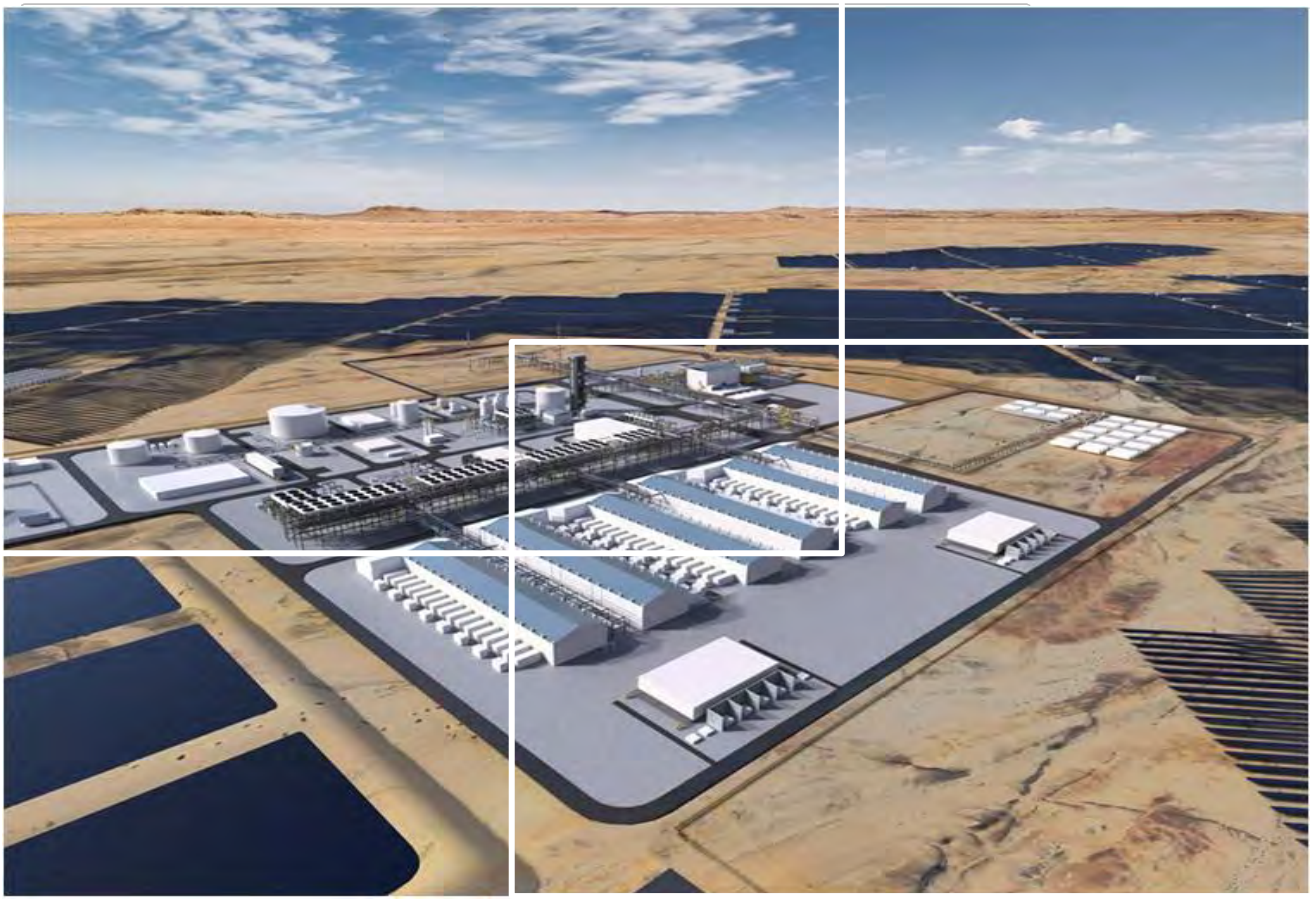

Submitted to: CMB.TECH Namibia (Pty) Ltd
Attention: Ms Liesbeth Verhaert
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BACKGROUND INFORMATION DOCMENT:

