

2 Legal Framework and Regulatory Requirements

There are a number of regulatory requirements at local, provincial and national level with which the proposed alteration of the BSD will have to conform. Some of the key environmental legal statutes include:

- Environmental Impact Assessment Regulations, promulgated in terms of the Environment Conservation Act 73 of 1989;
- National Environmental Management Act 107 of 1998;
- Marine Living Resources Act 18 of 1998;
- National Heritage Resources Act 25 of 1999 (and other relevant legislation applicable to archaeological material at sea);
- Dumping at Sea Control Act 73 of 1980⁵; and
- National Ports Act 12 of 2005.

Other guidelines and policy documents applicable to the proposed activities include:

- London Protocol of 1996 (on the Prevention of Marine Pollution by Dumping of Wastes and other Matter);
- Strategic Environmental Assessment: Port of Cape Town;
- National Ports Authority policies and management plans, including but not limited to:
 - NPA Environmental/SHEQ Policy;
 - NPA Environmental Management System;
 - NPA Waste Management Plan;
 - NPA Ballast Water Management Plan;
 - NPA Marine Mammal & Seabird Management Plan; and
 - NPA Dredging Environmental Management Plan;
- Transnet Projects Environmental Management Plan, which includes:
 - Construction Environmental Management Plan
 - Standard Environmental Specification
 - Project Environmental Specification

A brief summary of these key requirements, as understood by SRK Consulting, is provided below. Note that other legislative requirements may pertain to the proposed development, but identification and interpretation of these is beyond the brief of this study. As such, the summary provided below is

⁵ As amended by the Dumping at Sea Control Amendment Act 73 of 1995 and the Environmental Law Rationalisation Act 51 of 1997.

not intended to be definitive or exhaustive, and serves to highlight key environmental legislation and obligations only.

2.1 Environment Conservation Act 73 of 1989

Section 21 of the Environment Conservation Act 73 of 1989 (ECA) makes provision for the assessment of activities that are potentially substantially detrimental to the environment. Section 21 of the ECA provides that the Minister (of Environmental Affairs and Tourism) may identify those activities which (in the Minister's opinion) may have a substantial detrimental effect on the environment. Section 22 of the ECA prohibits any person from carrying out any activities which have been identified (in terms of section 21 of the ECA) by the Minister, without prior written authorisation from the Minister or a competent authority duly designated in the *Government Gazette*. Section 22 of the ECA also stipulates that the authorisation may only be issued after consideration of reports concerning the impact of the proposed activity and alternative proposed activities on the environment. Activities that require authorisation from the relevant authority, based on the findings of an assessment of the impact of the proposed activity on the environment, have been identified in the Environmental Impact Assessment (EIA) Regulations⁶. Identified activities that are relevant for the proposed project include:

1. The construction, erection or upgrading of:

(c) with regard to any substance which is dangerous or hazardous and is controlled by national legislation-

ii. manufacturing, storage, handling, treatment or processing facilities for any such substance

(e) marinas, harbours and all structures below the high- water mark of the sea and marinas, harbours and associated structures on inland waters.

The proposed deepening and alteration of the BSD thus requires authorisation in terms of the ECA.

The environmental assessment process stipulated in the EIA Regulations is divided into a number of phases. Initially a *Scoping Study*, including public consultation, is completed to determine whether there are any significant environmental issues associated with the proposed activity. Should the findings of the Scoping Study indicate that there are no significant issues that require detailed assessment, or that the issues identified can be effectively managed and the authorities are of the opinion that sufficient information has been provided, a Record of Decision will be issued by the relevant authority.

However, should the Scoping Study indicate that there are potentially significant environmental impacts associated with the proposed activity and the authorities require more information, they will request that a *full Environmental Impact Assessment* be undertaken. The EIA includes specialist assessment of any significant impacts of the proposed development as identified in the scoping process as well as alternatives (unless application has been made for exemption from consideration of alternatives), with the resulting information being presented in an Environmental Impact Report (EIR). Following public consultation regarding the findings of the EIR it is presented to the relevant authority, who will issue an RoD.

⁶ Government Notice No. R1182, September 1997. Promulgated in terms of Section 21 of the Environment Conservation Act 73 of 1989.

The Environment Conservation Act also makes provision for appeal against any decision issued by the relevant authorities (DEAT) (Section 35(3)). In terms of the Regulations, appeals have to be lodged with the Minister of Environmental Affairs and Tourism, in writing, within thirty days of the issue of the Record of Decision.

