

APPENDIX B - NON-TECHNICAL SUMMARY









ECC-106-285-NTS-03-D

NON-TECHNICAL SUMMARY FOR

A PILOT SUSTAINABLE WATER SUPPLY PROJECT BY MEANS OF DESALINATION,
POWERED BY SOLAR TO SUPPLEMENT WATER SUPPLY FOR WALVIS BAY

PREPARED FOR





MAY 2020

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NON-TECHNICAL SUMMARY

PILOT SUSTAINABLE WATER SUPPLY PROJECT BY MEANS OF DESALINATION, POWERED BY SOLAR TO SUPPLEMENT WATER SUPPLY FOR WALVIS BAY ERONGO REGION, NAMIBIA

1 PURPOSE OF THIS DOCUMENT

The purpose of this Non-Technical Summary (NTS) is to provide Interested and Affected Parties (I&APs) a background to the proposed project and to invite I&APs to register as part of the Environmental and Social Impact Assessment (ESIA) process.

The proposed project is to develop a pilot sustainable water project by means of desalination, powered by solar to supplement water supply for Walvis Bay.

Through registering for the project, all I&APs will be kept informed throughout the ESIA process and a platform for participation will be provided to submit comments/recommendations pertaining to the project.

This NTS includes the following information on:

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

2 DESCRIPTION OF PROPOSED PROJECT

Environmental Compliance Consultancy (ECC) has been engaged by the proponent a Joint Venture (JV) between Turnkey Water Solutions (Pty) Ltd and Innovent SAS to undertake an ESIA and an

Environmental Management Plan (EMP) in terms of the Environmental Management Act, 2007 and

its regulations. An environmental clearance application will be submitted to the relevant competent authorities; the Ministry of Environment, Forestry and Tourism (MEFT).

2.1 LOCATION

The proposed project is located on a 4ha portion of Walvis Bay municipal land on Erf 4688 in the Erongo Region, Namibia. The preferred site is located on a semi-industrial location alongside the existing oil and gas jetty. The preferred site location is set out in figure 1.

2.2 Why is the Project Needed

Walvis Bay receives only 13.2 millimeters (0.52 in) average precipitation per year, making it one of the driest cities on earth. Water requirements of the town are currently 7 000 000 m3/year (20 000 m3/day).

To meet the current water demand water is supplied to the Municipality from different sources, mainly boreholes.

In order to ensure water security and sustainability in the context of population and industry demand growth, as well as climate change new innovative solutions for supplementing water supply to Walvis Bay is required.

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2.3 WHAT IS PROPOSED

This project aims to supply the Walvis Bay Municipality with an alternative clean and reliable water supply, through the use of innovative technology by means of a solar powered desalination plant. The project design components include:

- Producing approximately 3,900 m3/day of clean water or 1,422,000 m3/year;
- Installation of 5 beach boreholes (4 fully equipped and one spare);
- On shore beach boreholes fitted with infrastructure for an approximate pump capacity of 150m3/h;
- A plant and infrastructure lifespan of 20 vears:
- Brine discharge rates into the ocean will vary between 294 - 340 m3/h during normal operations; and
- Power for the plant to be generated on site by a hybrid Photovoltaic (PV) solar plant connected to the grid with an underground 3-phase cable.

This project will improve the water resilience of Walvis Bay, and allow for further development.

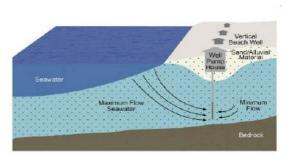


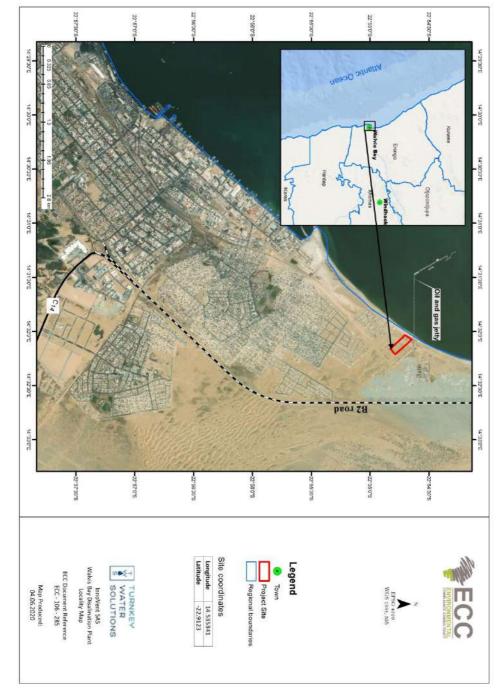
Figure 22 - Beach Borehole Concept for Water Supply to Plant