PROPOSED CONSTRUCTION AND OPERATION OF THE PV2FUEL ARANDIS – A GREEN AMMONIA PLANT, ARANDIS, ERONGO REGION, NAMIBIA

PROJECT NUMBER: ECC-145-725-BID-02-D

REPORT VERSION: REV 01

DATE: 20 MAY 2026

ECC ENVIRONMENTAL COMPLIANCE CONSULTANCY

TITLE AND APPROVAL PAGE

Project Name:	Proposed construction and operation of the PV2FUEL Arandis – a green ammonia plant, Arandis, Erongo Region, Namibia
Client Company Name:	CMB.TECH Namibia (Pty) Ltd
Client Name:	Ms Liesbeth Verhaert
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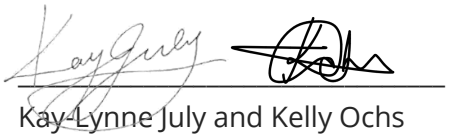

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ABBREVIATIONS

Abbreviation	Description
BID	background information document
CMB.TECH	CMB.TECH Namibia (Pty) Ltd
DEAF	Directorate of Environmental Affairs and Forestry
EAP	environmental assessment practitioner
ECC	Environmental Compliance Consultancy
EIA	environmental impact assessment
ESMP	Environmental and social management plan
ESIA	environmental and social impact assessment
GHDP	Green Hydrogen Demonstration Plant
GW	gigawatts
GWH	gigawatt-hour
H_2	hydrogen
ha	hectares
I&APs	interested and affected parties
km	kilometre
Ltd.	limited
MAFWLR	Ministry of Agriculture, Forestry, Water and Land Reform
MEFT	Ministry of Environment, Forestry and Tourism
MIME	Ministry of Industry, Mines and Energy
MTPD	metric tonnes per day
MW	megawatts
NH_3	ammonia
Pty	proprietary
RoD	record of decision

1 BACKGROUND INFORMATION DOCUMENT

1.1 PURPOSE OF THIS DOCUMENT

Environmental Compliance Consultancy (Pty) Ltd (ECC) has been engaged by CMB.TECH Namibia (Pty) Ltd (hereto referred to as CMB.TECH or "the Proponent") as the environmental assessment practitioner (EAP) to conduct an environmental and social impact assessment (ESIA) and develop an environmental and social management plan (ESMP) for the proposed construction and operation of a green ammonia plant (hereto referred to as the "Project").

An environmental clearance certificate application is being compiled in terms of the Environmental Management Act No. 7 2007 and its associated 2012 Regulations and will be submitted to the competent authority, being the Ministry of Industries, Mines and Energy (MIME), Arandis Town Council and the Ministry of Environment, Forestry and Tourism (MEFT) for a record of decision (RoD) with regards to the proposed Project.

The background information document (BID) has been compiled to provide interested and affected parties (I&APs) with an introduction to the proposed Project's scope of work and invite I&APs to register as part of the environmental and social impact assessment (ESIA) process. A platform for I&APs to submit comments, concerns and inputs will be established. All registered I&APs will be notified about the proposed Project, the public review periods throughout the ESIA process and the RoD on the environmental clearance certificate application.

This BID includes the following information:

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

1.2 BACKGROUND OF THE PROPONENT

CMB.TECH Namibia is the Namibian operating entity of the international clean technology and energy company, CMB.TECH (Pty) Ltd. CMB.TECH is one of the largest listed maritime groups in the world in the way of decarbonisation (CMB.TECH, 2026). CMB.TECH's H_2 Infra division offers hydrogen and ammonia fuel to its customers, either through its own production or by sourcing it from third party producers (CMB.TECH, 2024). Cleanergy Solutions Namibia, a joint venture between CMB.TECH Namibia and the Ohlthaver & List (O&L) Group, currently operates a green hydrogen demonstration plant (GHDP) at Farm 58, Walvis Bay, Namibia. The GHDP generates off-grid, pure green hydrogen and includes a public hydrogen refuelling station, a dual fuel workshop and a Hydrogen Academy (CMB.TECH, 2024). In addition, Cleanergy Solutions obtained an

environmental clearance certificate (ECC-2502644) in mid-2025 for the construction and operations of an ammonia terminal at the Walvis Bay North Port. A separate environmental clearance certificate application was also submitted for the proposed ammonia pipeline between Arandis and the Walvis Bay North Port area, for which a Record of Decision is still pending.

1.3 DESCRIPTION OF THE PROPOSED PROJECT

The Project is located on a 2400 hectares (ha) portion of land outside of the Arandis town. The Project involves the production of green ammonia using renewable energy. Electricity generated from a 1.2 gigawatts (GW) solar park is used to produce hydrogen via water electrolysis. The hydrogen is then combined with nitrogen extracted from air to produce ammonia. A battery energy storage system (BESS) of 1.5 gigawatt hours GWh supports continuous and flexible operation by supplying electricity during periods of low solar generation (at night).

