km per hour for construction vehicles and 40 km per hour for light and passenger vehicles.; - Receive deliveries during day; - Mark all construction vehicles as required; - Make use of legible bright colours for signage; - Direct and control traffic flow when working along the road.	Contractor	ESO	Number of fire road traffic accidents	Monthly	Ministry of Safety and Security
Injuries to employees and guests onsite / work areas.	- Provision of appropriate protective gears such as gloves, goggles, masks and clothes; - Provision of first aid kits and equipment; All visitors to report to the RE and be inducted/guided through the site with appropriate personal protective equipment.	Contractor	ESO/RE	Lost time cases rate, calculated by the multiplying the number incidents that were lost time cases by 200 000 and then dividing that by the	Monthly	MLIREC

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
				employee labour hours at the company.		
Sexual exploitation and abuse, gender-based violence and HIV/AIDS Influx of people from various areas, alcohol and drug abuse etc.	- Training of employees and awareness campaigns; - Non-local employees should return to their original residential areas after completion of the contract.	Contractors	RE/EM	Number of GBV cases, Illnesses	Monthly	MoHSS, Ministry of Gender, Equality,
Stray domestic animals roaming through work areas resulting in	- Create gateways for movement of livestock along pre-identified major crossing ways or livestock corridors; - Barricade and protect work areas from domestic animals	Contractors	RE/EM/ESO	Number of incidences	Monthly	MAWLR

Potential impact	Mitigation / Enhancement Measure (s)	Implementing Agent	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
animals falling or getting trapped in pits or trenches etc.						
Fire accidents arising from sparks generated during work activities involving welding, cutting of metal or gas cutting can cause fires.	- Provide bins for waste collection, especially at work stations that are manned daily; - Restrict smoking to designated areas; - Provide fire extinguishers; - Restrict hot work activities to designated areas; - Have an emergency fire plan for visitors and staff in place; - No open fires for heating or cooking shall be permitted on site - Maintain equipment in good working codnition; - No hot work activities near flammable chemical storage area;	Contractors	RE/EM/ESO	Number of incidences	Monthly	MAWLR

3.3. Operation phase

Table 5: Environmental and Social Management Plan monitoring framework

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Domestic solid waste is generated by workers from control room.	- Provide bins for waste collection, especially at work stations that are manned daily; - Dispose of domestic waste generated at the nearest designated waste disposal site.	Scheme Superintendent	Amount and type of waste generated	Weekly	MEFT
Soil contamination or pollution from hazardous chemicals or products such as petroleum products e.g. oil and fuel, brine and water treatment chemicals as well as waste	- Prevent spillages of any chemicals and petroleum products (i.e. oils, lubricants, petrol and diesel); - Use drip trays, linings or concrete floors when evidence of leaks are observed on vehicles or equipment; - All fuelling, storage and chemical handling should be conducted on surfaces provided for this purpose. - No major servicing and maintenance of vehicles and/or equipment should be conducted onsite; - Drip trays, linings or concrete floors must be used when removing oil from machinery;	Scheme Superintendent	Observations and soil tests (Hydrocarbons)	Daily or weekly observations.	MEFT, MAWLR

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
water from toilets	- Spillage control procedures must be in place according to National Oil Spill Contigency Plan; - Waste water collection systems should be connected to these systems; - Should portable toilet facilities be necessary, adequate containment systems should be erected at the site for use during the decommissioning phase; - Waste water should properly be contained to avoid any leakages and/or spillages, and should regularly be disposed of at a suitable sewage disposal site; - Run-off from toilets due to overflows should be avoided at all cost; - Proper environmental awareness and remedial response training of operators must be conducted on a regular basis.				
Noise and vibration pollution	- Check for faults when equipment is noisy; - Turn off machinery and equipment when not in use; - Ensure regular maintenance of machinery and vehicles;	Scheme Superintendent	Allowable noise exposure in decibels:	Monthly	MLIREC

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
	- Ear plugs must be used when working in noisy areas;		85 dBA as an 8 hr Time Weighted Average)		
Disruption of water supply Switching / cutting off water supply during repairs and / or during planned maintenance or break downs.	- Communicate and warn stakeholders of the planned maintenance resulting in water cuts; - If decommissioning, an alternative water supply system should be commissioned before water supply is halted.	Scheme Superintendent	Number of announcements (water cuts)	Monthly	MAWLR
Road traffic accidents due to increase in traffic flow in the project area	- Drive during day only; - Adhere to speed limits on the national roads; - Adhere to speed limits on construction sites: 30 km per hour for construction vehicles and 40 km per hour for light and passenger vehicles; - Receive deliveries during day; - Mark all construction vehicles as required; - Make use of legible bright colours for signage; - Direct and control traffic flow when working along the road.	Scheme Superintendent	Number of fire road traffic accidents	Monthly	Ministry of Safety and Security

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent	
Injuries to employees working at pump stations and RO plant.	- Provision of appropriate personal protective equipment such as gloves, goggles, masks and clothes; - Provision of first aid kits and equipment; - All visitors to report to the Scheme superintendent on duty and be inducted / guided through the site with appropriate personal protective equipment; - First aid and safety awareness training for employees; - Ensure the general safety and security at all times by providing day and night security guards and adequate lighting within and around the pump stations, RO plant, Brine disposal ponds and reservoirs; - The employees must be properly trained on safety and health issues of the planned infrastructure during operation, repairs and maintenance; - Workers should be fully equipped with appropriate personal protective equipment.	Scheme Superintendent	Lost time cases rate, calculated by the multiplying the number incidents that were lost time cases by 200 000 and then dividing that by the employee labour hours at the company.	Monthly	MLIREC	
Fire accidents arising from sparks	- Provide bins for waste collection, especially at work stations that are manned daily; - Restrict smoking to designated areas;	Contractors	RE/EM/ESO	Number of incidences	Monthly	MAWLR

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent	
generated during work activities involving welding, cutting of metal or gas cutting can cause fires.	- Provide fire extinguishers; - Restrict hot work activities to designated areas; - Have an emergency fire plan for visitors and staff in place; - No open fires for heating or cooking shall be permitted on site - Maintain equipment in good working codnition; - No hot work activities near flammable chemical storage area;					

3.4. Decommissioning phase

It is assumed the project will operate optimally for a lifetime of 30 years and 50 year for mechanical and strcuctural components of the project respectively. The RO Plant and the pump station facilities will likely be upgraded then and continue operation as long as the town of Eenhana and the settlements in the project area continue to grow. Maintenance and upgrading may therefore be necessary in order to keep optimal functionality. After the lifespan is finished and/or no more upgrades are feasible, a decommissioning period will commence. The environmental and social impacts of decommissioning would reflect its operational history, the projected use of the site and the social and environmental conditions within the program area.