Figure 21 - Proposed Site Layout

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FIGURE 23 – LOCATION MAP OF THE PROPOSED PROJECT





2.4 POTENTIAL IMPACTS OF THE PROJECT

2.4.1 SOCIO-ECONOMIC

The potential social impacts are anticipated to be positive as the project will not only produce approximately 100 new jobs, but it will contribute to the sustainable water supply for Walvis Bay.

The proposed project location has been selected due to its access to existing infrastructure, the existing disturbed site, and importantly is not in proximity to sensitive receptors who may have visual amenity concerns with a new project.

Furthermore as the project is positively contributing to water security the potential flow on positive socio economic effects of the project could include the ability for further development of Walvis Bay.

2.4.2 ENVIRONMENTAL

The potential environmental impacts that will be assessed as part of this ESIA include:

- Brine discharge modelling;
- Avian impact assessment; and
- Hydrogeological investigations for the beach boreholes; and
- A Geotechnical report.

3 CONSIDERATION OF ALTERNATIVES

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

The project has conducted an alternative assessment evaluating other potential project sites. Four alternative sites were investigated that assessed numerous project elements including but not limited to:

- Intake locations;
- Access to existing infrastructure;
- Proximity to sensitive sites;
- Land availability; and
- Access to municipal water infrastructure.

Further to the initial assessment and during the ESIA process, alternatives considered will take the form of optimisation and efficiency to reduce potential effects through an iterative process including plant design and project improvements.

4 THE ENVIRONMENTAL ASSESSMENT PROCESS

This ESIA, conducted by ECC, is undertaken in terms of the Environmental Management Act, 2007 and its regulations. The process followed in this EIA is set out in the flowchart in figure 2.



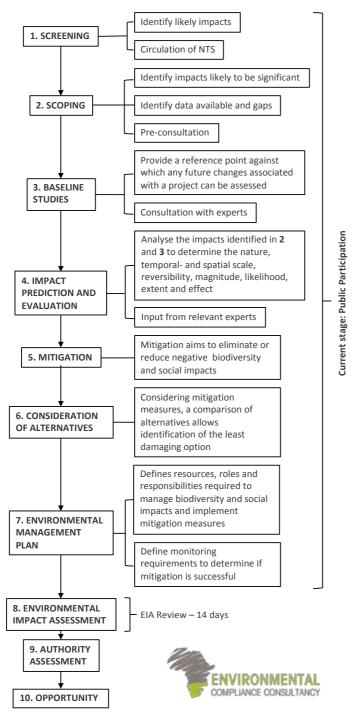


FIGURE 24 - FLOWCHART OF THE ENVIRONMENTAL ASSESSMENT PROCESS



4.1 SCREENING

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

ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES

- 1. The construction of facilities for -
- (a) the generation of electricity;
- (b) the transmission and supply of electricity;

WATER RESOURCE DEVELOPMENTS

8.1 The abstraction of groundwater and surface water industrial or commercial purposes 8.12 The release of brine back into the ocean by desalination plants.

INFRASTRUCTURE

(10.1.e) Any structure below the high water mark of the sea

4.2 BASELINE STUDIES

For the proposed project, baseline information will be obtained through a series of specialist studies combined with desk-based studies and site verification.

The ESIA will focus on the environmental receptors that could be affected by the proposed project. ECC will also engage with stakeholders, I&APs and the proponents to seek input into the assessment.

4.3 IMPACT ASSESSMENT

Impacts will be assessed using the ECC EIA methodology. The EIA will be conducted in terms of the Environmental Management Act, 2007 and its regulations. ECC's methodology for impact assessments was developed using IFC standards in particular Performance Standard 1 'Assessment and management of environmental and social risks and impacts' (IFC 2012, 2017) and Namibian Draft Procedures and Guidance for EIA and EMP (GRN, 2008) including international and national best practice with over 25 years of combined EIA experience.