The ammonia will be transported via the proposed ammonia pipeline from the production location in Arandis to the approved ammonia terminal at the Walvis Bay North Port area.

The location of the proposed Project in relation to towns and conservancies is shown with in Figure 1.

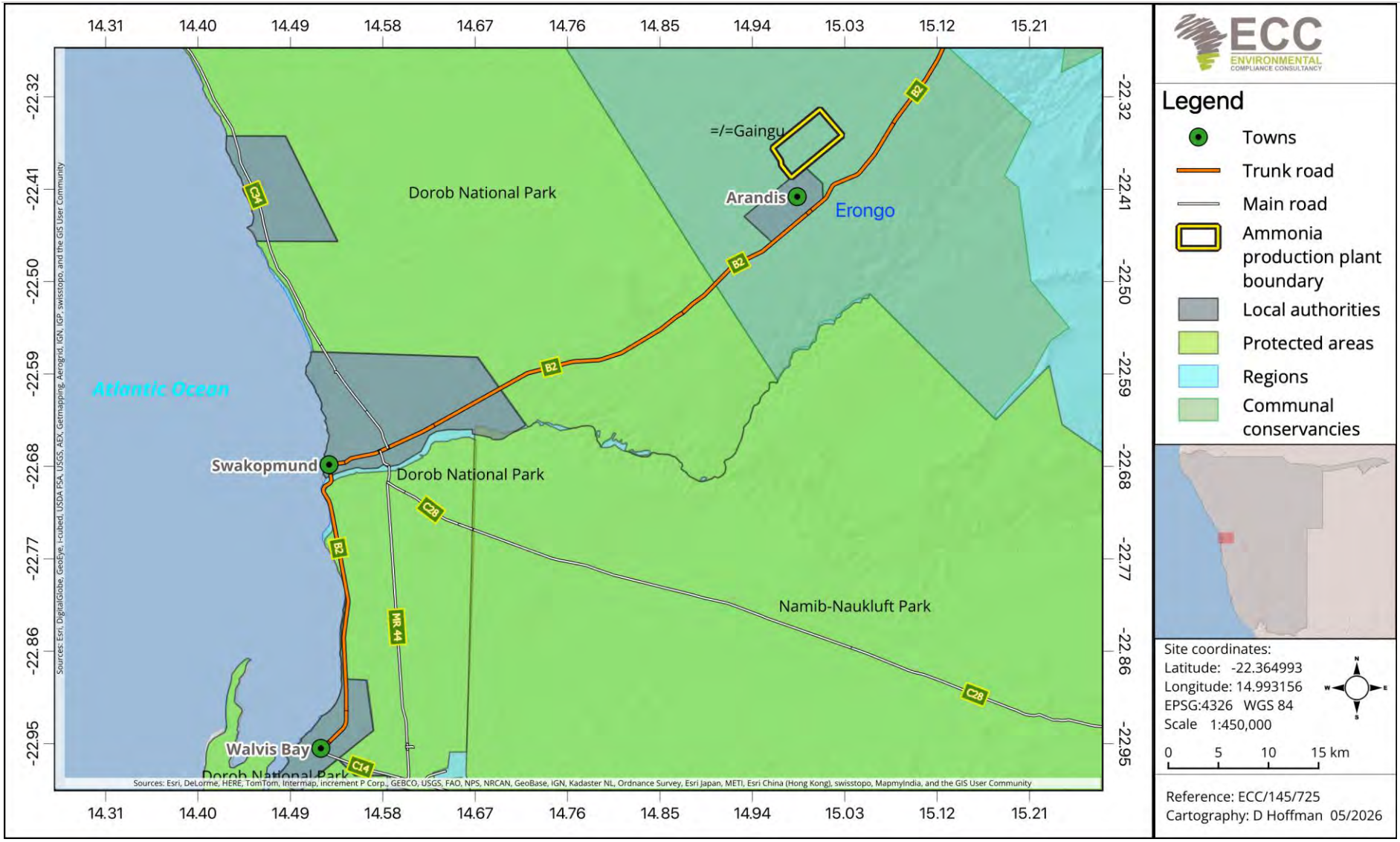

Figure 1- Locality of the proposed Project

1.4 NEED FOR THE PROJECT

The proposed ammonia production facility in Arandis is driven by the strategic need to initiate and develop Namibia's hydrogen and ammonia sector and to support broader industrial and renewable energy transition goals (Namibia Business Review, 2025). The proposed Project will stimulate the growth of local industry and develop local infrastructure, giving local communities jobs and increased economic opportunity (Namhindo, 2025). The proposed Project forms part of CMB.TECH Namibia's phased approach to produce, store and bunker or refuel locally produced green ammonia to power ammonia ships. A separate ESIA has been conducted and submitted to MIME and MEFT for the proposed ammonia pipeline that will transport ammonia from the proposed project site to an ammonia terminal in Walvis Bay. As such, without the production of ammonia at the proposed Project site, the phased approach set by prior strategic planning, would not be possible.

1.5 PROJECT DETAILS – CONSTRUCTION AND OPERATIONAL PHASES

1.5.1 CONSTRUCTION PHASE

The following activities are envisioned during the construction phase:

- Minimal vegetation clearing of entire site footprint;
- Establishment of site access roads and construction camp/worker accommodation;
- Project site levelling, grading and excavation works to establish solar park and relevant general and processing buildings;
- Solar photovoltaic (PV) plant with an installed capacity of approximately 1.2 GW.
- Battery energy storage system (BESS) with an initial capacity of 1.5 GWh, expandable to 3 GWh.
- Development of water infrastructure via connection to NamWater municipal water supply;
- Hydrogen production facility with an electrolyser capacity of approximately 480 MW:
    - Electrolyser buildings (6 buildings); and
    - Hydrogen compressor building.
- Installation of transformers, rectifier cabinets, electrolyser stack, gas-liquid separating units (GLS), hydrogen purification unit (PDU);
- Installation of general utilities: air separation unit, water storage tank, water purification unit, fire water pumps, evaporation pond, ammonia and hydrogen flare and emergency power generator;
- Green ammonia production facility:
    - Syngas compressor building.
- Supporting infrastructure:
    - Central control building: The process operators are located in the central control room, where they monitor and control the process plant via the distributed control system (DCS) and oversee the site fire and gas alarm system. Additionally, it includes the emergency control center, laboratory and offices.