Inappropriate disposal of wastewater technology and biodigester equipment and infrastructure, may involve environmental harm. Recycling and disposal of waste will be done by a company with a license and experience in this type of decommissioning projects. The projected impacts and risks during this phase are expected to be limited in scope but may include:

3.4.1. Disturbance to traffic

The following activities associated with decommissioning may disturb traffic flow and these include road cuttings, excavations of trenches, temporary road closures/lane closures, heavy vehicle movement from trucks loaded with demolition material, and vehicle and pedestrian traffic deviations. These could result in traffic congestion and perhaps risks of accidents;

3.4.2. Air pollution

Emissions from the use of machines and dust production from infrastructure and equipment dismantling may result in a decrease in air quality impacting nearby residents, pedestrians and/or nearby activities;

3.4.3. Noise pollution

Noise generated through dismantling infrastructure and equipment could potentially impact on workers and neighbourhood residents;

3.4.4. Occupational health and safety

Possibility of injury to workers from onsite accidents;

3.4.5. Waste generation

Decommissioning of infrastructure and equipment may cause excess material generation. Equipment such as piping, valving, pumps, instrumentation and control equipment, can have residual values and can be sold or relocated off-site for reuse. Where recycling options are possible these will be implemented prior to the last option of landfilling. Other waste such as lubricants, oils and greases must be treated as hazardous waste and disposed accordingly.

Table 6: Environmnetal and Social Management Plan monitoring framework.

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Domestic solid waste generated by workers	- Provide bins for waste collection, especially at camp sites; - Dispose of domestic waste generated at the nearest designated waste disposal site.	Contractor	Amount and type of waste generated	Weekly	MEFT
Soil contamination or pollution from hazardous chemicals or products such as petroleum products e.g. oil and fuel, brine and water treatment chemicals as well as waste water from toilets	Prevent spillages of any chemicals and petroleum products (i.e. oils, lubricants, petrol and diesel); - Use drip trays, linings or concrete floors when evidence of leaks are observed on vehicles or equipment; - All fuelling, storage and chemical handling should be conducted on surfaces provided for this purpose. - No major servicing and maintenance of vehicles and/or equipment should be conducted onsite; - Drip trays, linings or concrete floors must be used when removing oil from machinery; - Spillage control procedures must be in place according to National Oil Spill Contigency Plan;	Contractor	Observations and soil tests (Hydrocarbons)	Daily or weekly observations.	MEFT, MAWLR

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
	- Waste water collection systems should be connected to these systems; - Should portable toilet facilities be necessary, adequate containment systems should be erected at the site for use during the decommissioning phase; - Waste water should properly be contained to avoid any leakages and/or spillages, and should regularly be disposed of at a suitable sewage disposal site; - Run-off from toilets due to overflows should be avoided at all cost; - Proper environmental awareness and remedial response training of operators must be conducted on a regular basis.				
Noise generated from dismantling of infrastructure	- Check for faults when equipment is noisy; - Turn off machinery and equipment when not in use; - Ensure regular maintenance of machinery and vehicles; - Ear plugs must be used when working in noisy areas;	Contractor	Allowable noise exposure in decibels: 85 dBA as an 8 hr Time Weighted Average)	Monthly	MLIREC

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Disruption of water supply Switching / cutting off water supply.	- Communicate and warn stakeholders of the planned maintenance resulting in water cuts; - If decommissioning, an alternative water supply system should be commissioned before water supply is halted.	Contractor and / or Business Unit North (BUN)	Number of announcements (water cuts)	Monthly	MAWLR
Injuries due to onsite accidents	- Provision of appropriate personal protective equipment such as gloves, goggles, masks and clothes; - Provision of first aid kits and equipment; - All visitors to report to the Scheme superintendent on duty and be inducted / guided through the site with appropriate personal protective equipment; - First aid and safety awareness training for employees; - The employees must be properly trained on safety and health issues of the removal of old equipment. - All sites must be fenced off and fences maintained intact to prevent access to unauthorised persons or stray livestock from entering.	Contractor	Lost time cases rate, calculated by the multiplying the number incidents that were lost time cases by 200 000 and then dividing that by the employee labour hours at the company.	Monthly	MLIREC
Air pollutiion	- Soil or ground excavation works should be done when wind is calm;	Contractor	Dust count	Monthly	MEFT

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
	- Use water to suppress dust whe breaking up concrete stands and slabs; - Dampen surfaces with water during work; - Protect stock piled soil with cover materials such as nets to protect loose soil from being blown away by the wind; - It must be ensured that all vehicles entering the site and machinery used in construction activities are in good working order to prevent unnecessary emissions; - Trucks transporting sand should be covered by tarpaulin;				
Road traffic flow disturbances leading to accidents.	- Drive during day only; - Adhere to speed limits on the national roads; - Adhere to speed limits on construction sites: 30 km per hour for construction vehicles and 40 km per hour for light and passenger vehicles.; - Receive deliveries during day; - Mark all construction vehicles as required; - Make use of legible bright colours for signage;	Contractor	Number of motor vehicles accidents	Monthly	MEFT

Potential impact	Mitigation / Enhancement Measure (s)	Responsible Party	Indicator (S)	Monitoring Frequency	Monitoring Agent
Excess material which may become waste	- Rubble should be disposed at a registered building waste material landfill; - Recycleable materials should be segregated and send to recycling enterprises; - Reusable equipment such as pipes, valves, motors can be relocated and auctioned to the public for reuse.	Contractor and Superintendant	Type and quantityof waste	Monthly	MEFT

3.5. Rehabilitation management plan

The objectives of the rehabilitation exercise are as follows:

- Identify areas that must be rehabilitated to their natural state and areas that can be rehabilitated to a functional state (e.g. lawns and gardens);
- Provide a description of the procedures that should be followed for soil stabilisation and planting;
- Provide a framework for monitoring and reporting on the success of the rehabilitation exercise;
- Define roles and responsibilities for the implementation of this plan.

