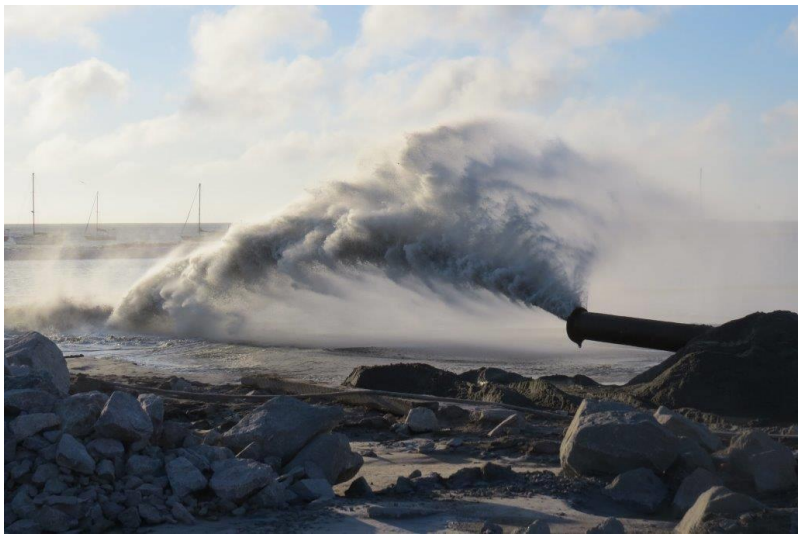
BACKGROUND INFORMATION DOCUMENT

UPDATE OF THE ENVIRONMENTAL IMPACT ASSESSMENT FOR CAPITAL AND MAINTENANCE DREDGING AT THE PORT OF WALVIS BAY

ENVIRONMENTAL CLEARANCE CERTIFICATE RENEWAL



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1 INTRODUCTION

The Namibian Ports Authority, Namport, is mandated to manage and control ports and lighthouses in Namibia, and to provide, among others, facilities and services related to ports. To fulfil this, Namport is continuously investing in port infrastructure to optimize or expand existing operations and to increase the range of cargo handled by Namibia's ports. Examples of recent investments made in the development of the Port of Walvis Bay include the construction and commissioning of the new container and fuel terminals. All cargo handling via the port relies on adequate water depth to allow for vessels to safely berth as well as enter and exit the port. Also, with increased cargo handling capacity (e.g. the new container and fuel terminals), the need to accommodate larger vessels with increased draught is required. As such, Namport has to periodically conduct dredging in order to ensure optimal water depth.

Dredging is the mechanical removal of sediment in order to either deepen the water, generally referred to as capital dredging, or maintain the water depth (referred to as maintenance dredging). Areas within a harbour that are typically dredged include the entrance channel, the vessel turning basins, and the vessel berthing basins. During the development (or upgrade) of a harbour, capital dredging is typically required and thereafter maintenance dredging is performed in order to negate the effects of natural sedimentation and seabed scouring by vessel propellers.

Namport has an existing environmental impact assessment (EIA), with associated environmental management plans (EMP) that was last updated in 2013/2014 to make provision for their dredging activities performed between 2014 and 2017. Geo Pollution Technologies (Pty) Ltd was appointed by Namport to perform the next update on the Port of Walvis Bay's EIA and EMP in order to include the next 10 years' planned dredging activities. The update of the EIA and EMP will be conducted in line with the Environmental Management Act, Act No 7 of 2007 and its regulations as gazetted in 2012. The updated documents will be used to apply for renewal of their environmental clearance certificate (ECC) with the Ministry of Environment, Forestry and Tourism (MEFT).

This background information document (BID) was prepared as part of the public consultation process and serves to inform the relevant authorities and interested and affected parties (IAPs) about the project. It also serves as information sharing document used to register the planned EIA update and ECC renewal with the MEFT.

2 SCOPE OF THE STUDY

The scope of the study is to provide a detailed and updated description of the various dredging components and to update the legal register and environmental description to be relevant to the status quo. Based on this, the potential environmental impacts that may emanate from the proposed dredging operations will be reassessed, and management actions which could prevent or mitigate the potential adverse impacts to acceptable levels, updated. Knowledge gained and lessons learned from the previous dredging campaigns, with which Geo Pollution Technologies was closely involved as independent environmental monitoring specialist, will be key to the update of the EIA and EMP. The main objective of the updated EIA and EMP is to provide sufficient information to the MEFT to allow them to make an informed decision regarding the issuing of an ECC for the proposed dredging project.