- Administration and canteen building: The site reception area accommodates non-operational staff offices and meeting rooms. The food is prepared in the kitchen of the canteen and serves all personnel at the site.
- Workshop and warehouse: location of maintenance staff and space for executing maintenance activities, like electrical and mechanical works, welding, painting, etc. Spare parts and goods which are needed to operate the site are stored in the warehouse.
- Fire Station and medical building: Provides a garage to park one ambulance and two fire trucks. The medical part of the building has a treatment room and examination room. The fire part of the building has a workshop, office, recreational room, break room, changing rooms (M/F) and a fire kit room/laundry.

1.5.2 OPERATIONAL PHASE

Operation of the proposed Project will include the following aspects:

- Generation of electricity from 1.2 GW Solar park;
- BESS support power supply for stable operation during period of low solar generation;
- Production and storage of hydrogen via electrolysis;
- Ammonia synthesis through the combination of hydrogen and nitrogen;
- Plant operation and monitoring;
- Routine maintenance of solar park, BESS and relevant processing facilities; and
- Management of ammonia pipeline transport from Project site.

2 CONSIDERATION OF ALTERNATIVES

Best practice environmental assessment methodology calls for consideration and assessment of alternatives to a proposed Project. In a Project such as this one, it is difficult to identify alternatives to satisfy the need of the proposed Project. The proposed Project forms one aspect of a broader phased initiative aimed at supporting the fuel storage, supply and production for offshore vessels. Therefore, project parameters, such as location technology and associated infrastructure, are largely informed by the overarching initiative's requirements and prior strategic planning decisions. As such, assessment of alternatives is limited.

The proposed site is considered a suitable location for a large ammonia production facility due to a combination of high-quality renewable energy resources and strategic proximity to export infrastructure. The area is characterised by high solar irradiation levels and low cloud cover associated with the Namib Desert, providing optimal conditions for large-scale photovoltaic (PV) power generation required to support energy-intensive hydrogen production via electrolysis (World Bank Group, 2021). The availability of extensive, sparsely vegetated land further supports the development of utility-scale solar infrastructure and associated components with limited land-use conflict. The proposed Project footprint is located approximately 100–120 km from the CMB.TECH Namibia ammonia terminal within the North Port of Walvis Bay. The Port of Walvis Bay is Namibia's primary deep-water export terminal, enabling efficient export of ammonia to international markets (NamPort, 2023). This proximity significantly reduces logistical costs and infrastructure requirements associated with product export.

