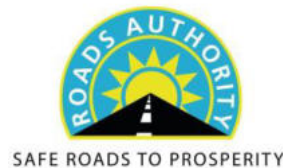


BACKGROUND INFORMATION DOCUMENT (BID)

Environmental Impact Assessment (EIA) Study for the Proposed Construction of the New Oute River Bridge on District Road 3703 (DR3703) in the Kunene Region - Application for Environmental Clearance Certificate (ECC)

Proponent:

Roads Authority of Namibia



Project Consulting Engineer:

**D&P Engineers, Archetype
Project Consultants & Tweya
Consulting Engineers Joint
Venture (DAT JV)**



Environmental Consultant:

**Serja Hydrogeo-Environmental
Consultants CC**

March 2026

1 PROJECT BACKGROUND

The Roads Authority of Namibia (RA) intends to construct and operate the Oute Bridge in the Kunene Region (*the Project*). The proposed bridge is located on the District Road 3703 (DR3703) over the Oute River (also known as the Hoarusib River) between Okaundje and Orotjitombo Villages (Figure 1), about 33km west of Opuwo Town in the Opuwo Rural Constituency. The DR3703 runs from the Epupa Constituency via the Opuwo Rural Constituency until the Opuwo Urban Constituency, as shown on the map in Figure 2. The DR3703 is an important route connecting the villages of Otjitanda and Etanga, and the town of Opuwo, which is the main centre for economic and social facilities. However, the road has become inaccessible during the rainy season when the Oute River flows, thereby cutting off communities from accessing much-needed services in Opuwo. The project, therefore, includes the design of a new bridge or major culvert across the Oute River on DR3703 and subsequently, the bridge construction works.

The bridge construction will commence upon completion of the project design by the joint venture of three consulting engineers (D&P Engineers, Archetype Project Consultants, and Tweya Consulting Engineers, hereinafter referred to as *DAT JV*). The JV engineering team will administer the construction contract and supervise the construction works of the bridge. The project design will entail the following components:

- Geotechnical investigation and evaluations,
- Hydrological and hydraulic analyses
- Drainage considerations (75mm diameter weepholes installed at 1.5 m centres in the bridge deck to discharge surface runoff into the river), and
- Construction materials investigation. At this stage, the availability and suitability of coarse and fine aggregates and construction water

for structural concrete works have not yet been confirmed, as a detailed geotechnical site investigation and materials investigation are pending completion. The information in this section is therefore preliminary and will be updated once test results and supply options are confirmed.

Furthermore, other activities associated with bridge construction include the abstraction of construction materials, as well as water supply for construction from the area (near the project site).

1.1 Need for an environmental clearance certificate (ECC)

The roadwork-related works, such as the bridges, culverts, abstraction of construction materials, and water supply, are listed activities in the Environmental Impact Assessment (EIA) Regulations (2012) of the Environmental Management Act (EMA) No. 7 of 2007 that may not be undertaken without an Environmental Clearance Certificate (ECC). The listed activities that are relevant to the proposed activities are as follows:

-Listed Activity 10.2: the construction of the route determination of roads and the design of associated physical infrastructure where -

(a) It is a public road

(b) The road reserve is wider than 30 meters; or

(c) The road caters for more than one lane of traffic in both directions.

The Listed Activity 10.2 (a) is further explained under Schedule 1 (b) of the EIA Regulations as:

“Public road” means any road, street, or thoroughfare or any other place which is commonly used by the public or any section thereof, or to which the public or any section thereof has a right of access, and includes -
(a) the verge of any such road, street, or thoroughfare;

(b) any bridge, culvert, causeway, ferry, ford, or drift traversed by any such road, street, or thoroughfare.

Associated activities: mining and quarrying activities for sand and gravel from borrow pits

-Listed Activity 3.1 The construction of facilities for any process or activities that require a license, right, or other forms of authorization, and the renewal of a license, right, or other forms of authorization, in terms of the Minerals (Prospecting and Mining Act), 1992.