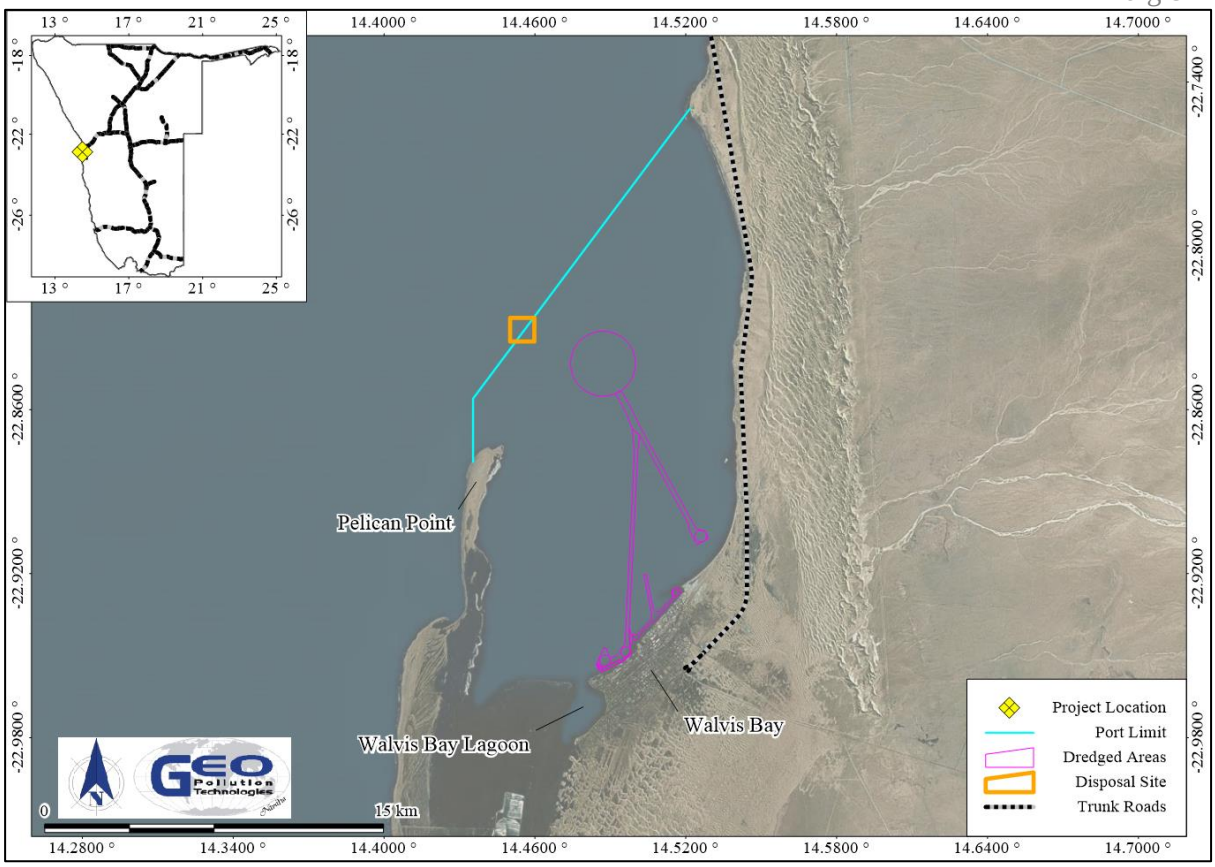

Figure 2-1. Project location

3 ENVIRONMENTAL ASSESSMENT

The EIA and EMP will enable decision makers and stakeholders to make informed decisions regarding the proposed project by presenting the following:

- A detailed description of activities related to the dredging campaigns and the areas earmarked for capital and maintenance dredging.
- A description of possible alternatives within the project scope.
- A summarised legal register.
- A detailed description of the environment that may potentially be affected by the dredging projects. For purposes of the EIA, the environment is defined according to the Environmental Management Act as "land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values".
- Community and stakeholder concerns with indications of how all of the concerns were addressed.
- A risk assessment that determines potential impacts of the planning, operational and decommissioning phases.

4 PROJECT DESCRIPTION

4.1 Dredge Locations

It is envisioned that both capital and maintenance dredging will be performed at the Port of Walvis Bay during the next 10 years. The following is a summary of the proposed dredging activities. Refer to Figure 4-1 and Figure 4-2 for the various components within the harbour that requires periodic dredging.

Capital Dredging

- Widening and deepening of the entrance channel to the commercial harbour and new container terminal of the South Port, and associated turning basins, to accommodate ships up to 9,300 TEU (twenty-foot equivalent – the number of twenty-foot containers that can be loaded onto a vessel).
- Increasing the size of the turning basin of the new fuel terminal at the North Port.
- Commencing with the dredging of the dig-out basin of the North Port.
- Minor capital dredging at the new marina, west of the new container terminal.