3 THE ENVIRONMENTAL CLEARANCE CERTIFICATE PROCESS

The environmental clearance certificate application for the proposed Project, which is an identified listed activity, is being conducted by ECC and will be undertaken in terms of the Environmental Management Act, 2007 and its associated 2012 Regulations. The process followed for this application is set out in the flowchart in Figure 2.

The environmental and social impact assessment (ESIA) process will include:

1. Screening phase, which includes determining whether the proposed Project is a listed activity and whether an environmental clearance certificate is required (completed);
2. Scoping phase, which includes baseline review and the development of the terms of reference (ToR), identifying specialist studies and consultation with key stakeholders and I&APs (in progress); and
3. Assessment phase, which includes the following:

- Impact prediction utilising ECC's methodology and evaluation of alternatives;
- Determining and assigning mitigation measures;
- Developing monitoring and conceptual rehabilitation plans;
- This phase culminates in the drafting of the ESIA and the draft ESMP;
- Public review of the draft ESIA and draft ESMP; and
- Submission of the final ESIA and final ESMP to the competent authority (MIME), MEFT and Arandis Town Council (ATC) for review and RoD (future phase).

The main objectives of the assessment are to:

a. Provide information describing the proposed construction and operational activities;
b. Provide an independent environmental and social assessment (ESIA) of the activities associated with the proposed Project; and
c. Develop management and mitigation measures associated with any identified potential impacts, where necessary.

A final decision relating to the above-mentioned application will be made by the MIME (the competent authority) in consultation with the MEFT: DEAF and ATC.