-Listed Activity 3.2 Other forms of mining or extraction of any natural resources, whether regulated by law or not.

Water resources development – to supply construction works

-Listed Activity 8.1: The abstraction of ground or surface water for industrial or commercial purposes.

Subsequently, to comply with the EMA and its EIA Regulations and ensure environmental sustainability, the Proponent, through the consulting engineer (DAT JV), has appointed Serja Hydrogeo-Environmental Consultants CC (*Serja HGE Consultants*), independent environmental consultants (environmental assessment practitioners), to apply for the project ECC on their behalf.

An application for the ECC is being launched with the Ministry of Environment, Forestry and Tourism (MEFT)'s Department of Environmental Affairs and Forestry (DEAF) by Serja HGE Consultants. Upon screening of this Background Information Document (BID), Serja HGE Consultants will be required to prepare an Environmental Scoping Report and Environmental Management Plan (EMP) in an application for the ECC. The required documents (Scoping Report and EMP) will be submitted to the MEFT for evaluation and to consider issuing the ECC for the project.

1.2 The Purpose of this document

It should be noted that this Background Information Document (BID) is not an Environmental Scoping Report nor an EMP, but a non-technical summary of the Project's environmental assessment.

The BID is aimed at sharing first-hand, summarized information about the proposed project activities. It also provides public guidance and a basis for their participation from the beginning of the environmental process, and registers as interested and affected parties (I&APs) that raise issues on the project.

The information obtained from the I&APs will then form the basis of the EIA Scoping Report, and or EMP to help the MEFT in making an informed decision and consider the issuance of the ECC.

1.3 Project need and desirability

As mentioned earlier, the DR3703 provides a crucial route connecting the villages of Otjitanda and Etanga, and the town of Opuwo, the main centre for economic and social facilities. However, the road becomes inaccessible during the rainy season when the Oute (Hoarusib) River flows, cutting off communities from accessing much-needed services in Opuwo. Therefore, the construction of the new Oute Bridge is necessary to provide safe, reliable, and year-round access along DR3703 (across the river). The bridge will enhance mobility for residents, improve access to essential services, support local economic activities, and strengthen regional connectivity within the Kunene Region. Additionally, the project will contribute to reducing travel risks during floods, improving emergency response, and facilitating the movement of goods, services, and people between rural communities and Opuwo.