Legal requirements for this project

The proposed deepening and alteration to BSD contain elements that are listed activities requiring authorisation. Transnet is consequently obliged in terms of Sections 21, 22 and 26 of the Environment Conservation Act 73 of 1989 to obtain an authorisation in terms of section 22 of the ECA (read with the regulations promulgated in GN R1183 on 5 September 1997, as amended).

The listed activity related with the storage of hazardous substances (Activity 1(c) ii) relates specifically to the temporary storage of fuel for construction purposes, while all works below the high water mark of the sea require authorisation in terms of Activity 1(e).

Please Note: New EIA Regulations were promulgated in terms of the National Environmental Management Act (NEMA) in April 2006, replacing the EIA Regulations promulgated in terms of ECA. The NEMA EIA Regulations came into force on 3 July 2006 and provide that the activities identified in those Regulations may not commence without an environmental authorisation granted in terms of Section 24 of the NEMA.

2.2 National Environmental Management Act 107 of 1998

The National Environmental Management Act 107 of 1998 (NEMA) establishes a set of principles, which all authorities (organs of State) have to consider when exercising their powers, that may significantly affect the environment, for example during the granting of permits. These include the following:

- Development must be sustainable;
- Pollution must be avoided or minimised and remedied;
- Waste must be avoided or minimised, reused or recycled;
- Negative impacts must be minimised;
- Responsibility for the environmental consequences of a policy, project, product or service applies throughout its life cycle.

Section 28(1) of NEMA states that “every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring”. If such pollution cannot be prevented then appropriate measures must be taken to minimise or rectify such pollution. These measures may include:

- Assessing the impact on the environment;
- Informing and educating employees about the environmental risks of their work and ways of minimising these risks;
- Ceasing, modifying or controlling actions which cause pollution/degradation;
- Containing pollutants or preventing movement of pollutants;

- Eliminating the source of pollution; and
- Remediating the effects of the pollution.

Legal requirements for this project

Transnet has a responsibility to ensure that the proposed activity and the EIA process conform to the principles of NEMA. Transnet is obliged, under Section 28 to take actions to prevent pollution or degradation of the environment in terms of Section 28 of NEMA.

2.2.1 NEMA EIA Regulations

New EIA Regulations⁷ were promulgated in terms of NEMA on 3 July 2006, replacing the EIA Regulations promulgated under the ECA (see Section 2.1). Section 24 of NEMA provides that the Minister may identify (among other things) activities which may not commence without an environmental authorisation from the competent authority.

Regulation 84 which provides for transitional arrangements between the previous EIA Regulations promulgated under the ECA and the new regime under the NEMA specifies that:

“An application for authorisation of an activity submitted in terms of the previous regulations and which is pending when these Regulations take effect, must despite the repeal of the previous regulations, be dispensed with in terms of the previous regulations as if the previous regulations were not repealed.”

The application for authorisation of the proposed BSD project was submitted to the relevant authority in 2005 and therefore falls under the EIA Regulations promulgated in terms of the ECA.

However, should the proposed project include an activity that was not previously listed under the ECA EIA Regulations but is now listed under the NEMA EIA Regulations, this activity needs to be separately authorised under the new NEMA EIA Regulations. The following activities listed in terms of the new EIA Regulations apply to the proposed BSD project:

GN R 3868 (s6): The excavation, moving, removal, depositing or compacting of soil, sand, rock or rubble covering an area exceeding 10 square metres in the sea or within a distance of 100 metres inland of the high-water mark of the sea.

GN R 3879 (s9): Construction or earth moving activities in the sea or within 100 metres inland of the high-water mark of the sea, excluding an activity listed in item 2 of Government Notice No. R. 386 of 2006 but including construction or earth moving activities in respect of –

- facilities associated with the arrival and departure of vessels and the handling of cargo;
- piers;
- coastal harbours.

⁷ G.N. No. R. 385, R. 386 and R387, July 2006. Promulgated in terms of section 24(5) of NEMA (Act No. 107 of 1998).

⁸ Activities listed in GN R 386 require a Basic Assessment.

⁹ Activities listed in GN R 387 require a Full Environmental Assessment.

Legal requirements for this project

Activities listed in sections 6 of R 386 and section 9 of R 387 of the NEMA EIA Regulations are considered to cover the same components of the proposed BSD project as were listed in section 1 (e) of the previous ECA EIA Regulations. Thus the application is to be continued under the old regulations and it is assumed no authorisation is required under the new regulations.