The “4 R” Approach should be employed for the rehabilitation of the disturbed environment. This includes:

- Restoration;
- Rehabilitation;
- Replacement / re-vegetation; and
- Reservation/conservation.

The success of rehabilitating the community/population within a designated area is dependent on the satisfactory establishment of the chosen plant species. To ensure that the process is optimised, the correct plant species in the correct densities and combinations should be utilised. Monitoring of the rehabilitation process is imperative to ensure that aggressive plant species and herbivores are controlled, and slopes remain stable. The general aim of a rehabilitation programme is to recreate a natural ecosystem. The rehabilitation will therefore be outlined in three (3) phases, which are required, namely:

- Take measures to stabilise the soil and remedy the soil, when required, through the monitoring and management of the soil composition, pH levels, nutrients, etc.;
- Re-vegetate disturbed areas using appropriate natural successional species;
- Monitor and manage the success of the rehabilitation by controlling aggressive indigenous plants, removing alien invasive plant species as soon as they are observed, and maintaining the re-vegetated areas to ensure the successful establishment of these re-vegetated areas.

The proposed Rehabilitation Plan for Ohangwena II Wellfield is applicable to the following areas:

- Areas near or bordering wetlands or water drainage channels that may have been disturbed but have not been developed;
- Road verges after temporary access roads construction is completed;
- Campsite areas when construction workers demobilize;
- Wetlands;
- Stormwater soak away features and landscaped areas; and
- Areas where large patches of indigenous or invasive Alien Plant species have been removed.

Rehabilitation starts at the beginning of the project i.e., when clearing for construction begins and is not applied retrospectively. The steps outlined in the sections below must therefore be applied during the construction phase.

3.5.1. Rehabilitation Phase 1: Soil Stabilisation And Remediation

Topsoil, which is removed during construction, must be utilised in the nursery and stored on site for rehabilitation and re-vegetation. Once construction is complete, the topsoil must be spread over the disturbed site and covered with mulch. Where necessary, the soil must be stabilised using suitable materials, such as netting or geotextiles. The plant material (grasses and herbs), which have been removed from the site, should be mixed into the topsoil to supplement the organic nutrient content of the soil. No further soil conditioning in terms of fertilising is deemed necessary at this stage.

3.5.2. Rehabilitation Phase 2: Re-Vegetation Procedure

The selection of species to be used for re-vegetation should be based on the ability of the species to successfully grow from the indigenous seeds, sods and/or slips which have been collected from the site. The table below outlines the steps which should be followed during out-planting for the revegetation procedure:

Table 7: Revegetation procedure.

Land preparation	The target area should be prepared as follows: - Prior to rehabilitation of the site, all remnants of foreign debris / liter should be removed from the site. Compacted soil should be ripped to a depth of more than 250 mm to allow easy root establishment. - The final prepared surface should not be smooth but furrowed to follow the natural contours of the land. - All target areas must be covered with topsoil. Topsoil should be manually spread evenly over the surface. Topsoil must be spread to the original depth and deeper where sufficient topsoil is available. - Sites where concrete slabs are to be thrown must first have 20cm of the topsoil removed for later use in the rehabilitation programme. - All the target should be mulched. The vegetation stripped and stockpiled during site preparation must be spread in a single layer across the target areas as mulch. - All revegetation target areas should be treated with nitrogen-fixing bacteria which is important for legumes, Trichoderma sp. and mycorrhizal products as a natural form of soil remediation.
Plant preparation	Plants should undergo a period of 'hardening-off' during which they have been exposed to full, direct sunlight and been under a reduced watering regime. The individual plants destined for each target site should be grouped into site-specific, marked containers, before they leave the nursery. Each plant should be labelled with an aluminium label, giving species code, and a specific numeral identifying the site. Before planting commences, the

	equipment necessary for the proper handling and placing of all required materials must be on hand, in good condition and to acceptable approved standards. - Planting should preferably be done during the rainy season (summer). - Excavate square holes of approximately 800 mm x 800 mm x 800 mm for trees and approximately 500 mm x 500 mm x 500 mm for shrubs. - Backfill planting holes with excavated material/approved topsoil, thoroughly mixed with weed-free manure or compost (per volume, approximately one quarter of the plant hole), one cup of 2:3:2 fertiliser and an approved ant and termite poison (if required). - As much of the soil from container plants as possible must be retained around the roots of the plant during planting. - The soil must cover all the roots and be gently pressed down to a level equal to that of the surrounding in situ material. - After planting, each plant must be well watered and additional soil should be added once the soil has settled, if necessary. - Mulch must be added to the surface area of the topsoil in order to sustain soil moisture. - Stake all trees using at least three (3) weather resistant wooden or steel stakes anchored firmly into the ground. Two (2) of the three (3) stakes should be located on the windward side of the plant. Galvanised wire binding, 3 mm thick, covered with a 20 mm diameter plastic hosepipe must be tied tightly to the stakes, half- to two thirds the height of the tree above the ground and looped around the trunk of the tree. - Place stakes at least 500 mm apart and away from the stem and roots of the tree, so as not to damage the tree or its roots. - Thoroughly water plants as required until the plants are able to survive independently, i.e. until they are able to survive when receiving water from rainfall only. - A raised circular 200 mm high subsoil berm placed 500 mm (shrubs) to 750 mm (trees) from the plant stem must be provided for the watering. Do not simply leave the excavated plant hole partially backfilled for this purpose, the berm must be raised above the natural soil level.