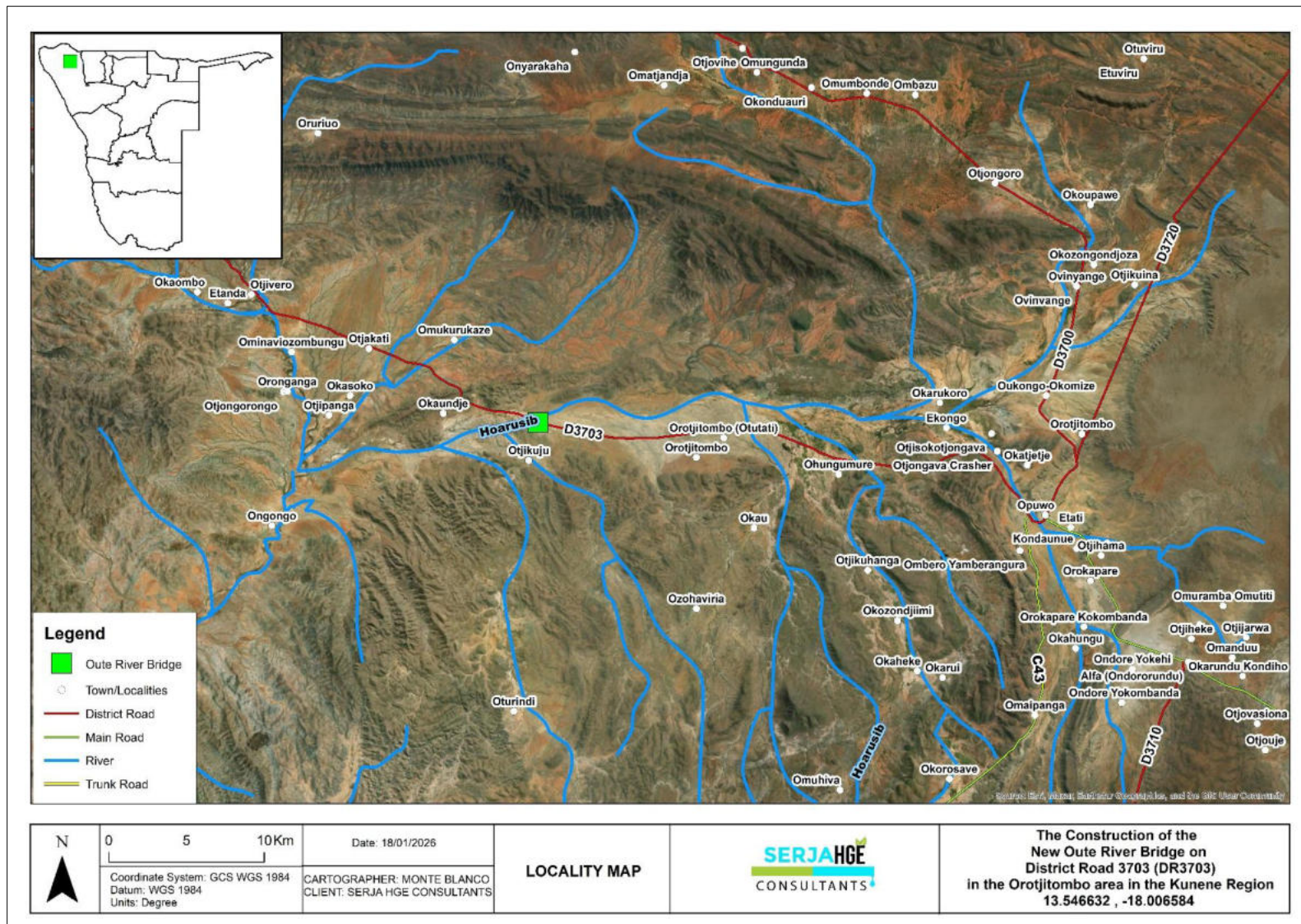


Figure 1: Locality map of the proposed New Oute Bridge on the DR3703 in the Kunene Region