2.3 Marine Living Resources Act 18 of 1998

The Marine Living Resources Act 18 of 1998 governs Marine Protected Areas (MPAs) and states in Section 43 that:

- (2) No person shall in any marine protected area, without permission in terms of subsection (3)—
- (b) take or destroy any fauna and flora other than fish;
 - (c) dredge, extract sand or gravel, discharge or deposit waste or any other polluting matter, or in any way disturb, alter or destroy the natural environment;
 - (e) carry on any activity which may adversely impact on the ecosystems of that area.
- (3) The Minister may, after consultation with the Forum¹⁰, give permission in writing that any activity prohibited in terms of this section may be undertaken, where such activity is required for the proper management of the marine protected area.

Legal requirements for this project

The following areas in which marine resources are protected occur in the vicinity of Table Bay:

- Table Mountain National Park (NP) Marine Protected Area (MPA) (see Figure 2-1);
- Table Bay Rock Lobster Sanctuary (see Figure 2-2)
- Robben Island Exclusion Zone¹¹ and national heritage site.

The proposed dredge spoil disposal sites lie just to the north of the Table Mountain NP MPA but within the Table Bay Rock Lobster Sanctuary. This is an important distinction, because the Marine Living Resources Act's (MLRA) section 43(2) prohibits (without permission) the activities described in that sub-section if they are sought to be undertaken in (rather than adjacent to) an MPA. The proposed dump sites will not be static sites and the material deposited may be transported away from the sites as a turbid plume. The potential adverse impacts of this on the Table Mountain National Park MPA (due to the proximity of the dump sites to the MPA) have been investigated as part of the EIA process. Depending on the extent of these impacts (if any), the activities carried out by Transnet might trigger the application of the duty of care provisions in section 28 of the NEMA.

The rock lobster sanctuary is not a Marine Protected Area as anticipated in the Marine Living Resources Act, but rather as a closed area in terms of Regulation 47 of the Regulations promulgated

¹⁰ "Forum" means the Consultative Advisory Forum for Marine Living Resources established under section 5 of the Act.

¹¹ Robben Island is a provincial nature reserve with no formal marine protected area, however the sea area within a 1 nautical mile radius of Robben Island can be considered to be environmentally sensitive because of its conservation importance to African Penguins and Bank Cormorants.

in terms of the MLRA (published in GN R1111 in *Government Gazette* 19205 of 2 September 1998). The effect of this is that “[n]o person shall, in any manner or for any purpose, engage in ... disturbing West Coast Rock Lobster”¹² within that area. Insofar as the proposed dumping of dredge spoil will disturb West Coast Rock Lobster within the Table Bay Rock Lobster Sanctuary, such activity is prohibited in terms of the Regulations, and any activity which results in the disturbance of rock lobster within the closed area is unlawful. As part of the EIA process an assessment of the presence of Rock Lobster at the disposal sites and whether the turbidity plumes impact on the Rock Lobster are being investigated.

GN 490 in *Government Gazette* 28876 of 26 May 2006 declares Robben Island (including an area of 1 nautical mile surrounding the island) as a national heritage site in terms of section 27 of the National Heritage Resources Act.¹³ (NHRA). Section 27(18) of the NHRA provides that “no person may destroy, damage, deface, excavate, alter, remove from its original position, subdivide or change the planning status of any heritage site without a permit issued by the heritage resources authority responsible for the protection of such site.” Insofar as the dumping activities would destroy or damage the Robben Island heritage site then a permit would be required from SAHRA in terms of the NHRA. The potential impacts of the turbidity plumes on Robben Island heritage site have been investigated as part of the EIA process.