4.4 ENVIRONMENTAL MANAGEMENT PLAN

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

4.5 Public Participation and Advertising

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

At this phase ECC will perform the following:



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

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

CONTACT US

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

Environmental Compliance Consultancy (ECC)

info@eccenvironmental.com

Tel: +264 816 697 608

www.eccenvironmental.com

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APPENDIX C – EVIDENCE OF PUBLIC CONSULTATION

List of registered stakeholders

Name of		Means of
Stakeholder	Institution / Interest / Relevance	communication
Mr Timoteus Mufeti	Environmental Commissioner, Directorate of Environmental Affairs, Ministry of Environment, Forestry and Tourism	Registered letter
Mr John Titus	Director: Energy, Directorate Energy, Ministry of Mines and Energy	Registered letter
Mr Percy Misika	Executive Director, Ministry of Agriculture, Water and Land Reform	Registered letter
Ms Maria Amakali	Director: Water Affairs, Directorate of Water Resource Management, Ministry of Agriculture, Water and Land Reform	Registered letter
Dr Moses Maurihungirire	Executive Director, Ministry of Fisheries and Marine Resources	Registered letter
Dr Anja Kreiner	Chief Fisheries Biologist, Directorate Resource Management, Subdivision Environment, Ministry of Fisheries and Marine Resources	Email; phone
Mr Coenie Koegelenberg	Chief Business Unit, Coastal, NamWater	Email; phone
Mr Saltiel Shaanika	Business Unit Coastal	Email
Mr NP du Plessis and team	Senior Environmentalist, NamWater	Email
Mr Nico Gabrielsen	Power Station Superintendent Paratus and Anixas, Department Technical And Operations, NamPower	Email; phone
Mr. Elzevir Gelderbloem	Executive Port Authority and Port Engineer, Walvis Bay Port Authority, Namport	Email
Mr Stefanus Gariseb	Namport	Email
Mr Ellis Eugumbo	Terminal Manager, NamCor	Email; phone
Mr Knowledge Ipinge	Councillor: Walvis Bay Urban Constituency, Erongo Regional Council	Registered letter
Mr John Esterhuizen	General Manager: Water, Waste and Environmental Management, Walvis Bay Municipality	Email; phone
Mr Andre Burger	General Manager: Roads and Building Control, Walvis Bay Municipality	Email
Nangula Amutenya	Environmental Management Section, Walvis Bay Municipality	Email
Vazembua Tjizoo	Walvis Bay Salt Refiners	Email
Mr Peter Bridgeford	Coastal Environmental Trust of Namibia	Email
Dr Simon Elwen	Namibian Dolphin Project	Email



Name of Stakeholder	Institution / Interest / Relevance	Means of communication
Mr Bruce Stewart	Stewart Planning, Town and Regional Planners, Walvis Bay	Email
Mr Alex Busch	Aqua Services and Engineering	Email; phone
Ms Daniela Bramwell	Private	Email
Mr Buddy Bramwell	Private	Email
Mr Titus Shaanika	Private	Email
Mr. Victor Miti Libuku	WALVIS BAY TOWN MUNICIPALITY	Email
Ms Kristofina Asino	WALVIS BAY TOWN MUNICIPALITY	Email
Mr Chris Stöck	AQUA SERVICES AND ENGINEERING	Email
Ms Jolana Kamburona	NAMWATER	Email



LETTER TO STAKEHOLDERS

REFERENCE: ECC-105-235-LET-05-A

9 June 2020

Identified Stakeholder and or Potentially Interested Party for:

Pilot sustainable water supply project by means of desalination, powered by solar to supplement water supply for Walvis Bay, Erongo Region Namibia

Dear Sir or Madam:

RE: NOTIFICATION OF ENVIRONMENTAL ASSESSMENT FOR PILOT SUSTAINABLE WATER SUPPLY BY MEANS OF DESALINATION, POWERED BY SOLAR TO SUPPLEMENT WATER SUPPLY FOR WALVIS BAY, ERONGO REGION, NAMIBIA

Environmental Compliance Consultancy (ECC) has been engaged by Turnkey Water Solutions (Pty) Ltd and Innovent SAS Joint Venture, the Proponent, to act on their behalf for the application of an environmental clearance certificate for a pilot sustainable water supply project by means of desalination, powered by solar to supplement water supply for Walvis Bay, Erongo Region Namibia. The exact location of the project is visible on the map hereto attached.

