

**ENVIRONMENTAL SCOPING ASSESSMENT AND  
ENVIRONMENTAL MANAGEMENT PLAN FOR THE  
DEVELOPMENT AND OPERATIONS OF A LIQUID MUD & BULK  
PLANT IN THE PORT OF WALVIS BAY**

**BACKGROUND INFORMATION DOCUMENT**



**Prepared by:**



**Prepared for:**



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## 1 INTRODUCTION

Baker Hughes Energy Services Namibia (Pty) Ltd (the Proponent) is an oil field services company that provides products and services for oil well drilling, formation evaluation, completion, production and reservoir consulting. With the recent developments in oil exploration in Namibia, Baker Hughes intends to develop and operate a liquid mud plant, dry bulk plant, and cement bulk plant within the commercial harbour of the Port of Walvis Bay. The purpose of which will be to mix, condition, store and transfer drilling and completion fluids, and storage and transfer of dry bulk powders, for oil well drilling projects. Geo Pollution Technologies (Pty) Ltd (GPT) was appointed by the Proponent to undertake an environmental assessment for the proposed liquid mud plant in Walvis Bay, Erongo Region (Figure 1).

The Proponent requested that an application for an Environmental Clearance Certificate (ECC) for the proposed operations of the liquid mud & bulk plant be made. The ECC application will be made in terms of the Environmental Management Act, Act No. 7 of 2007 (EMA). A scoping environmental impact assessment (EIA) report and an environmental management plan (EMP) are proposed to be submitted to the Ministry of Environment, Forestry and Tourism's Department of Environmental Affairs (DEA) in support of an application for an ECC. The environmental assessment will include all construction (including upgrades and maintenance) and operational activities associated with the planned project.