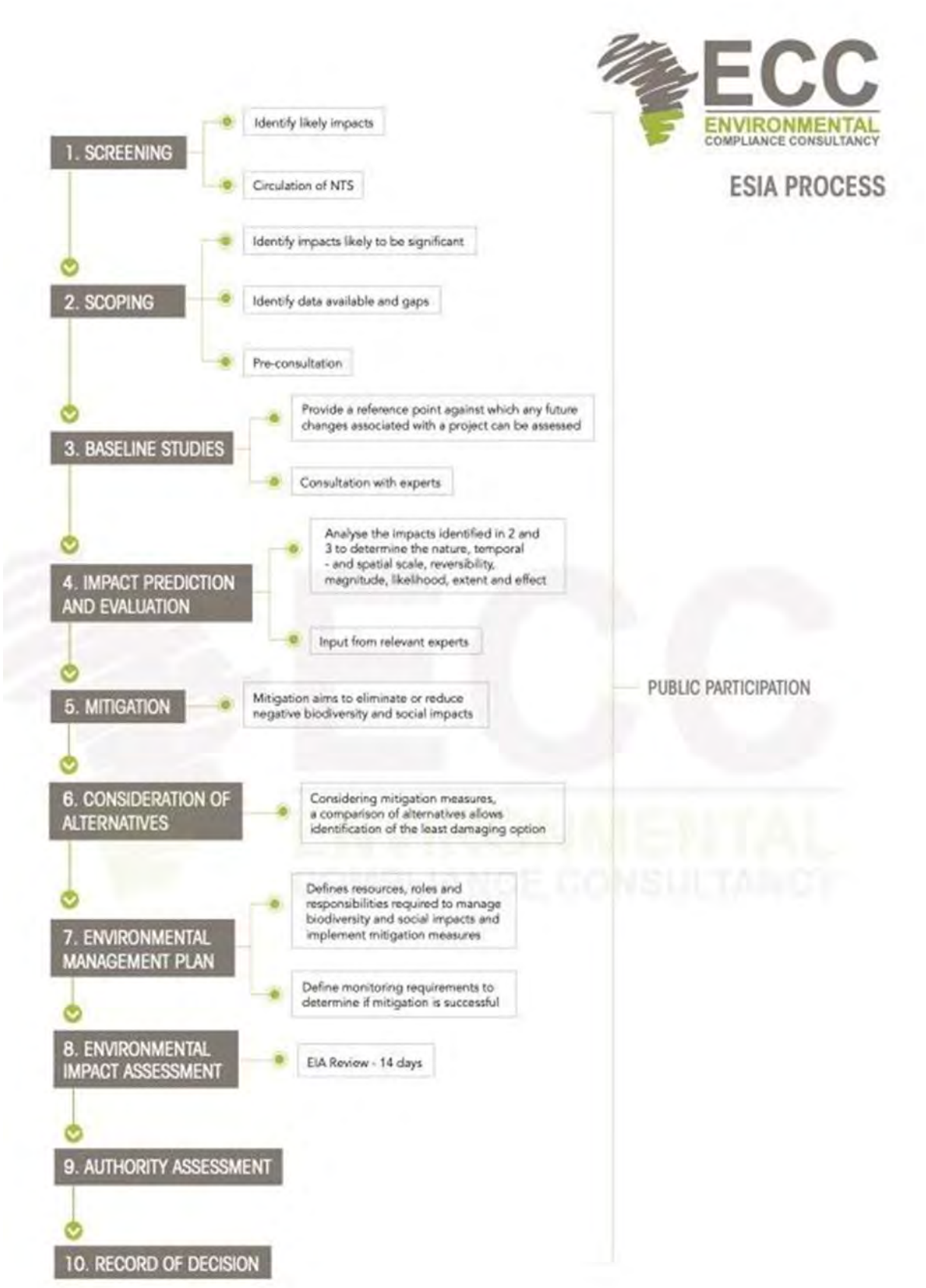

Figure 2 – Flowchart of the environmental and social assessment process

3.1 SCREENING

A review of the planned Project was undertaken and the screening findings against the listed activities was conducted; the findings of which are summarised in Table 1.

Table 1- Listed activities triggered by the Proposed Project

LISTED ACTIVITY	ESIA SCREENING FINDING
ENERGY GENERATION, TRANSMISSION AND STORAGE ACTIVITIES (1.a) The construction of facilities for the generation of electricity; (1.b) The construction of facilities for the transmission and supply of electricity	– Electricity will be produced through a 1.2 GW solar park. – A battery energy storage system (BESS) of 1.5 GWh will be installed with the option to upscale to 3 gigawatt per hour (GWh). – An emergency diesel generator is included in the Project design. – An Electricity Generation Licence shall be obtained from the Electricity Control Board (ECB).
WASTE MANAGEMENT, TREATMENT, HANDLING AND DISPOSAL ACTIVITIES (2.1) The construction of facilities for waste sites, treatment of waste and disposal of waste. (2.2) Any activity entailing a scheduled process referred to in the Atmospheric Pollution Prevention Ordinance, 1976. (2.3) The import, processing, use and recycling, temporary storage, transit or export of waste.	– An evaporation pond will be developed for the disposal of treated and potentially contaminated wastewater during operations. – General and non-hazardous waste from the Project construction and operations shall be transported by a license waste contractor to an approved disposal facility (Arandis Municipal Waste Disposal Site). – Hazardous waste shall be collected by a licensed waste contractor (e.g., Rent-A-Drum Namibia) and transported to the nearest permitted industrial hazardous waste storage and handling facility, i.e., Walvis Bay. – Water will be supplied from NamWater.
FORESTRY ACTIVITIES (4) The clearance of forest areas, deforestation, aforestation, timber harvesting or any other related activity that requires authorisation in term of the Forest Act, 2001 (Act No. 12 of 2001) or any other law.	– Minimal vegetation clearing will be required where necessary; however, the area is largely sparsely vegetated. – A forestry permit shall be obtained from Ministry of Environment, Forestry and Tourism: Directorate of Forestry; should any protected or indigenous species be

LISTED ACTIVITY	ESIA SCREENING FINDING
	identified within the development footprint.
WATER RESOURCE DEVELOPMENTS (8.6) Construction of industrial and domestic wastewater treatment plants and related pipeline systems.	– The proposed use of evaporation ponds for the disposal of treated and potentially contaminated wastewater constitutes a discharge to the environment. In terms of the Water Resources Management Act, 2013 (Act No. 11 of 2013), a wastewater treatment, reuse and discharge licence shall be obtained from Ministry of Agriculture, Fisheries, Water, and Land Reform: Department of Water Affairs (MAFWLR:DWA).
HAZARDOUS SUBSTANCE TREATMENT, HANDLING AND STORAGE (9.1) The manufacturing, storage handling, or processing of a hazardous substance defined in the Hazardous Substances Ordinance, 1974. (9.2) Any process of activity which requires a permit, license or other form of authorisation, or the modification of or changes to existing facilities for any process or activity which requires an amendment of an existing permit, license or authorisation or which requires a new permit, license or authorisation in terms of a law governing the generation or release of emissions, pollution, effluent or waste. (9.4) The storage and handling of dangerous goods, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic meters at any one location.	– Production and storage of hydrogen – Production, storage and transport of ammonia. – A hazardous substances licence/authorisation may be required from the Ministry of Health and Social Services (MoHSS) for the production, storage, handling, transport, and trade of hazardous substances. – Nominal ammonia production capacity of the plant is 800 MTPD. – During construction, portable sanitation facilities shall be provided on site and regularly serviced by an approved contractor and removed from site regularly.

