

**DRAFT**

**ENVIRONMENTAL MANAGEMENT PROGRAMME  
FOR THE PROPOSED UPGRADE OF TRANSNET  
HELIPAD AND ASSOCIATED INFRASTRUCTURE  
AT THE PORT OF RICHARDS BAY WITHIN THE  
CITY OF UMHLATHUZE IN THE KWAZULU-NATAL  
PROVINCE.**

**DFFE REF: F004-22**

**DATE**

**JANUARY 2023**

**PREPARED FOR:**

**TRANSNET**



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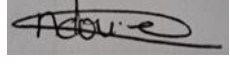


## DOCUMENT CONTROL


## PROJECT TITLE

**ENVIRONMENTAL MANAGEMENT PROGRAMME FOR THE PROPOSED UPGRADE OF TRANSNET HELIPAD AND ASSOCIATED INFRASTRUCTURE AT THE PORT OF RICHARDS BAY WITHIN THE CITY OF UMHLATHUZE MUNICIPALITY IN THE KWAZULU-NATAL PROVINCE.**

## QUALITY CONTROL

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## REPORT AUTHORISATION

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<b>ACRONYMS</b>
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CARA	Conservation of Agricultural Resources Act (Act 43 of 1983)
DFFE	Department of Forestry, Fisheries, and Environment
DWS	Department of Water and Sanitation
EA	Environmental Authorisation
EAP	Environmental Assessment Practitioner
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EM	Environmental Manager
EMPr	Environmental Management Programme
EO	Environmental Officer
HIA	Heritage Impact Assessment
HAS	Hazardous Substance Act (Act 15 OF 1973)
KM	Kilometres
MS	Method Statement
NEMA	National Environmental Management Act (Act 107 of 1998)
NEMAQA	National Environmental Air Quality Act (Act 39 of 2004)
NEMBA	National Environmental Management Biodiversity Act (Act 10 of 2004)
NEMWA	National Environmental Management Waste Act (Act 36 of 2008)
NHRA	National Heritage Resources Act (Act 25 of 1999)
NLTA	National Land Transport Act (Act 5 of 2009)
NWA	National Water Act (Act 36 of 1998)
OHSA	Occupational Health and Safety Act (Act of 85 of 1993)
SACNASP	South African Council of Natural Scientist Profession
SAHRA	South African Heritage Resources Agency
WULA	Water Use Licence Application

## 1. INTRODUCTION

Transnet SOC Limited (hereafter referred to as Transnet) appointed Nsovo Environmental Consulting (hereafter referred to as Nsovo) to compile an Environmental Management Programme (EMPr), in terms of the [National Environmental Management Act, Act 107 of 1998 (NEMA)], for the proposed upgrade of Transnet Helipad and associated infrastructure at the Port of Richards Bay within the City of uMhlathuze in the KwaZulu-Natal Province.

The proposed development is located on the Farm Richards Bay 12217 GV, within Municipal Ward 2 of City of uMhlathuze in the jurisdiction of the King Cetshwayo District Municipality, KwaZulu-Natal Province.

### 1.1. PURPOSE OF THE EMPr

An Environmental Management Programme (EMPr) is defined as an environmental management tool used to ensure that undue or reasonable avoidable adverse impacts of the construction, operation, and decommissioning of a project are prevented or mitigated and that the positive benefits of the project are enhanced. This EMPr serves as a guideline for the management of the site and provides specifications and regulations that must be adhered to in all instances. It is the responsibility of all parties, including Contractors and Sub-Contractors, involved in the daily activities to commit to the implementation of the EMPr throughout the project.

This EMPr is prepared to provide specific environmental guidance for the Transnet Helipad upgrade construction which includes demolition, operational and Decommissioning phases, and includes all activities that will take place for the proposed upgrade. The EMPr sets out general environmental specifications, which apply to the construction, operational, and decommissioning phases associated with the project.

The EMPr has been developed to give effect to precautionary measures, which are to be put in place for the monitoring of the activities that will take place on-site and ensure compliance with the national legislative and regulatory requirements, as well as Transnet monitoring guidelines and implementation tools associated with their operation.