	- Water aloes and bulbs once directly after transplanting to settle the soil. - Remove stakes and wire binds over time as required, as plants become established.
Grassing using sods	"Sodding" is defined as the laying of grass sods. - Sodding may be done at any time of the year. - The soil should be uniformly wet to a depth of at least 150 mm before grass sods are planted. - Protect sods against drying out by keeping them moist from the time of harvesting until final placement. - Rake or spike the the area to create a loose surface to a depth of approximately 100 mm. - Lay two (2) rows of sods in a straight line or following a contour, starting at the bottom of a slope (if not flat), where possible. - Place the next two (2) rows of sods in the same direction, 5 m away, until the full area is covered with rows of sods. - Tightly push sods together, taking care not to stretch or overlap sods. - Where a good fit cannot be obtained, the intervening spaces should be filled with parts of sods or topsoil. - After planting, water sods to prevent drying out. - Irrigate as required until the grass is able to survive independently, i.e. until it is able to survive when receiving water from rainfall only.
Grassing using runners	- Plant grass runners evenly by hand or by mechanical means at a rate of at least 400 runners per hectare (i.e. at 250 mm centres). - Only use fresh runners, avoiding grass runners which have dried out. - Rake or spike the area to create a loose surface to a depth of approximately 100 mm. - The soil should be uniformly wet to a depth of at least 150 mm before planting of grass runners. - After planting, the runners must be given copious amounts of water and, when sufficiently dry, must be rolled with a light agricultural roller and re-watered. - Irrigate as required until the grass is able to survive independently, i.e. until it is able to survive when receiving water from rainfall only.

Grassing using seeds	- All seed should be collected from the site during vegetation clearing or from the neighbouring veld. - Seeding must be done during the summer months, when the germination rate is better. - Seeds must be sown at the rate of 0,5kg per 100m^2 (50kg per hectare). - The soil should be loose and uniformly wet to a depth of at least 30 cm, before any seeding commences. - Halve the seed and fertiliser mixture as specified and apply evenly in two (2) successive applications perpendicular to each other. - The seeded area must be raked over after seed application and well watered. - Irrigate as required until the grass is able to survive independently, i.e. until it is able to survive when receiving water from rainfall only.
Maintenance	- Cordon-off areas which are under rehabilitation as temporary no-go areas using danger tape and steel droppers. If necessary, these areas should be fenced-off to prevent vehicular, pedestrian and livestock access. - Re-vegetation of the ridges must be the same as the vegetation type which previously existed. - Water all transplanted, planted and grassed areas as specified. - Watering must commence and continue immediately after the seeds have germinated and growth begins. - Mow lawns regularly to a height of 50 mm above ground level. This promotes adequate coverage. - Mowing of veld grass is to take place once a year after the grass has shed its seed and not before the grass has fully grown - fire breaks are important. - Check all plants for pests and diseases on a regular basis and treat the plants, when required, using approved methods and products as per the manufacturers' specifications. - Control weeds by means of extraction, cutting or other approved methods. - In planted areas which have failed to establish, replace plants with the same species as originally specified. The same species must be used unless otherwise specified by the ECO.

	- A minimum grass cover of approximately 80% is required. Individual plants must be strong and healthy growers by the end of the maintenance period. - Acceptable cover, in the case of sodding, is attaining 100% cover by the specified vegetation.

3.5.3. Rehabilitation Phase 3: Rehabilitation Monitoring

Namwater will implement and maintain a rehabilitation monitoring plan from the commencement date of rehabilitation activities, which should be recorded in the Environmental File. Monitoring of rehabilitation efforts must continue for a period of twelve (12) months after the rehabilitation procedure has been completed. Should any issues arise, which are not resolved through the implementation of the recommended measures, a suitably qualified horticulturist or botanist should be contacted to provide further rehabilitation/remedial measures. The ECO should monitor the rehabilitation process and record the progress in the regular audit reports using photographic evidence. This should include monitoring the establishment success (presence, percentage cover or absence) of plant cover and species composition per rehabilitated area. Monitoring must be undertaken biannually during theproject cycle. Rehabilitation will be deemed successful once primary grass cover has been established, and there is no further requirement for frequent monitoring and management of the growth.

3.6. Monitoring and Evaluation

NamWater will ensure that this Rehabilitation Plan is reviewed for efficacy, and any necessary changes thereto will be reflected in the periodic revisions of this document. A summary of all rehabilitation monitoring activities and outcomes will need to be reported on in the biannual reports.

3.7. Community and Stakeholder engagement

While this ESMP does not repeat details of the consultation and disclosure undertaken as part of the ESIA, it is acknowledged that consultation is an ongoing process and forms part of the life cycle of the project and the following measures are proposed:

a. Conduct stakeholders meetings as and when needed, to ensure that the people in the community and stakeholders continue to be informed during construction and, where required, during operation and decommissioning phases. The consultation meetings held during the environmental scoping phase marked the beginning of the early engagement with stakeholders.

3.7.1. Grievance redressal mechanism (GRM)

The grievance management mechanism will be implemented throughout the project phases in order to extend an opportunity to all the stakeholders, in particular, those affected by the project to air their views on the project. This will form a channel to allow two-way communication from the lowest level to the top and vice-versa and in a way allow access to information and also to cascade resolutions.