ECC is conducting the Environmental Impact Assessment (EIA) in terms of the Environmental Management Act, No. 7 of 2007 and will be submitted to the competent authority and the Ministry of Environment, Forestry and Tourism for a record of decision.

The proposed project is to supply water by means of desalination, powered by solar to supplement water supply for Walvis Bay, Erongo Region Namibia. By ensuring a sustainable water supply, the project may contribute to further development of Walvis Bay and create approximately 100 new jobs. As part of the proposed project, the following activities are envisaged, which shall be confirmed, as the assessment is refined:

- Installation of five beach wells, fitted with infrastructure for an approximate pump capacity of 150m³/h;
- A plant and infrastructure lifespan of 20 years;
- Brine discharge into the ocean which will vary between 294 and 340 m³/h;
- Marine construction may not be required if the existing jetty can be used; and
- Power for the plant to be generated on-site by a hybrid photovoltaic (PV) solar plant connected to the grid.

This letter is intended to engage stakeholders and potentially Interested and Affected Parties (I&APs) of the project and provide a communication channel to ECC for the project. You have been identified



as either a stakeholder, interested or affected party; therefore ECC wishes to inform you of how you can become involved in the project.

Public participation is an important part of the EIA process, as it allows public and stakeholders to obtain information about the proposed project. Public participation occurs at various stages throughout a project lifecycle including:

- Advertising in newspapers;
- Distributing a Non-Technical Summary (NTS) to identified stakeholders and I&APs;
- Registered I&APs will also be informed of the available draft scoping report for a 14-day comment and review period, during this period I&APs will have the opportunity to review the draft document and raise any issues or concerns, and
- Stakeholders and I&APs who wish to register as an I&AP must do so on the ECC website as per the link provided below: https://eccenvironmental.com/projects/

If you are unable to complete the registration form online please email info@eccenvironmental.com and request an electronic copy of the form that you can complete, sign, scan and return via email to info@eccenvironmental.com to register as an I&AP for the project.

ECC values community input and participation in our projects and we look forward to working with you as the project develops.

The NTS can also be obtained from our website and provides a brief overview of the proposed project https://eccenvironmental.com/projects/

Should you have any questions or require additional information please do not hesitate to contact either of us.

Yours sincerely,

Stephan Bezuidenhout

Environmental Compliance Consultancy

Office: +264 81 669 7608

Email: stephan@eccenvironmental.com

Jessica Bezuidenhout Mooney
Environmental Compliance Consultancy
Office: +264 81 669 7608

Email: jessica@eccenvironmental.com

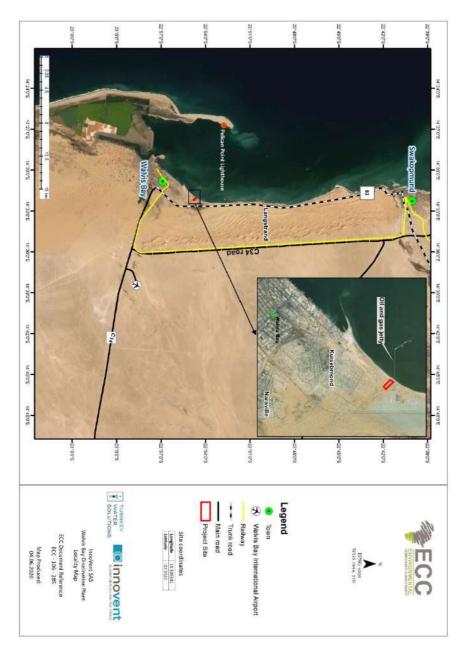


FIGURE 25 - LOCALITY MAP OF THE PROPOSED PROJECT



CONCERNS RAISED BY STAKEHOLDERS FROM INITIAL PUBLIC PARTICIPATION CONDUCTED.