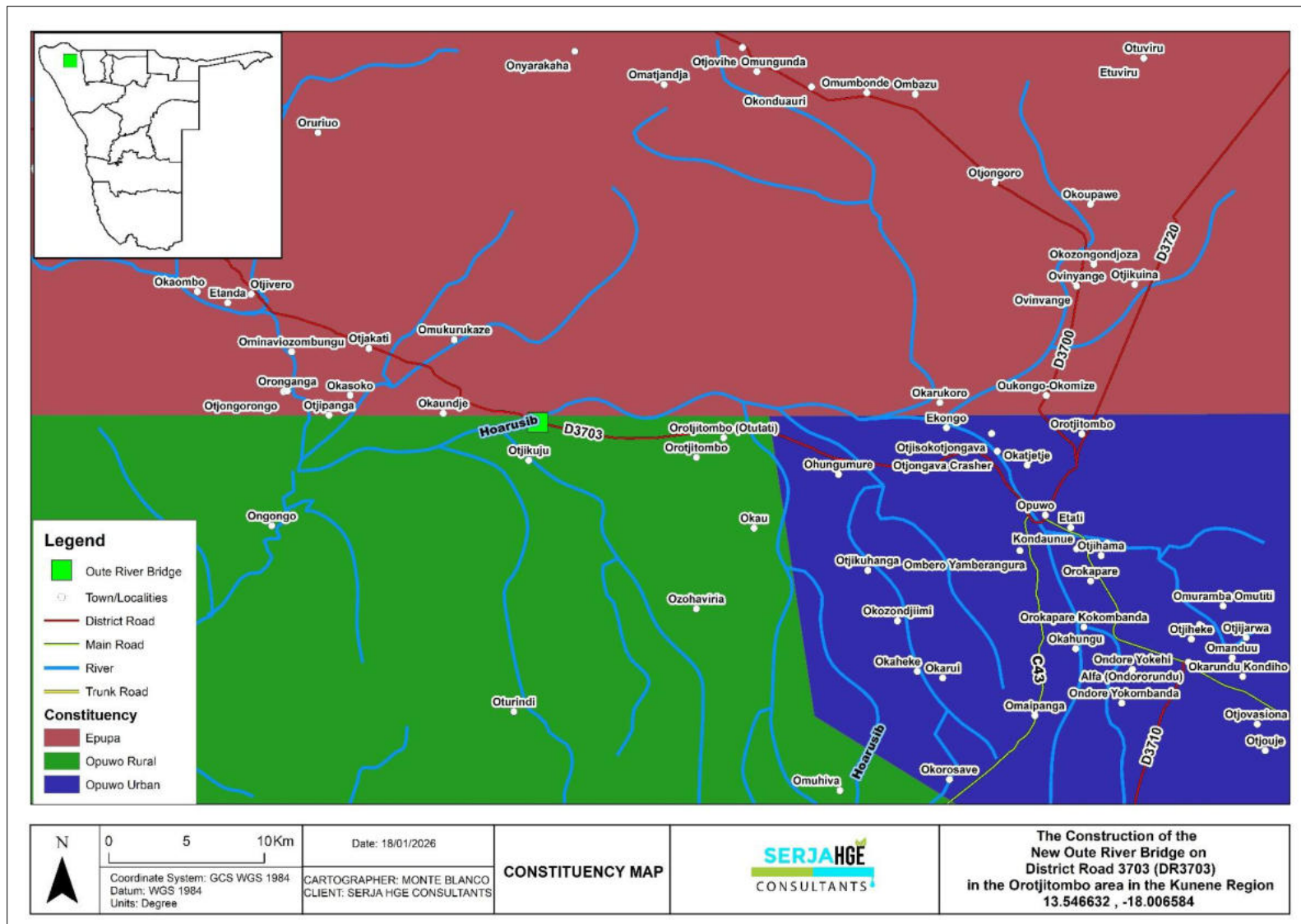


Figure 2: The regional constituency and villages map through which the DR3703 (with the proposed Oute Bridge) passes in the Kunene Region

2 PROJECT DESCRIPTION

The project will involve the design, construction, and eventual operation of the Oute Bridge across the DR3703 between Okaundje and Orotjitombo Villages in the Kunene Region.

Based on the preliminary constructability and durability assessment, the bridge to be constructed will be a cast-in-situ reinforced concrete cellular type. This is considered the most appropriate structural solution for further development. The cast-in-situ reinforced concrete cellular bridge option best matches the project constraints associated with a remote rural site, reduces reliance on specialist construction expertise and heavy plant. The option also supports the Roads Authority's objective of uplifting emerging contractors, and it is expected to provide a more durable and less service-intensive solution over the design life when compared with the prestressed precast beam alternative (DAT JV, 2026).

2.1 Planning and Design Phase

The main components of the project planning and design will include the following, as provided by the DAT JV Preliminary Design Report (2026):

2.1.1 Geotechnical investigation and evaluations

This entails project-specific geotechnical recommendations, including founding levels, allowable bearing pressures, pile/caisson feasibility, excavation conditions, and seepage/dewatering requirements. These will be provided upon completion of the geotechnical investigation and interpretation of the results.

2.1.2 Hydrological and hydraulic analyses

The hydrological and hydraulic analysis recommendations are based on the findings of the hydrological and hydraulic analyses, undertaken in terms of the requirements of the RA's "Drainage Manual" (1st Edition, October 2014). The project's Hydrological and Hydraulic Analyses Report concluded with the following recommendations for the Oute River Bridge:

- 1:50-Year Flood Event (given return period discharge (QT) = 464.63m³/s)
- 1:100-Year Flood Event (Q2T = 580.10m³/s).