3.7.2. Objectives of GRM

To enable the employee to air their grievance:

- To clarify the nature of the grievance
- To investigate the reasons for dissatisfaction
- To obtain, where possible, a speedy resolution to the problem
- To take appropriate actions and ensure that promises are kept

3.7.3. Grievance processes and procedure

Grievances will be handled by NamWater through Ohangwena Regional Council and will include the following steps and timelines:

- Provide a grievance registration form triplicate book onsite.
- Provide a grievance form to the concerned party or stakeholder to complete (personal details and details of the grievance) and submit one copy to Namwater and another copy to the Regional Council, one copy remains onsite;
- Open discussion of the issue by project team and proponent to formulate resolution(s);
- Provide for communication of the resolution to the concerned stakeholder(s); and
- Provide for an appeal process if the stakeholder is not satisfied with the proposed resolution of the complaint.

If the stakeholder is still unsatisfied, it is the responsibility of the EM to advise the aggrieved party of their right to legal recourse by the EM. Anonymous grievances can be raised and addressed. The grievance registration form is attached at the end of this report under Annexure 2. Several uptake channels to consider include:

- Walk-ins at focal points such as the Contractor's site office and NamWater's office
- Emails
- Telephone calls

Once an issue is received it must be recorded and resolved within a specified time period. All issues should be reported on and followed up during monthly progress meetings.

3.7.4. Grievance handling procedures

The grievance handling procedures that will be followed is presented in Figure 1 below.

During the ESIA the grievances and / or concerns can be communicated through the following details:

NamWater: Senior Scientist: Jolanda Kamburona
Email: kamburonaj@namwater.com.na
Phone number: 061 712105

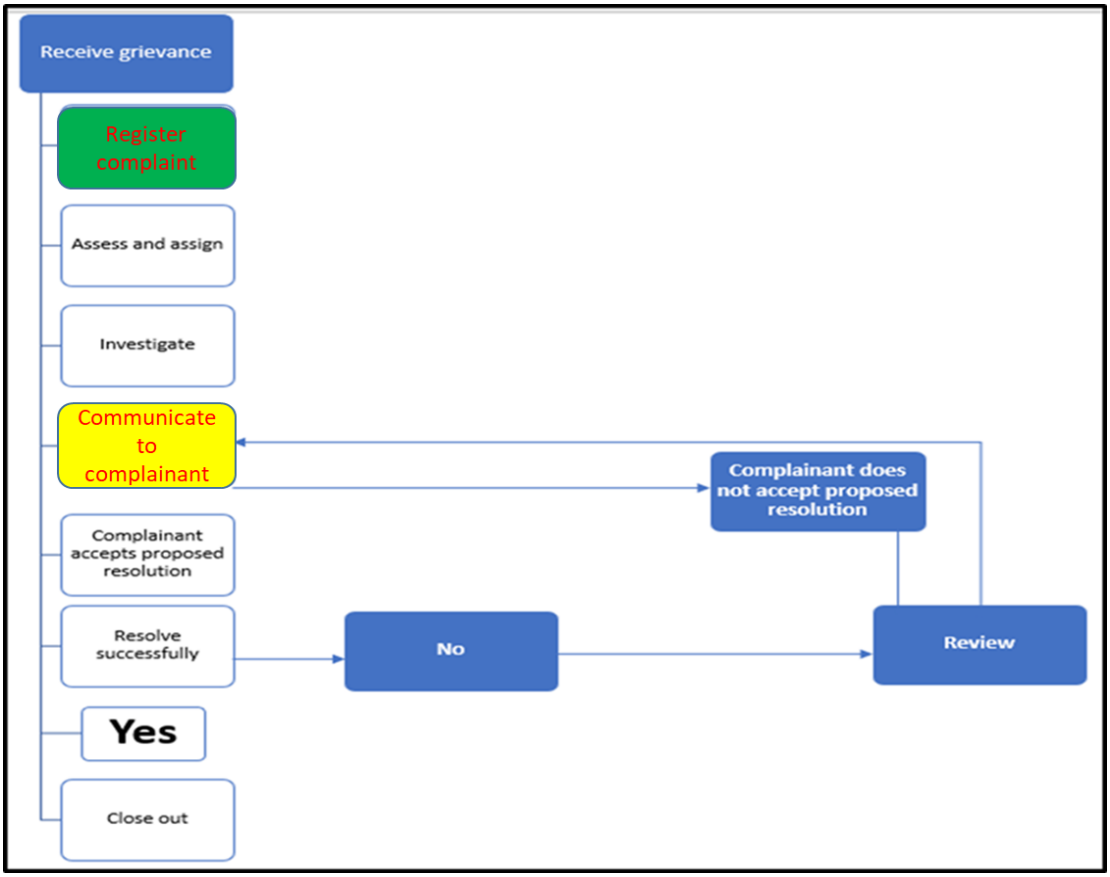

Figure 1: Grievance redressal mechanism process flow, GRM form is attached under Annexure 1.

3.7.5. Estimated overall annual ESMP implementation budget

An estimated overall annual budget for the implementation of all environmental and social measures is provided in the table below.

Table 8: Estimated overall ESMP implementation annual budget.

Impact / activity	**Estimated Cost (Nam$)**
SEA / GBV / HIV AIDS awareness training and awareness campaigns	
Development of training and awareness materials master copies	65 000.00
Facilitation	25 000.00
Road shows	30 000.00
Total annual cost	***120 000.00***

4. ENVIRONMENTAL MANAGEMENT ACTIONS

4.1. Accidents on Site

The Contractor shall comply with the Occupational Health and Safety Act and any other national, regional or local regulations with regard to safety on site. The Contractor shall ensure that contact details of the local medical services are available to the relevant construction personnel prior to commencing work.

4.2. Method statements

Construction Method Statements (CMS) are documents that detail exactly how to carry out work safely. The purpose of method statements is to describe the safety precautions in a high-risk work environment in order to controlrisks identified in the risk assessment. The CMS provides an environmental manual for use by management and construction staff involved in the works. It addresses the environmental issues that are specific to an activity and/or site. CMS's should be produced for all major activities, and will typically provide detailed descriptions of items including, but not necessarily limited to:

- Nature, timing and location of activities;
- Procedural requirements and steps;
- Management responsibilities;
- Material and equipment requirements;
- Transportation of equipment to and from site;
- Develop methods for moving equipment/material while on site;
- How and where material will be stored;
- Emergency response approaches, particularly related to spill containment and clean-up;
- Response to compliance/non-conformance with the requirements of the ESMP; and;
- Any other information deemed necessary by the EM/ECO.