The objectives of the EMPr are to: Ensure that the activity is undertaken in compliance with national and provincial environmental legislation as well as local by-laws and policies;

- Detail mitigation measures, timeframes, and criteria for assessing the success or failure of each measure;
- Provide detailed monitoring programs to ensure compliance;
- Provide input and strategies for environmental quality control and risk management;
- To preserve the natural environment by limiting destructive actions on-site;
- Ensure appropriate restoration of areas affected by the proposed activities;
- Prevent long term environmental degradation; and



- Ensure that activities consider the rights of other land users to enjoy a safe and healthy living environment.

## **1.2. LOCALITY OF THE PROPOSED PROJECT**

The proposed development is located on the Farm Richards Bay 12217 GV, within Municipal Ward 2 of the City of uMhlatuze in the jurisdiction of the King Cetshwayo District Municipality of the KwaZulu-Natal Province. Figure 1 below shows a locality map that depicts the proposed study area at a scale of 1:50 000.

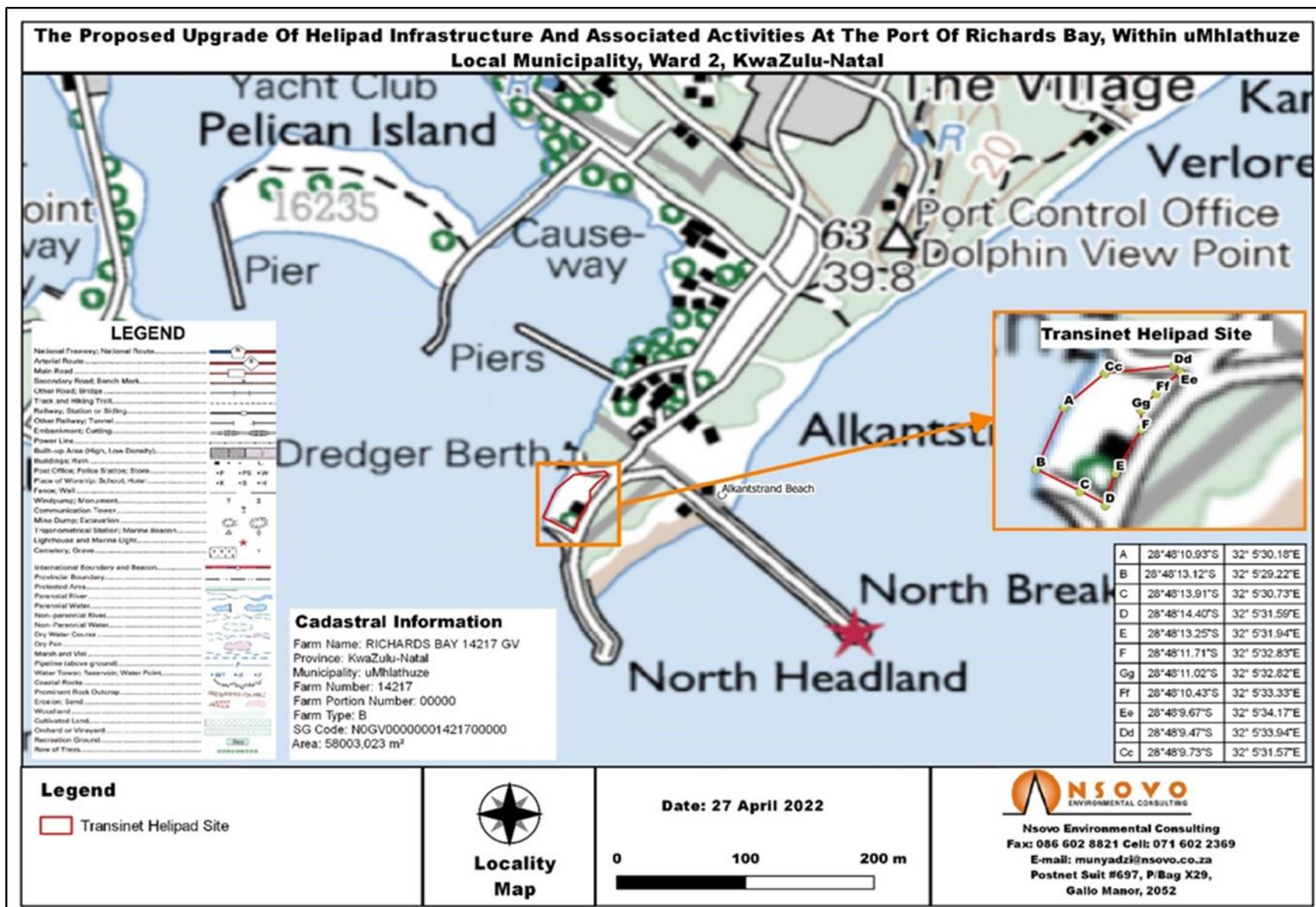


Figure 1: Locality map of the proposed project area

### 1.2.1. Description of the property

The proposed project will be located on Farm Richards Bay 12217 GV. Details of the farm are provided in Table 1 below.

**Table 1: Details of the proposed site property**

Farm Name	Portion	Surveyor General 21 Digit Code
Richards Bay 14217 GV	Portion 0	NOGV00000001421700000

## 2. THE STRUCTURE OF THE EMPr

This report has been compiled in terms of the provisions contained within Appendix 4 of GN R. 982 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA): EIA Regulations of 2014, as amended. Table 2 below provides a summary of the NEMA requirements in terms of the Environmental Impact Assessment (EIA) Regulations and an indication in which section the supporting information and documentation can be found in this document.

**Table 2: 2014 NEMA EIA Regulations EMPr Report Content**

No	Requirement	Reference
1(1)(a)	Details of- i) The EAP who prepared the report; and ii) The expertise of the EAP, including Curriculum Vitae;	Section 3
1(1)(b)	A detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;	Section 4
1(1)(c)	A map at an appropriate scale that superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;	Section 5