2.1.3 Drainage considerations

75mm diameter weepholes installed at 1.5 m centres in the bridge deck to discharge surface runoff into the river.

2.1.4 Construction materials and water supply investigation

This entails the investigation of the availability and suitability of coarse and fine aggregates and construction water for structural concrete works. However, these have not yet been confirmed at this stage, as a detailed geotechnical site investigation and materials investigation have not yet been completed.

2.1.5 Structural considerations

Two bridge concepts were considered at this preliminary design stage to identify the preferred structural form for further development. In selecting alternative structural forms suitable for the Oute River crossing, these design objectives were used as the primary screening criteria:

- Safety (strength, stability, and robustness, including performance under extreme flood events),
- Durability and serviceability (whole-life performance, maintenance requirements, and reliability in a harsh environment),

- Economy and constructability (with specific emphasis on the rural/remote site setting, logistics, programme risk, and the availability of local construction capability), and
- Aesthetics, appropriate to the surrounding environment and road context (DAT JV, 2026).

2.2 Resources and Services Infrastructure

2.2.1 Human resources

The bridge construction will potentially employ about 90 to 100 people. The workforce will comprise safety officers, the resident engineer, contracts manager, land surveyor, quality control technicians, maintenance artisans, general foremen, operators, labourers, security guards, etc. Locals will be prioritised for employment (semi-skilled to unskilled labour).

2.2.2 Contractors' Accommodation

Local labourers will be commuting to the project site from their homes in villages near the site. The skilled project workforce that is from outside the area will be accommodated in a construction camp established in either Otjikuj, Orotjitombo, or Okaundje Villages, which are near the bridge site. However, before the camp can be established, the contractor will need to obtain consent from the relevant traditional authority (headmen) of the area.

2.2.3 Water supply

The water supply for the project will be assessed during the EIA Study, i.e., surface water or drilling of a borehole for the project near the site. The water will likely be stored in a water storage tank on-site, to be used for construction works (concrete) and human consumption (drinking water) on-site.

2.2.4 Fuel supply

Diesel will be used for machinery and equipment, and a fuel generator to ensure an uninterrupted fuel supply to the project. The fuel will be stored in a 23,000-litre tank or less, which will be temporarily installed at a selected point on-site to ensure an uninterrupted supply during construction.

2.2.5 Occupational health and safety

All project workers will be supplied with appropriate and adequate personal protective equipment (PPE) while carrying out project activities on-site. The site will also be equipped with at least three fully furnished first aid kits.

2.2.6 Accidental fire outbreaks

The site vehicles, campsites, and machinery will be equipped with fire extinguishers in case of accidental fire outbreaks.

2.2.7 Waste Management (Solid Waste)

All waste generated from the project activities will be sorted, stored on-site in designated waste containers, and transported to the nearest approved solid waste dumping site in Opuwo. Consent and approval to dispose of solid waste on the Opuwo Town dumpsite will need to be obtained from the Opuwo Town Council before doing so.

2.2.8 Human waste/sanitation

The appointed contractor will establish portable toilets for the workers and project-related visitors. The toilets will be emptied according to the manufacturer's instructions and as regularly as deemed necessary.

3 POTENTIAL IMPACTS

The construction of new bridges is associated with some impacts, both positive and negative, and these are as follows:

3.1 Positive impacts (benefits)

-Socio-economic development through temporary job (employment) creation in the area during the bridge construction phase for 90 to 100 people or more.

-Improved accessibility: better connections enhance accessibility to remote rural areas, facilitating the transportation of goods and services, and access to healthcare, education centers, and other social services in the area.

-Economic development: better road crossing can stimulate economic growth by attracting investment, promoting development, tourism, and better service delivery in this part of the Kunene Region.

-Safety: The new bridge with improved design, culverts, and drainage system can enhance road safety, thus reducing the risk of accidents and fatalities.

-Social cohesion: the bridge will improve connectivity that can strengthen social ties within rural communities by enabling easier access to growth centres, schools, healthcare centres, and other social services in Opuwo and nearby areas on the other side of the DR3703.