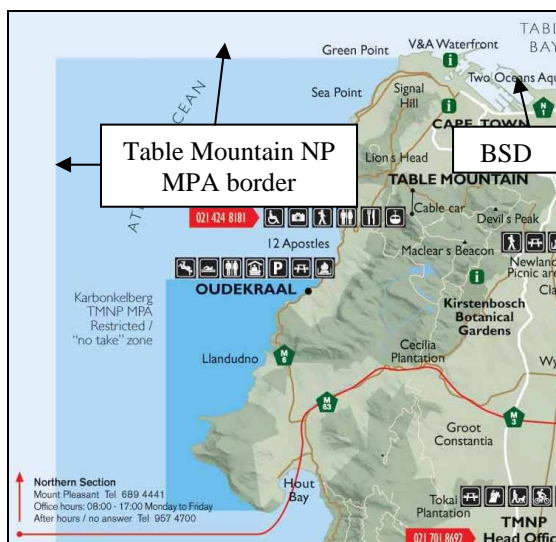


Figure 2-1: Table Mountain NP MPA northern boundary

Source: SanParks

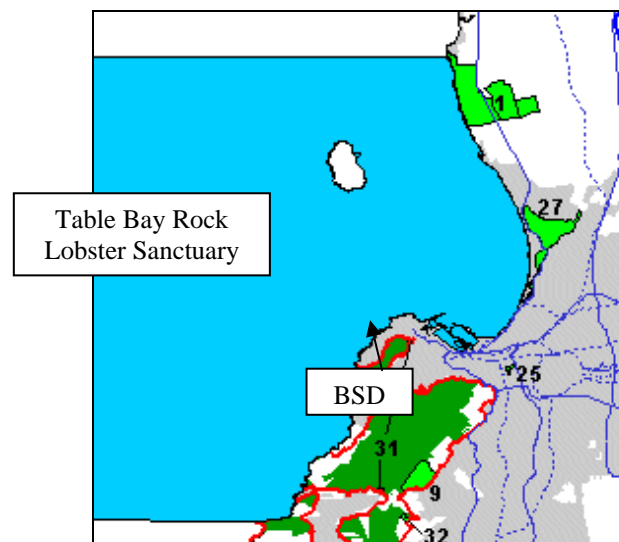


Figure 2-2: Table Bay Rock Lobster Sanctuary

Source: DEAT

2.4 National Heritage Resources Act 25 of 1999 and other legislation applicable to marine archaeological sites

The South African legislative system includes several acts which are relevant to the protection of archaeological sites, both on land and underwater. Although most of these acts were not formulated

¹² Regulation 47.

¹³ Act 25 of 1999.

with this specific purpose of protecting archaeological sites, they contain some clauses and conditions which regulate aspects of management and control.

Relevant legislation which touches on or incorporates submerged archaeological sites is described in the following acts:

- Sea Shore Act 21 of 1935 (as amended);
- Merchant Shipping Act 57 of 1951 (as amended);
- Customs and Excise Act 91 of 1964;
- Legal Succession to the South African Transport Services Act 9 of 1989;
- National Heritage Resources Act 25 of 1999.

The first four acts deal mainly with the sites of shipwrecks and with shipwrecks and their contents, without specific reference to the cultural and historical-archaeological values of such remains. The National Heritage Resources Act of 1999, however, specifically acknowledges these values and includes detailed regulations in this regard.

The protection and management of South Africa's heritage resources are thus controlled by the National Heritage Resources Act 25 of 1999. It is the only act within the South African legal system which specifically attributes historical-archaeological and cultural values to shipwrecks. The Act states in Section 35(1) that "... the protection of any wreck in the territorial waters and the maritime cultural zone shall be the responsibility of SAHRA" (South African Heritage Resources Agency).

In terms of the Act, historically important features such as wrecks, graves, trees, archaeological artefacts and fossil beds are protected. Similarly, culturally significant symbols, spaces and landscapes are also afforded protection. In terms of Section 38 of the National Heritage Resources Act, SAHRA can call for a Heritage Impact Assessment (HIA) where certain categories of development are proposed. The Act also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is deemed adequate, a separate HIA is not required.

The activities identified in the Act as requiring a notification of SAHRA include:

- Section 38 (1) (c): Any development or other activity which will change the character of a site¹⁴
- exceeding 5,000 m² in extent.
- The total area to be deepened by dredging amounts to approximately 1,100,000 m² and thus exceeds the above threshold that requires notification of SAHRA.

¹⁴ "site" means any area of land, including land covered by water, and including any structures or objects thereon;

Legal requirements for this project

The Ben Schoeman Dock is an existing component of an active port, and deepening the basin, which has been previously dredged, will not change the current character of the site where large container vessels will continue to be loaded and unloaded. The activities listed in Section 38 of the Heritage Resources Act thus do not apply to the proposed project and notification of the relevant authorities is not required.