The contractor shall not commence the activity until the Method Statement has been approved and shall, except in the case of emergency activities, allow a period of one week for approval of the Method Statement by the ECO and EM. Such approval shall not unreasonably be withheld.

The ECO and EM may require changes to a method statement if the proposal does not comply with the specification or if, in the reasonable opinion of the ECO and EM, the proposal may result in, or carries a greater than reasonable risk of, damage to the environment in excess of that permitted specifications.

Approved method statements shall be readily available on the site and shall be communicated to all relevant personnel. The contractor shall carry out works in accordance with the approved method statement. Approval of the Method Statement shall not absolve the Contractor from any of his obligations or responsibilities in terms of the contract. Based on the nature of this project and its associated environment the following Method Statement is proposed:

- Site establishment
- Solid waste management
- Waste water management
- Fire control and emergency procedure
- Hazardous substances control; and
- Site clearing

4.2.1. Site Establishment and Construction

4.2.1.1. Demarcation of the Site

The 'site' here refers to all areas required for upgrade and site alteration purposes. Prior to any such activities on site the approved site shall be demarcated for the planned works.

The site will be properly demarcated and/or temporarily fenced off as agreed with the ESO. The method of demarcation shall be determined by the contractor and agreed to by the EM or ESO prior to any work being undertaken. The contractor shall maintain the demarcation line and ensure that materials used for upgrade and alterations of the site do not blow on or move outside the site and surrounding environment, or pose a threat to people. The boundaries of the site shall be demarcated prior to any work commencing on the site. The site boundary demarcation material (fence, barricade tape, corrugated iron sheets etc) shall be removed when all construction work is completed.

The contractor shall ensure that all his plant, labour and materials remain within the boundaries of the site, unless otherwise agreed in writing with EM. Failure to do so may result in the EM requiring the contractor to fence the boundaries of the site with wire mesh at his own expense to the satisfaction of the EM and the local town council. It will be the responsibility of the contractor to decide on an appropriate system of protective measures for the site. The contractor shall be responsible to ensure that building materials such as sand is not blown away and take the necessary precautions to prevent sand from being blown by the wind.

4.2.2. Solid Waste Management

NamWater (and its Contractors) shall institute a waste control and removal system for the site that is acceptable to the ESO. The Contractor shall not dispose of any waste and/or construction debris by burning, or by burying. All waste shall be disposed offsite at an approved landfill site. Consultation with the Eenhana Town Council should be conducted in this regard.

Where necessary, the Contractor shall supply waste bins/skips where construction personnel are working. The bins shall be secured in such a manner as to prevent their contents blowing out. The Contractor shall ensure that all personnel immediately deposit all waste in the waste bins for removal by the Contractor. Waste shall be properly contained in a scavenger, water and wind-proof containers until disposed of at an approved landfill. Bins shall be emptied and waste removed at least once a week from the site. The bins shall not be used for any purposes other than waste collection.

Petroleum, chemical, harmful and hazardous waste throughout the site shall be stored in enclosed, bunded areas, the location of which shall be determined on site in conjunction with the ESO. The bunded areas shall be clearly marked. Such waste shall be disposed offsite at an appropriate hazardous waste disposal site.
All contaminated soils must be removed from the site and disposed of or treated at a suitable facility. Unfortunately, no hazardous waste disposal facility exists in Eenhana, or the region at large, therefore a controlled bioremediation facility should be developed for any contaminated soil generated.

4.2.3. Waste Water Treatment

4.2.3.1. Discharge of Construction Water

Construction water in this report, refers to all water affected by construction activities. The Contractor shall construct and operate the necessary collection facilities to prevent pollution. The Contractor shall dispose of collected waste water in a manner agreed with the ESO.

The Contractor may discharge “clean” water overland and allow this water to filter into the ground. However, he shall ensure that he does not cause erosion as a result of any overland discharge. No water shall be allowed to drain onto neighboring properties or directly into any nearby surface water source. No washing of plant, equipment, concreting equipment etc. shall be permitted on site unless approved by the ESO based on a method statement which deals specifically with the issue of potential pollution of any surface water or stormwater systems.

Should it be necessary to dispose of contaminated water into the municipal sewer or storm water system, written permission is required from the relevant Eenhana Town Council.

The Contractor shall notify the ESO/EM immediately of any pollution incidents on Site.

4.2.3.2. Prevention of Soil, Surface-and Groundwater Pollution

The Contractor shall take all reasonable precautions to prevent the pollution of the ground and/or surface water resources on and adjacent to the site as a result of his activities. Such pollution could result from the release, accidental or otherwise, of chemicals, oils, fuels, sewage and waste products, etc. Water pollution can be reduced through the establishment of rules and regulations set by the ESO on water usage which will guide workers and visitors during operation and construction. The Contractor shall obtain oil absorbent pads, booms and spill kits, or similar designed products or materials to soak up oil, petrol and diesel. These materials shall be readily available for use wherever construction equipment is working. This should also be available at work stations where fuel and lubricants is being offloaded, stored, equipment is filled and serviced. The Contractor shall ensure that he is familiar with the correct use and disposal of any materials designed to soak up petroleum products. Environmental friendly methods will be used during construction e.g.:

- cement batching on boards,
- no wash water allowed to run off

- paint washing in containers to be removed to licensed site,
- use of environmental friendly paints with low toxicity,
- use sand filters for paint brush washing and contain cement bags,
- Waste water from paints with potential high environmental impact must be disposed of in accordance with an agreed method with the ESO.