3.2 Potential negative impacts of the road construction

-Soil and water pollution: improper handling of wastewater may lead to pollution of surrounding soils and eventually water resources systems (through wastewater runoff and infiltration).

-Habitat destruction: excavations for material sourcing (borrow pits) can lead to the destruction of natural habitats for plants and animals. This can disrupt local biodiversity.

-Soil erosion: The removal of large amounts of soil and vegetation from borrow pits and bridge positions can increase the risk of soil erosion, especially during heavy rainfall events.

-Depletion of local groundwater table: excavation of borrow pits may affect the local water table, leading to changes in groundwater levels.

The depletion of the local groundwater table can impact the availability of water for vegetation that relies on groundwater as a water source in the area.

-Land use change: The conversion of natural landscapes into borrow pits can permanently alter landscapes, affecting the aesthetic value of the area.

-Deforestation: construction may require the clearing of trees and vegetation at and near the site to set up construction infrastructure and services, resulting in habitat loss.

-Impact on air quality: dust and particulate matter generated during the excavation of materials (sand and gravel) and transportation (the movement and operation of heavy vehicles and machinery) can compromise air quality in the surrounding area.

-Water pollution: Runoff from construction activities can carry pollutants such as oil, fuels, and heavy metals into the Oute River and nearby surface water bodies, thus impacting aquatic ecosystems.

-Noise associated with the movement of heavy machinery and trucks can disturb nearby locals and animals.

-Disruption of hydrological systems by borrow pits can alter natural drainage patterns, causing changes in surface water flow in the area and potentially exacerbating flooding or drought conditions in the area.

-General environmental pollution through the mishandling of project-related waste associated with the project.

-Occupational and community health and safety: Improper handling of materials and equipment may cause health and safety risks to workers and locals. Community safety can also be compromised by unfenced borrow pits or abandoned borrow pits (that are not properly rehabilitated to safe conditions).

-Potential archaeological and cultural heritage impact: borrow pits and site preparation activities may impact local cultural heritage sites or traditional land use practices through inadvertent unearthing of such resources (sites and objects).

4 EIA PROCESS STEPS

The following steps are followed for this EIA Study:

- **Step 1:** Project initiation - compilation of the BID, ECC application, and registration at the DEAF, and developing the stakeholders' list.
- **Step 2:** Baseline assessment - Literature and legal review of applicable data sources.
- **Step 3:** Ongoing Public Consultation and facilitation (throughout the EIA process)

The EIA notifications were placed in 2 newspapers for two consecutive weeks in the *New Era* and *Windhoek Observer* on the 12th & 19th of March 2026.

- **Step 4:** Information sharing - Circulation of the BID to pre-identified stakeholders/I&APs and the public who request EIA registration.
- **Step 5:** Public consultation meetings, site visits, and assessment. Community consultation meetings will be held near the site (in Orotjitoambo or Otjikujuru Village).
- **Step 6:** Compilation of the Draft Environmental Scoping Assessment Report and Environmental Management Plan (EMP).
- **Step 7:** Final EIA Scoping Reporting and Submission of the Scoping Report and EMP to the Environmental Commissioner at MEFT for evaluation and consideration of the ECC.
- **Stage 8:** Follow up with MEFT on the status of the evaluation of the submitted EIA documents and decision on the ECC.

We are here, and moving towards Step 5

4.1 Details for consultation and engagement meetings

The consultation and engagement meeting will be held in the project area (near the site) as per the following details:

Date: Tuesday, 24 March 2026

Time: 14:30

Venue: The meeting venue is yet to be confirmed (either at Otjikujuru/Orotjitoambo Community Village Gathering Point/Area).

4.2 Comments submission and deadline for comments

All concerns, issues, and/or comments should be put **in writing** (email, short messages (SMS), WhatsApp, or handwritten letters) to be considered in the EIA Scoping Report as well as in the Draft EMP.

Environmental Assessment Practitioners (EAPs):

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The last date for registration as I&APs and or to submit comments, concerns, and issues is **Friday, 17 April 2026.**