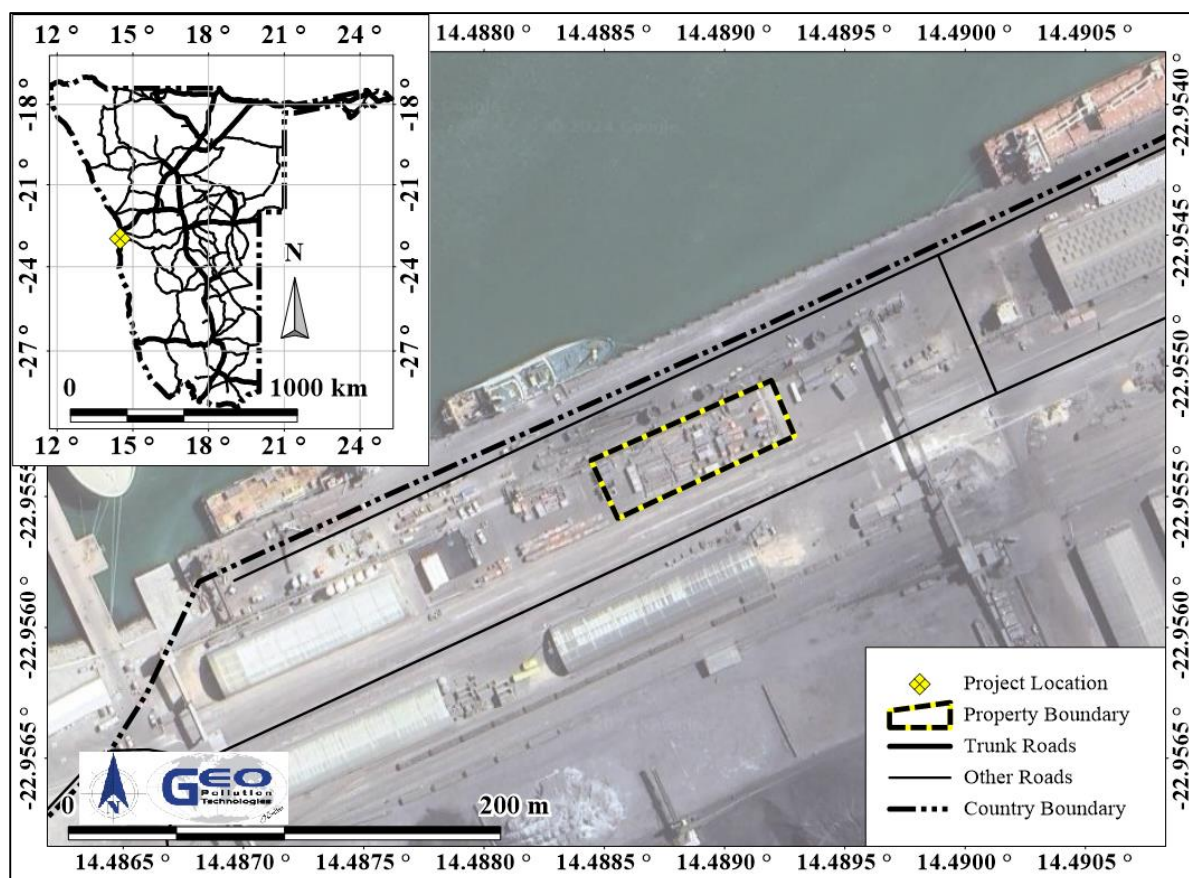


Figure 1 Project location

## 2 PURPOSE OF THE BID

With this Background Information Document (BID), GPT aims to provide information to, and interact with, authorities and interested and affected parties (IAPs) regarding the project and the environmental assessment process. IAPs are therefore invited to register with GPT to:

- ◆ Be officially included in the list of registered IAPs for the project.
- ◆ Request additional information and clarifications.

- ◆ Provide information relevant to the proposed project which should be taken into account in the assessment of impacts.
- ◆ Share any comments, issues or concerns related to the project.
- ◆ Review and comment on the EIA, EMP and any other related submissions made to the DEA.

### **3 PROJECT DESCRIPTION**

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Drilling fluid (or drilling mud) is a viscous fluid used in oil and gas drilling activities to, among others, transport drill cuttings to the surface, stabilize the walls of the well, and lubricate and cool the drill bit. Completion fluid is a brine liquid circulated through a completed well to clear any remaining solids in the well, as part of the processing of preparing the well for production. Dry bulk powders can be products used to make drilling mud more dense or viscous, or it can be cement used to isolate, support and protect the casing inside a well.

Drilling fluid can either be water based or oil based mud and ultimately, the Proponent intends to produce both types at the project site. The project will be developed in two main phases: Phase 1 being the water based liquid mud plant, the completion fluids plant, and the dry bulk powders plant; and Phase 2 the oil based mud plant, a mud rejuvenation plant and a small diesel storage facility for own use.

Activities which are considered for the environmental assessment are divided into the following: planning, construction (development of the liquid mud plant, upgrades and continued maintenance), operational and decommissioning phases. A brief outline of expected activities for each phase is detailed below.

#### **3.1 PLANNING PHASE**

While planning for construction, operations, and decommissioning of the facility, it is the responsibility of the Proponent to ensure they are, and remain, compliant with all legal requirements. The Proponent must also ensure that all required management measures are in place prior to, and during all phases, to ensure potential impacts and risk are minimised. Typical planning activities include:

- ◆ Obtain permits and approvals from local and national authorities.
- ◆ Ensure compliance to land use rights.
- ◆ Appoint a health, safety and environmental coordinator or similar to implement the EMP.
- ◆ Provide for a fund / insurance to cater for environmental incidents such as pollution clean-up and ecological restoration if ever required.
- ◆ Ensure all appointed contractors and employees enter into agreements which includes the EMP.
- ◆ Establish and / or maintain a reporting system to report on aspects of construction, operations and decommissioning as outlined in the EMP and as required by the DEA.

#### **3.2 INFRASTRUCTURE AND CONSTRUCTION**

No major construction activities are foreseen and development of the plant comprise mainly of the placement of storage and mixing tanks, silos, installation of reticulation, pumps and air compressors, installation of spill containment infrastructure, and placement of containers for office space, ablutions, storage, etc. Due to the nature of the harbour, no excavations will be made and all infrastructure will be constructed and installed aboveground and on the existing surface cover. The facility will be developed at berth 8 within the commercial harbour of the Port of Walvis Bay.

#### **3.3 OPERATIONAL PHASE**

Drilling and completion fluids are comprised of three main phases: 1) the continuous phase (liquid); 2) the active solids phase; and 3) the inert solids phase. The continuous phase can be water or oil based fluids, the active solids comprise material which react with each other and the continuous phase to among others increase viscosity and adjust pH. They include for example bentonite, lime or caustic soda. The inert solids change the physical and technological characteristics of the fluid. This include weighting agents which increases the density of the fluid (e.g. barite or calcite) and loss

circulation materials that prevent fluid loss during drilling in permeable substrate (e.g. micas or cellulose fibres).