Nevertheless, SAHRA was notified of the proposed project in May and October 2006 and a heritage specialist was commissioned during the EIA to assess the proposed development for potential negative impacts on heritage resources. According to SAHRA, a permit for the proposed activity is required from SAHRA, which can be issued to the project's maritime archaeologist. SAHRA further requires the monitoring of dredging activities by a suitably qualified maritime archaeologist at the proponent's cost.

2.5 Dumping at Sea Control Act 73 of 1980

The Dumping at Sea Control Act 73 of 1980, as amended by the Dumping at Sea Control Amendment Act 73 of 1995, controls the dumping of substances at sea. The Act lists substances that are prohibited to be dumped at sea (Schedule 1) and substances whose dumping at sea is restricted (Schedule 2):

Schedule 1 prohibited substances include:

- Organohalogen compounds;
- Mercury and its compounds;
- Cadmium and its compounds;
- Persistent plastics and other persistent synthetic materials;
- High-level radio-active waste or other high-level radio-active matter; and
- Substances in whatever form produced for biological and chemical warfare.

Schedule 2 restricted substances include:

- Arsenic and its compounds;
- Lead and its compounds;
- Copper and its compounds;
- Zinc and its compounds;
- Organosilicon compounds;
- Cyanides;
- Fluorides;
- Pesticides and their by-products not included in Schedule 1;
- Beryllium and its compounds;
- Chromium and its compounds;

- Nickel and its compounds;
- Vanadium and its compounds;
- Containers, scrap metal and any substances or articles that by reason of their bulk may interfere with fishing or navigation;
- Radio-active waste or other radio-active matter not included in Schedule 1; and
- Ammunition.

Substances listed in Schedule 1 may not be dumped at sea, while a permit must be obtained from the Minister of Environmental Affairs and Tourism (Marine and Coastal Management) if substances listed in Schedule 2 are to be dumped. In issuing a permit the Minister must take into account characteristics and composition of the substance and characteristics of the dumping or disposal site and method of disposal.

Legal requirements for this project

Dredge material *per se* is not a listed substance under either Schedules 1 or 2 of the Act. However, Schedule 2 lists “any substances or articles that by reason of their bulk may interfere with fishing or navigation”. The dumped sediment may have an impact on wave action and vessels will dump the material within a busy shipping zone. As such a permit should be obtained.

An analysis of the sediment to be dredged and disposed of has also shown that it contains trace metals (see Section 3.2.1 and CSIR, 2006b). As these are listed substances, their dumping requires a permit.

This permit must be obtained from the Department of Environmental Affairs and Tourism: Marine and Coastal Management (MCM). A permit application will be submitted to MCM in parallel to the submission of the EIR to DEAT, although the permit will not be issued until a Record of Decision is issued for the proposed activities in terms of the ECA (see Section 2.1 above).

As a result of this requirement, there has been ongoing correspondence between SRK Consulting and MCM, as well as Kevin Weerts, the consultant submitting the permit application on behalf of the applicant, to ensure that studies undertaken as part of the EIA process also meet the information requirements by MCM to issue the permit, once the need arises. MCM have been kept informed throughout the dredge disposal site identification and characterisation.

2.6 National Ports Act 12 of 2005

The National Ports Act 12 of 2005 aims to promote the development of an effective and productive South African ports industry that is capable of contributing to economic growth and development of the country. In terms of the Act the, relevant responsibilities of the National Ports Authority (NPA) include the maintenance and improvements of port infrastructure. The NPA is also required to regulate and control, among others, the development of ports and pollution and protection of the environment within the port limits.

The NPA is required to ensure that a fair and reasonable balance is achieved between the protection of the environment and the establishment, development and maintenance of ports.

Legal requirements for this project

While promoting the upgrade of infrastructure in the Port of Cape Town to ensure that the port is able to continue contributing to the economic growth and development of the country, NPA needs to ensure that the upgrades occur in such a manner that the negative effects on the natural environment are minimized.

2.7 London Protocol 1996

The 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention 1972) is an international treaty that limits the discharge of wastes that are generated on land and disposed of at sea. Requirements of the London Convention has been given effect to in South African law by the Dumping at Sea Control Act and it is in terms of that Act that the activity of dumping dredge material at sea will be regulated.

Annex I and Annex II of the London Convention provide lists of substances of which dumping is prohibited or requires a permit (referred to as LC Annexes in this report).