1(1)(d)	A description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed, and mitigated as identified through the environmental impact assessment process for all phases of the development including- (i) planning and design; (ii) pre-construction activities; (iii) construction activities; (iv) rehabilitation of the environment after construction and where applicable post-closure; and (v) where relevant, operation activities;	Section 6

No	Requirement	Reference
1(1)(e)	A description and identification of impact management outcomes are required for the aspects contemplated in paragraph (d);	Section 7
1(1)(f)	A description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to- (i) avoid, modify, remedy, control or stop any action, activity, or process which causes pollution or environmental degradation; (ii) comply with any prescribed environmental management standards or practices; (iii) comply with any applicable provisions of the Act regarding the closure, where applicable; and (iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;	Section 8
1(1)(g)	The method of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 8
1(1)(h)	The frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);	Section 8
1(1)(i)	An indication of the persons who will be responsible for the implementation of the impact management actions;	Section 8
1(1)(j)	The periods within which the impact management actions contemplated in paragraph (f) must be implemented;	Section 8
1(1)(k)	The mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);	Section 9
1(1)(l)	A program for reporting on compliance, considering the requirements as prescribed by the Regulations;	Section 9
1(1)(m)	An environmental awareness plan describing how- (i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and (ii) risks must be dealt with to avoid pollution or the degradation of the environment; and	Section 10
1(1)(n)	Any specific information that may be required by the competent authority.	Section 11

### 3. DETAILS AND EXPERTISE OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER INCLUDING THE APPLICANT'S DETAILS, ORGANISATIONAL STRUCTURE AND ROLES

#### 3.1. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Nsovo has been appointed as the independent Environmental Assessment Practitioner (EAP) for the proposed project and meets the general requirements as stipulated in Regulations 13 (3) of the NEMA EIA 2014 Regulations as amended. Nsovo therefore is:

- Independent and objective;
- Has expertise in conducting EIAs;
- Consider all relevant factors relating to the application; and
- Provides full disclosure to the applicant and the relevant environmental authority.

Table 3 below provides the details of the EAP and relevant experience. A detailed CV and qualifications of the EAP are attached as Appendix E1.