Maintenance Dredging

- Dredging of all areas of which the depth must be maintained in the South Port, North Port and fishing harbour (entrance channels, turning basins, berthing areas, etc.).
- Dredging at the Syncrolift platform and jetties.
- Dredging at the new marina.

4.2 Dredged Sediment Disposal Sites

During dredging, the sediment removed from the seabed needs to be disposed elsewhere. The main sediment disposal site is situated about 12 km northwest of the harbour in approximately 35 m deep water.

Some sediment is disposed of on land, specifically for dredging at the syncrolift. Prior to dredging here, a trench with sand embankments is constructed near the shore line. The mixture of water and sediment that is collected by the dredger is pumped inside the trench. The water then seeps through the sand embankment, back to the ocean. The remaining sediment, once dry, is then collected by tipper trucks for disposal at the municipal waste disposal facility.

Dredged sediment may also be used for beneficial purposes such as land reclamation as was carried out for the construction of the new container terminal, or as landfill as was performed at the proposed North Port during dredging at the new fuel terminal.

4.3 Dredger Types

Dredging equipment can be classified into three main types: (1) mechanical; (2) hydraulic; and (3) hydro-dynamic. Each of these employs different techniques and equipment and has its own set of advantages and disadvantages for different conditions. A dredger typically collects the dredged sediment inside a hopper which transports the sediment to a disposal site, or it delivers the sediment to a disposal site via a pipeline. Hoppers can either be a separate barge or it can be part of the actual dredging vessel. The most likely dredgers to be used at the Port of Walvis Bay are listed below.

Cutter suction dredgers (CSD) are hydraulic, stationary suction dredgers that have cutter heads that excavate the sediment before it is sucked into the vessel barge or hopper barge. These dredgers are particularly useful for hard sediments and where accuracy is required.

The **trailing suction hopper dredger (TSHD)** is a hydraulic, mobile dredger that dredge while the vessel moves. The vessel is self-propelled and include a hopper for sediment discharge. The

suction tubes are trailed behind the vessel during dredging, so that the suction mouths (dragheads) drag over the ocean floor while dredge pumps suck sediment from the seabed.

The **grab dredger (or clamshell dredger)** is a relatively simple mechanical dredger. It consists of a crane, mounted on a vessel, with or without its own hopper. A grab is lowered on a chain / cable and hydraulically or mechanically closed to pick up (or "grab") sediment from the sea floor. The grab size varies between 1 m^3 and 200 m^3.