3.2 STAKEHOLDER ENGAGEMENT

A formal notice must be provided to the public and key stakeholders to inform them about the Project and to invite them to register as I&APs. ECC's stakeholder engagement process follows the outlined procedure as per Section 21 of the Environmental Impact Assessment Regulations (GN 30 of 2012), which is summarised as follows:

- Witten notice must be given to all identified stakeholders, I&APs, the landowners and adjacent communities to the site where the activity is being undertaken or to any alternative site. For the proposed Project this includes the following stakeholders:
    - The general public with an interest in the Project;
    - The relevant farms and landowners;
    - Ministry of Industries, Mines and Energy (MIME);
    - Ministry of Environmental Affairs and Forestry (MEFT);
    - Ministry of Agriculture, Fisheries, Water and Land Reform (MAFWLR);
    - #Gaingu Conservancy; and
    - Arandis Town Council.
- Sites notices will be erected on the boundary of the Project site.
- Adverts will be published in the newspapers for two (2) consecutive weeks:
    - The Republikein;
    - The Nambian Sun; and
    - The Allgemeine Zietung.
- An I&AP register will be maintained for the duration of the assessment and I&APs are allowed to register and submit comments throughout the ESIA phase until the final ESIA and ESMP are submitted to MIME and MEFT for RoD
- The registered I&APs, local authorities and government offices are given seven (7) days to review the draft scoping report, draft ESIA and draft ESMP before it is finalised to be submitted to the competent authority and MEFT for RoD.

3.3 POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

The potential biophysical and social impacts should be considered with due regard to the nature and scale of the proposed Project. The potential environmental and social impacts associated with the construction and operation of the proposed green ammonia plant have been anticipated and may include the following:

- Potential for the social economic benefits such as job creation, skills development and local economic development;
- Potential to unearth, damage or destroy undiscovered heritage objects/artifacts;
- Potential alteration of the baseline visual environment;
- Potential occupational health and safety impacts;
- Potential disturbance of faunal habitats resulting in displacement of vulnerable species;
- Potential failure of waste management systems resulting in reduced aesthetic appeal and visual character of the environment;

- Potential discharge of domestic/contaminated wastewater during construction, evaporation pond operations impacting nearby drainage lines (surface water), groundwater and soil;
- Potential impacts on community severance due to potential increase in dust and noise levels during the construction phase;
- Potential conflict with the #Gaingu Conservancy and nearby residents; and
- Interspecific and intraspecific cumulative impacts

3.4 DRAFT ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

An ESMP will 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. The ESMP becomes the legally binding document upon approval of the ESMP and issuing of the environmental clearance certificate by MEFT. Environmental clearance certificates are issued for a period of 3 years, and renewal is subject to compliance with the provisions and conditions of the environmental clearance certificate.

4 THE WAY FORWARD – PUBLIC PARTICIPATION

Public participation is an important part of the ESIA process. It allows you, the public and stakeholders to raise concerns or provide valuable local environmental knowledge that can benefit the process further as well as aid the planning process for the scoping phase of the defined assessment process. At this phase ECC will perform the following:

- Identify relevant key stakeholders, authorities, municipalities, environmental groups and I&APs;
- Conduct a public consultation process in accordance with Regulation 21 of the EMA 2007 as outlined in Section 3.2; and
- Prepare the draft ESIA report for public and stakeholder review for seven (7) days.

Your request for registration as an I&AP as well as any comments on the BID or Project must be submitted in writing and can be emailed using the details in the contact us section below. Registration as an I&AP for the Project can be completed online on ECCs website on the Projects page, or by using this link: https://eccenvironmental.com/projects/

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