Some bulk chemicals will be stored on site in storage silos while others will be ordered on demand. Once an order for drilling or completion fluid is received, it will be prepared according to determined specifications and pumped to a platform support vessel / road transport tanker, which will deliver the product to the drilling rig.

Regular cleaning of tanks and pipes will take place. Health, safety and environmental procedures and requirements will be in place, including restricted access, personal protective equipment, dust filtration systems, firefighting equipment, etc. Any spilled products will be dealt with immediately using spill cleaning kits and absorbent materials. Waste will be disposed of at registered waste disposal facilities.

Administrative tasks, site security and cleaning of the premises will continue on a daily basis to ensure the effective and clean operations of the facility. Environmental compliance monitoring and public liaison will continue throughout operations.

### **3.4 DECOMMISSIONING PHASE**

Decommissioning of the entire facility is not foreseen during the validity of the ECC. Decommissioning will however be assessed, since activities like the removal of old infrastructure during construction and maintenance activities or upgrades form part of decommissioning. Where decommissioning occur, rehabilitation of the area may be required. Decommissioning will entail partial or complete removal of all infrastructure. After decommissioning, any pollution present on the site must be removed or remediated.

### **3.5 PRELIMINARY IDENTIFIED IMPACTS**

During the preparation of the EMP, all components of the environment will be considered. However, only those components which are, or may be, significantly impacted, or are deemed to be sensitive, will be assessed. These include the following:

- ◆ Human component (employee and visitor health and safety).
- ◆ Infrastructure (aesthetics, fire, integrity, etc.).
- ◆ Neighbours (dust, noise, aesthetics, waste, traffic).
- ◆ Groundwater, surface water and soil (dust, hydrocarbon spills, effluent generation and disposal, waste, pollutants).
- ◆ Ecosystem and biodiversity (dust and pollutants).
- ◆ Social and cultural aspects (demographic processes, community services etc.).
- ◆ Economic characteristics (revenue generation, employment, training, skills, revenue).

## **4 PUBLIC CONSULTATION**

Geo Pollution Technologies invites all IAPs to provide in writing, any issues and suggestions regarding the project. This correspondence must include:

- ◆ Name and surname
- ◆ Organization represented or private interest
- ◆ Position in the organization
- ◆ Contact details
- ◆ Any direct business, financial, personal or other interest which you may have in the approval or refusal of the application

All contributions by IAPs become public knowledge and will be circulated along with the reports as per the EMA requirements. The comments, inputs and suggestions will also be submitted to the DEA along with how any issues have been addressed in the EIA. The public participation process will remain ongoing during the environmental assessment. However, all comments and concerns should be provided timeously to ensure incorporation into the final report. The deadline for submission of comments will be communicated to all registered IAPs.

For any additional information the project team may be contacted at:



**Your Rights as an IAP according to the Environmental Management Act, No7 of 2007, Government Notice No 30 (Environmental Impact Assessment Regulations)**

*Section 23.*

- (1) *A registered interested or affected party is entitled to comment in writing, on all written submissions made to the Environmental Commissioner by the applicant responsible for the application, and to bring to the attention of the Environmental Commissioner any issues which that party, believes may be of significance to the consideration of the application, as long as -*
- (a) comments are submitted within 7 days of notification of an application or receiving access to a scoping report or an assessment report;*
  - (b) the interested and affected party discloses any direct business, financial, personal or other interest which that party may have in the approval or refusal of the application.*
- (2) *Before the applicant submits a report compiled in terms of these regulations to the Environmental Commissioner, the applicant must give registered interested and affected parties access to, and an opportunity to comment in writing on the report.*
- (3) *Reports referred to in sub regulation (2) include*
- (a) scoping reports;*
  - (b) scoping reports amended and resubmitted;*
  - (c) assessment reports; and*
  - (d) assessment reports amended and resubmitted.*
- (4) *Any written comments received by the applicant from a registered interested or affected party must accompany the report when the report is submitted to the Environmental Commissioner.*
- (5) *A registered interested or affected party may comment on any final report that is submitted by a specialist reviewer for the purposes of these regulations where the report contains substantive information which has not previously been made available to a registered interested or affected party.*

*Section 24:*

*The applicant responsible for an application must ensure that the comments of interested and affected parties are recorded in reports submitted to the Environmental Commissioner in terms of these regulations, and comments by interested and affected parties on a report which is to be submitted to the Environmental Commissioner may be attached to the report without recording those comments in the report itself.*