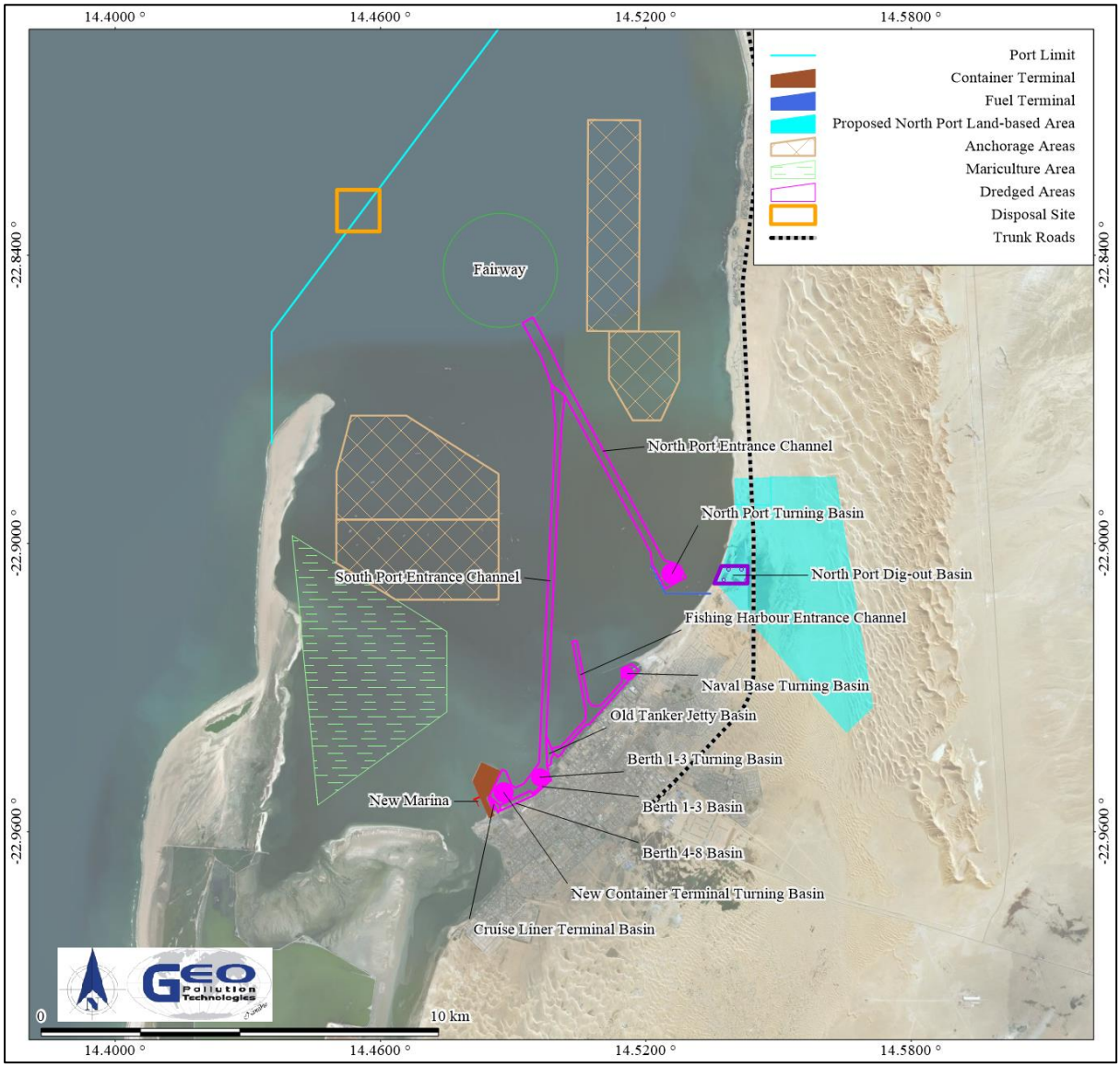

Figure 4-1. Port components related to dredging

Figure 4-2. Onshore disposal site (Google Earth 06/2007)

5 IMPACTS

Various impacts, both positive and negative, were identified during the 2013/2014 EIA update for dredging at the Port of Walvis Bay. The following is a list of these impacts. For purposes of the 2022 EIA and EMP update, each of these impacts will be re-assessed and new impacts, if any, will be identified. Preventative and mitigation measures will also be updated and more relevant and practically feasible measures will be proposed, where applicable.

- Economic development impacts: An optimized and well-functioning port promotes economic growth.
- Health and safety impacts: This impact relates to dredge operators (crew) and ship traffic.
- Fire and explosion impact: This impact relates to combustible and/or highly flammable materials that may be present on dredge vessels.
- Noise and vibration: Noise and vibration are generated on dredge vessels during operations.
- Traffic impact: This relates to shipping traffic and can result in delays or collisions.
- Land-based disposal impact: Relates to water quality, air quality, safety, dust and production of waste.
- Air quality impact: Release of noxious gases such as hydrogen sulphide from dredged sediments.
- Water quality impact: Mobilization of toxic or harmful substances that may be present in sediments.
- Water quality impact: Increased turbidity (suspended sediments) reducing water quality and affecting ecology. This also relates to the disposal of sediments at the disposal site which may inundate the seafloor.
- Biodiversity impact: Local destruction of habitat in dredging areas, increased turbidity, and the unintentional introduction of alien species through ballast water or biofouling of dredge vessels.
- Siltation of lagoon: Increased turbidity may lead to siltation of the lagoon, a RAMSAR site.

- Fish processing and mariculture impact: During dredging, increased suspended sediments in the water column can affect the seawater intakes of the fish processing factories as well as the mariculture industry.
- Tourism impact: Dredging operations can interfere with tourist sightseeing cruises in the harbour, but it can also be an additional tourist attraction when tourists can observe dredging operations from a safe distance.
- Heritage impact: Discovery of artefacts of heritage of archaeological value on the seafloor e.g. shipwrecks.

6 PUBLIC PARTICIPATION

The environmental assessment process involves interaction with people who are interested in, or who could be affected by, the proposed project and/or operational activities of the project. The role of IAPs are stipulated in the regulations of the Environmental Management Act as follows:

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 subregulation (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.

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.

IAPs are therefore invited to register with GPT for the project and provide in writing, any issues and suggestions regarding the proposed project.in order to:

- Provide GPT with additional information which should be taken into account in the assessment of impacts,
- Share any comments, issues or concerns related to the project; and
- Review and comment on all and any reports generated for the purposes of the environmental assessment.

Registration correspondence must include:

1. Name & Surname;
2. Organization represented & position held (may also be in private capacity);
3. Contact details; and
4. Any direct business, financial, personal or other interest which you may have in the approval or refusal of the application.

As notification of the project is in the public domain, GPT encourages all IAPs to share the notification with other possible IAPs. Registration for the project is an ongoing process and may be conducted until the final report is made available for public review. However, to ensure concerns are incorporated into the environmental assessment, IAPs are encouraged to submit written comments during the project notification / report compilation period. Comments are therefore encouraged to be sent before 04 April March 2022.

For further information, or to register as an IAP, please contact:

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