The Contractor shall ensure that no oil, petrol, diesel, etc. is discharged onto the ground. Pumps and other machinery requiring oil, diesel, etc. that are to remain in one position for longer than two days shall be placed on drip trays or other similar suitable containment structures. These containment structures shall be watertight and shall be emptied regularly and the contaminated water disposed off-site at a facility capable of handling such waste liquid. Drip trays shall be cleaned before any possible rain events that may result in the drip trays overflowing, and before long week-ends and holidays.
The Contractor shall remove all oil, petrol, diesel-soaked soil immediately and shall dispose of it as hazardous waste.

4.2.4. Movement of Construction Personnel and Equipment

The contractor shall ensure that all construction personnel and equipment remain within the demarcated construction site at all times. Where construction personnel and/or equipment wish to move outside the boundaries of the site other than normal access to the road for loading and access purposes, the contractor shall obtain written permission from the EM and/or ESO.

4.2.5. Location of Construction Camps

Construction camps include workshops, temporary stockpile sites, temporary fuel installations, other storage and work areas, required by the contractor, sub-contractors and suppliers. All construction camps (if any) will be positioned in demarcated areas approved by the ESO where there is minimum or no trees at all.

4.2.6. Ablution Facilities

The contractor shall provide the necessary temporary ablution facilities (where required) for all site personnel. The setting of toilets shall be agreed upon with the EM. The contractor shall supply an adequate amount of sanitation and hygiene reagents to maintain the approved number of toilets throughout the site where construction personnel will be operating. As a standard:

Table 9: Number of toilets and urinaries and the respective allowable number of people it can serve.

Number of toilets	Allowable number of people served
One toilet and one urinary	1 – 15 people
Two toilets and one urinary	16 – 30 people
Two toilets and two urinary	31 – 45 people
Three toilets and two urinaries	46 – 60 people

The toilets shall be secured to prevent them from discharging liquid waste or raw sewer but should be drained by a honey sucker before the fill up. They should be fitted with doors in order to ensure privacy. Above all, they be cleaned and serviced regularly.

The contractor shall ensure that any chemicals and/or waste from the toilets is not spilled on the ground at any time. Should there be spillage of raw liquid waste, the EM shall require the contractor to place the toilets on solid base or containment structures with sumps. The contractor will be required to provide a suitable and approved and to remove accumulations of raw the raw liquid waste from the site and dispose of it at an appropriate waste disposal site or sewage plant base at his own expense.

Open defecation other than in the toilets shall not be permitted. The contractor shall be responsible for cleaning up any waste deposited by personnel.

4.2.7. Eating Areas

The contractor shall, in agreement with the EM, designate specific areas for eating and shall provide the following as a minimum:

- Walls with smooth, rust proof, non-toxic and non-absorbent & washable material;
- No open joints or seams;
- No chips, splits or cracks;
- All areas where food is prepared and stored must be clean and capable of being kept as such;
- Adequate refuse bins at all places. The refuse bins shall be cleaned regularly.

4.2.8. Provision of Water

The contractor shall be responsible for providing construction, drinking and washing water for his staff. Construction water shall be obtained from locations as agreed with the ESO and EM. As a WHO standard, the contractors should provide between 50 to 100 liters of water per person per day to meet daily basic needs including drinking.

4.2.9. Material Handling and Storage

4.2.9.1. Re-fuelling of Equipment

Where reasonably practical, plant shall be re-fuelled at a designated re-fuelling area or at the workshop as applicable. If it is not reasonably practical then the surface under the temporary re-fuelling area shall be protected against pollution with proper spill containment materials. The contractor shall ensure that there is always a supply of containment materials and absorbent material readily available to contain/absorb/breakdown and where possible is designed to encapsulate minor hydrocarbon spillage. The quantity of such material shall be able to handle a minimum of 200 liters of hydrocarbon liquid spill.

4.2.9.2. Chemical, Harmful and Hazardous Materials

All project personnel and contractors shall comply with all relevant national and local legislation with regard to storage, transport, use and disposal of chemical, harmful and hazardous substances and materials. The contractor shall obtain the advice of the manufacturer with regard to the safe handling of such substances and materials.

The contractor shall provide the ESO and EM with a list of all chemical, harmful and hazardous substances and materials on site, together with storage, handling and disposal procedures for these materials.
The contractor shall ensure that information on all chemical, harmful and hazardous substances are available to all personnel on site. The contractor shall furthermore be responsible for the training and education of all personnel on site who will be handling the material about its proper use, handling and disposal. A dangerous material datasheet should be available on site.

4.2.9.3. Cement and Concrete Preparation and Handling

The contractor is advised that cement and concrete are regarded as materials that are potentially damaging to the natural environment on account of the very high pH of the material, and the chemicals contained therein. The contractor shall ensure that all operations that involve the use of cement and concrete are carefully controlled. Concrete mixing shall only take place in agreed specific areas on site.

Water and slurry from concrete mixing operations shall be contained to prevent pollution of the ground surrounding the mixing points. Old cement bags shall be placed in wind and spill proof containers as soon as they are empty. The contractor shall not allow closed, open or empty bags to lie around the site.
Where exposed aggregate finishes are specified the contractor shall collect all cement-laden water and store it in conservancy tanks for disposal off site at an approved disposal site.

All visible remains of excess concrete shall be physically removed immediately and disposed of as waste. Washing the visible signs into the ground is not acceptable. All excess aggregate shall also be removed.

All excess concrete shall be removed from site on completion of concrete works and disposed of. Washing of the excess into the ground is not allowed. No cement or concrete laden water will be permitted to be drained directly into any surface water source.

Housekeeping requirements for concrete mixers:

- Empty the mixer drum of all contents;
- While still wet, wash out with clean water;
- Allow the mixer to revolve to wash the interior and carefully clean off the exterior;
- Disconnect or switch off power source;
- Clean-up the work area;
- Return the mixer to a secure storage area.