Name of stakeholder	Concern / Comment	
Bruce Stewart	LOCATION I am not sure if the local area can be described as a semi-industrial location. The site is identified for residential development in terms of the IUSDF, the Council's long term plan. It is, in my opinion, prime residential land and the last available beachfront site available for (residential) development.	
	The description of the water volumes is confusing as it ranges from /day, /year, /hour – is it not possible to be consistent for comparison purposes? For example it is not clear to me the relationship between total production @ 162m³/hour, pump capacity @ 600m³/hour and brine discharge @ 340m³/hour	
	Are the 100 jobs, permanent jobs or construction jobs? Not in proximity to sensitive receptors? This is a predominantly residential area (as in 1 above); is the residential area not a sensitive receptor?	
	General comments: a. I understand that the land is owned by the Council. Is there a Council resolution in support of the proposed desalination project? b. Is solar power an option on the beachfront due to the potential of regular fog? c. The Council is busy investigating the treatment of purified effluent to potable water. Is this Council project likely to affect the viability/demand for desalinated	
	water? d. Reference is made to four alternative sites that were considered. Please provide details of these four alternative sites. e. I realise that hydrological investigations will be undertaken which will probably determine the quality of the available water for desalination. Have any preliminary investigations been undertaken? (I understand that the site is on reclaimed land and probably at the original mouth of the Kuiseb River which may also affect water	
	quality.) f. Is there any preliminary indication of the cost of the desalinated water relative to the current cost of potable water? g. Is the desalination plant modular that will allow for future growth/expansion? If so, is the site large enough for future growth?	
Stefanus Gariseb	The proposed area lies adjacent to the North Port Development.	
(Namport)	Brine discharge is our concern, along with dispersion models to be generated.	
Vazembua Tjizoo (Walvis Bay Salt Refiners)	WBSR will not be affected directly by proposed plant except for the water quality that will come into the systems. WBSR is busy with a project to build and operate a RO/PV plant and the proposed plant will have an impact on these future plans if constructed. It is always good to be on top of what is happing in the Walvis Bay area and to understand what the concerns are.	
Daniela Bramwell	This project is of special interest to me as I am studying Sustainable Development and I feel this project has particular interest in that field. I would be very interested to find out more about the policies and key role-players in the project as well as what kinds of regulations are in place with regards to waste management and impact studies that have been conducted.	
Buddy Bramwell	I would like to know what the process will entail and whether the filtering systems for the sea water are adequate to ensure a clean supply of salt water for desalination	
Titus Shaanika	How many will this project ensure that capacity building in terms of special and	



general skills development?

The discharge into the sea how will this affect the popular independence beach.

Sender's eference no.	Addressee's name an	d address Registratio
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2	6 Directionate Energy Energy Director - Mr John Titus P/Kon 13297, Windhoek	FIR 013 751 900 NA
3	To: Est curine Director Mr. Percy Misska MBoog 1984 y windheek	FRI 013 751 613 NA
4	To Directorate of wrotes resource programat Director - Mis Mario Amarkali P/Bay 131814 , Wirdhoek To Oxferorate Resource Management	MA 013 761 927 NA
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Ethana: Garwin Boulves

INVITATION TO COMMENT ON THE DRAFT ONDANGWA TOWN PLANNING AMENOMENT SCHEME NO. 8 DOCUMENTS

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Alele Kapule will be remembered as one of the coun-try's most gifted slayers.

Photos Contributed



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Centact our offices today: Setalogement Comput Windhook Comput USS 2323224, 54 Mandame sa Mdema bao Road, Industrial Area, Sealogorana

Oreign Compas 085 2322231; Black C Panyo Hotel, Diripa main road

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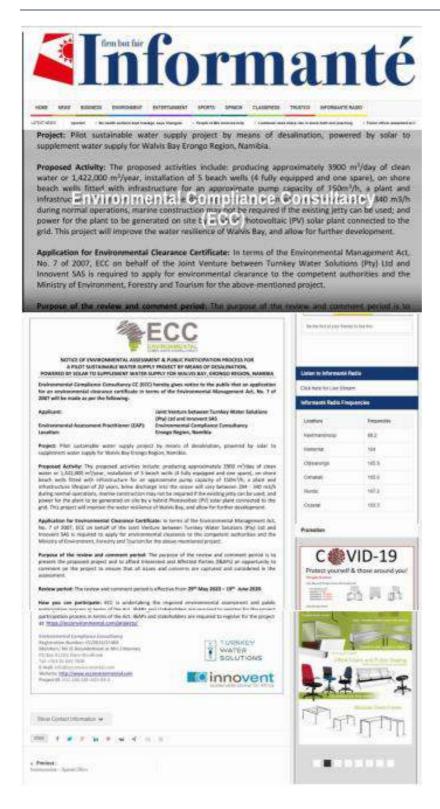
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