In terms of this convention “special care” and “prohibition” levels of contaminant concentrations have been determined. Contaminant concentrations at “special care” limits may result in minor environmental effects, although they do not exceed the levels at which acute or chronic effects on human health or sensitive marine organisms could occur. Care must thus be exercised in the disposal of substances in this category, to ensure that the environmental effects are minimized.

At “prohibition: levels, substances could cause significant deleterious biological responses. Materials falling into this category may generally not be dumped at sea

The London Protocol 1996 is a separate agreement that modernized and updated the London Convention, following a detailed review that began in 1993. The London Protocol 1996 will eventually replace the London Convention. South Africa is a Contracting Party to the London Protocol 1996 and as such has to adhere to its stipulations.

Article 4(1) of the London Protocol 1996 specifies that Contracting Parties shall prohibit the dumping of any wastes or other matter with the exception of those listed in Annex 1. Matter that may be considered for dumping in the sea as identified in Annex 1 of the protocol includes *dredged material*.

However, Annex 2 specifies that both the waste and proposed dump site must be characterised as described below before a permit can be issued:

Annex 2 (s8): Characterisation of the *wastes and their constituents* shall take into account:

- origin, total amount, form and average composition;
- properties: physical, chemical, biochemical and biological;
- toxicity;
- persistence: physical, chemical and biological; and
- accumulation and biotransformation in biological materials or sediments.
- Annex 2 (s11): Information required to select a *dump-site* shall include:

- physical, chemical and biological characteristics of the water-column and the seabed;
- location of amenities, values and other uses of the sea in the area under consideration;
- assessment of the constituent fluxes associated with dumping in relation to existing fluxes of substances in the marine environment; and
- economic and operational feasibility.

Article 4(2) of the London Protocol 1996 states that the dumping of wastes or other matter listed in Annex 1 shall require a permit. Annex 2 (s9 and 10) further clarifies that only waste with a toxicity below a certain threshold as specified in a national Action List developed by each Contracting Party can be dumped.

DEAT has the responsibility of implementing the protocol of the London Convention in South Africa.

Requirements for this project

In accordance with the Dumping at Sea Control Act the applicant has to apply for a permit before dumping the dredge material at sea. Transnet needs to ensure that the permit application procedure in terms of the Dumping at Sea Control Act is taken into account (see Schedule 3 to the Act which expressly lists the factors to be taken into account by the relevant decision-making authority in granting a permit in terms of the Act). The required characterisation of the sediment to be dredged and disposed of, as well as characterisation of the proposed disposal sites (both alternatives) have been integrated into the specialist marine studies undertaken as part of this EIA, and will inform the permit application.

2.8 Strategic Environmental Assessment: Port of Cape Town

A Strategic Environmental Assessment (SEA) was undertaken for the Port of Cape Town in 2004 and as a result a Sustainability Framework for the Port was developed. The SEA is related to the Port Development Framework in that it aims to provide a framework that will facilitate integrative port planning and provide solutions that are acceptable to all stakeholders from a biophysical, social and economic perspective. (CSIR, 2004)

The SEA sets out a number of sustainability objectives, targets and indicators to direct future port planning and development, taking into consideration the existing state of the environment.

SEA guidelines for port planning and environmental management that are of particular relevance to the proposed development can be summarised as follows:

Marine Ecosystems

- For physical port expansion, consideration should be given to the impact on the sandy beach ecosystems, including assessing the impact of future port development on the shoreline stability;
- Water quality management should be implemented, including sediment quality sampling prior to dredging and dumping operations (in terms of the London Convention and Protocol); and
- Prevent the introduction of alien invasive organisms and pathogens in Table Bay by prohibiting untreated ballast water discharges in Table Bay and or the port by vessels of distant origin (which would include dredgers).

Maritime Archaeology

- Baseline studies of marine archaeology are to be undertaken in any area of proposed expansion;
- Any work in designated area must take the possible presence, importance and sensitivity of maritime archaeological sites into consideration;
- Potential future surveys and excavation must be undertaken by suitably trained and qualified personnel; and
- Excavation and recovery of any material found can only be done once a licence has been issued by the Department of Customs and Excise and a permit from SAHRA.

Shoreline Stability

- Computational modelling of wave transformation, resulting sediment transport and shoreline evolution should be used to assist with conceptual designs of future port expansion.

Requirements for this project

Transnet must ensure that the development proposals take cognisance of the sustainability objectives and guidelines for port development, as detailed in the SEA. The requirements in terms of marine ecosystems, maritime archaeology and shoreline stability have been addressed in this EIA.