4.2.10. Lighting Management

The Contractor shall ensure that any lighting installed on the site for his activities does not interfere with road traffic, or cause an avoidable nuisance to the surrounding properties, or other users of the area. Lighting installed shall, as far as practically possible, be energy efficient. Lighting utilized on site shall be turned off when not in use.

4.3. Emergency Procedures

The Contractor shall ensure that there is an emergency procedure on site before commencing any operations that may cause damage to the environment. The Contractor shall also ensure that site staffs are familiar with all emergency procedures to be followed. The contact details of emergency services in Annexure 2, should be printed and displayed on-site.

4.3.1. Fire

The Contractor shall take all the necessary precautions to ensure that fires are not started as a result of activities on site. The Contractor shall report all fires immediately to the relevant authorities and EM. In the event of a fire the following procedure action steps should be taken:

- Stop work immediately;
- Alert all other individuals in the work place by activating alarm if available;
- Shouting clearly and audible enough for the message to be heard by others;
- Use a fire extinguisher if manageable;
- Use nearest escape route if in a confined area;
- Walk at normal to the assembly point;
- Assist physically impaired individuals if any;
- Call the fire emergency number (Eenhana Fire Brigade - +264 815 556 855).

The Contractor shall be liable for any expenses incurred by any organizations called to assist with fighting fires and for any costs relating to the rehabilitation of burnt areas and/or property, and/or persons should the fire be caused by activities on the site.

4.3.2. Petroleum, Chemical, Harmful and Hazardous Materials

The Contractor should be familiar with the requirements for the safe storage, handling and disposal of petroleum, chemical, harmful and hazardous materials. In the even of accidental spillage on site the following procedure should be implemented:

- Alert people or persons nearby the spill area;
- Stop and control the spill at the source first by using booms and spill berms and / or laternatively;
- Contain the spill/leakage with appropriate containers i.e., drip trays, sumps, etc., and in an approved manner to the satisfaction of the RE.

- Clean the affected area with water or an approved cleaning product (depending the spilled product: use water, or soap & water mixture if it is a non reactive chemical);
- If it is oil, use use spill kits, sorbent pads and granular oil sorbents to clean up oil;.
- The contaminated soil should be removed and disposed of at the Eenhana Town Council Waste Disposal Site.
- Repair vehicles or machinery with leakage.
- If it cannot be repaired, such vehicle or machinery should not be used until it is safe to do so;
- Report the incident to the RE and record it in the logbook

4.3.3. Adverse Weather Conditions

The Contractor should avoid waterflow channels and other low lying areas when siting waste receptacles to avoid runoff or flood water washing away waste. The Contractor shall also protect waste receptacles from rainfall and runoff water by using a combimnation of roof and bund walls. Stockpiles of the fine material such as sand, topsoil material, cement, etc., must also be protected from rain, runoff and wind. The Contractor shall ensure that a procedure is established for dealing with potentially polluted rainwater.

In case of adverse weather conditions, the ESO or EM will determine if the work can continue without endangering the health and safety of the field workers. The ESO will monitor the weather during morning and afternoon hours and will document it in the field logbook.

Some of the items to be considered prior to determining the continuance of work are:

- Potential for heat/cold stress and heat/cold-related injuries,
- Dangerous weather-related working conditions (high winds, dust storms),
- Limited visibility.

5. CONCLUSION AND WAY FORWARD

5.1. Conclusion

The planned development of the Ohangwena II well field can result in direct and indirect environmental and social impacts, including soil, water, air and noise pollution, waste generation and disposal, and occupational health and safety of employees. These impacts are expected to be site-specific and can be minimized by applying appropriate management and mitigation measures. The Environmental and Social Management Plan should be used as an on-site tool during all phases of the proposed development, preconstruction, construction, and operation and decommissioning. NamWater and the Contractor has the overall responsibility for ESMP implementation, to continuously monitor and audit all activities during the construction and operational activities of the project and to ensure that the ESMP is fully implemented and complied with in accordance with national regulations and AfDB safeguards requirements. Parties responsible for non-conformances of the ESMP will be held responsible for any rehabilitation that may need to be undertaken.

5.2. Way Forward

The draft report will be shared with the Client for approval before final submission to MEFT. This will pave the way for the application of the ECC.

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ANNEXURE 1: GRIEVANCE REDRESSAL FORM

GIEVANCE REGISTRATION FORM

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT: THE UPGRADE OF THE OHANGWENA II WELLFIELD II WATER SUPPLY SCHEME

KINDLY COMPLETE THIS FORM IN DETAIL AND RETURN TO ANY OF THE FOLLOWING INSTITUTIONS EASILY ACCESSIBLE:
NamWater, Ministry of Agriculture, Water and Land Reform Office, Contractor (Construction Foreman onsite / Site Foreman).

Date……Name & Surname……

Postal / Residential Address:……Email ……..……

Town…….…… Phone Number ……..

Subject of grievance

……

Description of grievance

……
……
……**Date of receipt / acknowledge:……Complainant reference:……..**

Expected time of redressal:.....…….

If time not met:
Reason for delay of redressal……

Action to be taken……

Updated time of redressal……...

Final redressal……

Action taken……

If Complainant is not satisfied advise on pathway to pursue the matter

SIGNATURE (s):
Complainant:……..Grievance Committee Chairperson……

Date:……Date:……

ANNEXURE 2: CONTACT DETAILS FOR EMERGENCY SERVICES

Emergency	Response Plan	Contact details
Fire outbreaks	Eehnana Fire Brigade	+264 815 556 855
Chemical exposure	Eehnana District Hospital	+264 65 263 023
	Ambulance	+264 65 263 023
	Namibia Ambulance Private Services (North)	+264 811 473 387
Injuries, loss of life, theft or robbery	NAMPOL - Eehnana	+264 65 264 247
	Ambulance	+264 811 473 387
Power Loss	Eehnana Town Council	+264 65 263 092
Water and Sewerage	Eehnana Town Council	+264 816 172 676