**Table 3: Details of the Environmental Assessment Practitioner (EAP)**

<b>Name of Company</b>	Nsovo Environmental Consulting
<b>Person Responsible</b>	Munyadziwa Rikhotso
<b>Professional Registration</b>	Cert.Sci.Nat: 300076/15 (SACNASP) EAP (EAPASA): Reg 2019/ 1156
<b>Postal Address</b>	40 Lyncon Road, Carlswald, Midrand, 1684
<b>Telephone Number</b>	087 803 9294
<b>Fax Number</b>	086 602 8821
<b>Email</b>	<a href="mailto:munyadzi@nsovo.co.za">munyadzi@nsovo.co.za</a>
<b>Qualifications &amp; Experience</b>	B.Sc. Honours Geography and Environmental Management <ul style="list-style-type: none"> <li>• <b>19 years of experience</b></li> </ul>
<b>Project Related Expertise</b>	In terms of project-related expertise, the EAP has worked on the following projects: <ul style="list-style-type: none"> <li>• EMPr, WULA, and EA amendment for the proposed Juno Gromis 400kV power line in the Western Cape Province.</li> <li>• EA amendment for the proposed 275kV Foskor Merensky power line in Limpopo province.</li> </ul>

	<ul style="list-style-type: none"> <li>• EIA for the proposed Exxaro Dorstfontein West Expansion project in Mpumalanga Province.</li> <li>• EIA for the proposed Bushveld Vametco Expansion Project in North-West Province.</li> <li>• EIA for the proposed Tubatse strengthening Phase 1 – Senakangwedi B integration within the jurisdiction of Greater Tubatse Local Municipality in Limpopo Province.</li> <li>• EMPr, WULA, and EA amendment for the proposed Juno - Gromis 400kV power line.</li> <li>• Basic Assessment for the proposed Decommissioning and Demolition of Verwoedberg Substation and 275kV power.</li> </ul>
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### 3.2. DETAILS OF THE APPLICANT

This EMPr is a living document that guides the day-to-day activities throughout the project lifecycle; it may, from time to time, require revisions as may be dictated by the course of construction, operation, and rehabilitation / decommissioning activities. It is therefore imperative that precautionary measures are taken to ensure that environmental degradation is minimised while the project is undertaken. This will take a concerted effort from the project team and proper planning is of the utmost importance. This document applies to all Transnet employees, contractors, and subcontractors. Table 4 below indicates details of the Applicant also referred to as the developer.

**Table 4: Details of the Applicant**

<b>Name of Company</b>	Transnet SOC Limited
<b>Physical Address</b>	TNPA Emendi Administration Building Neptune Rd Port of Ngqura Gqeberha
<b>Postal Address</b>	P.O Box 181 Richards Bay 3400
<b>Contact Person</b>	Nosicelo Biyana
<b>Telephone Number</b>	T: (+27) 35 905 4532 C: (+27) 67 367 0110

<b>Project Manager</b>	Nokwethemba Mngadi
<b>Cell</b>	C: (+27) 060 572 9805
<b>Email</b>	<a href="mailto:Nokwethemba.Mngadi@transnet.net">Nokwethemba.Mngadi@transnet.net</a>

### 3.3. ORGANIZATIONAL STRUCTURE AND RESPONSIBILITIES

To operate with utmost care of the environment effectively and efficiently within which Transnet, it is important that all parties understand their duties and responsibilities throughout all phases of the project lifecycle. Transnet and their duly appointed contractors and subcontractors are fully responsible for all activities taking place and ensuring that they are undertaken in compliance with the project's EA and EMPr as well as world best practices. The following sections describe the roles and responsibilities of the key team members.

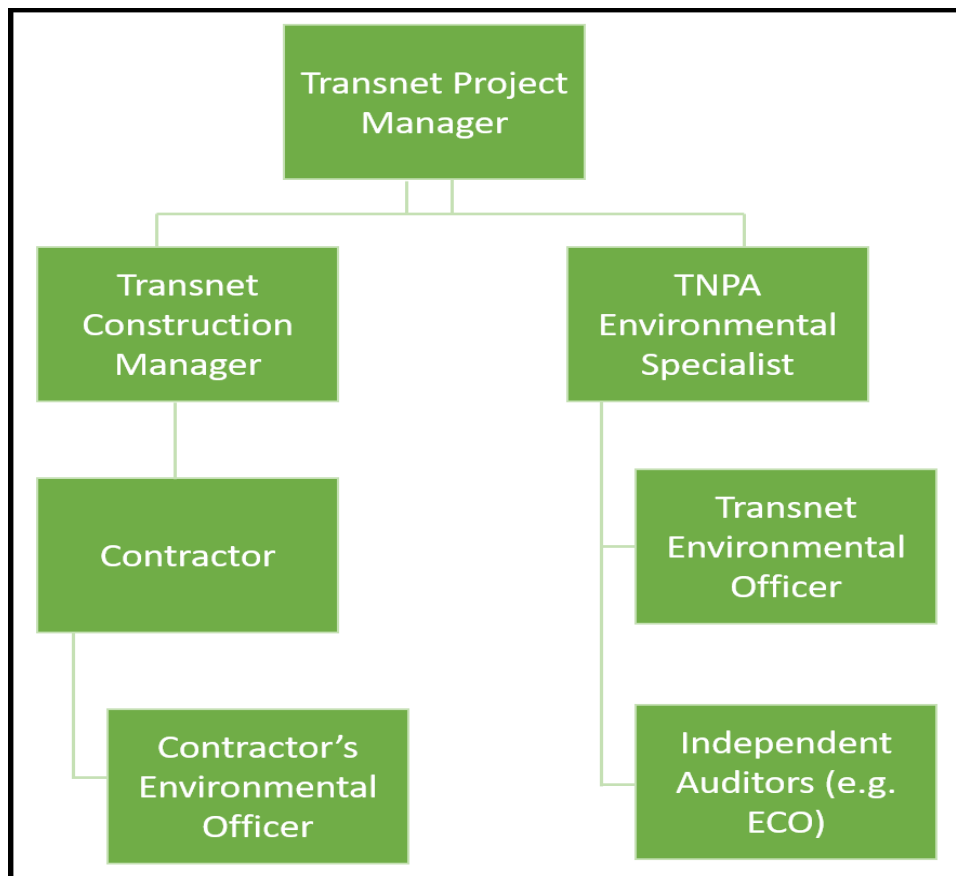


Figure 2: Typical Project Organogram

### 3.4. TRANSNET SOC LIMITED

Transnet must ensure implementation and compliance of all environmental authorisations and permits, and obligations emanating from other relevant environmental legislation throughout the project lifecycle. Formal responsibilities are necessary to ensure that key procedures are executed, and this would include the following:

- Ensuring that all team members are aware of their specific roles and responsibilities;
- Taking overall responsibility for all activities related to the project;
- Ensuring that all commitments/conditions contained in the EA and EMPr are communicated and adhered to by all Transnet employees, principal Contractors, and Sub-Contractors.

Specific responsibilities of Management, Environmental Control Officer, and Contractor during the construction, operation, and decommissioning phases are detailed below:

Transnet Management will:

- Appoint a Project Management Team that takes overall responsibility for EMPr implementation and oversees the Contractor and all activities;
- Appoint an independent Environmental Control Officer (ECO) and the Contractor;
- Ensure that the Contractor is aware of and adheres to the provisions of this EMPr;
- Ensure that the Contractor remedies problems timeously and to the satisfaction of the authorities;
- Appoint a suitably qualified ECO to ensure that the Contractor abides by the EMPr; and
- Ensure that an independent ECO monitors and audits the site to ensure compliance with the respective authorisation, permits, and licenses.

#### **3.4.1. Transnet Environmental Officer (TEO)**

The Transnet Environmental Officer will report to the Transnet Project Environmental Manager and will:

- Be fully knowledgeable of the contents of this EMPr and the conditions of the environmental authorization, and other permits;
- Be fully knowledgeable of the contents of all relevant environmental legislation and ensure effective compliance;
- Ensuring that Transnet and its contractors are made aware of all stipulations in the EMPr;
- Ensure compliance with the EMPr and EA commitments and any other legislative requirements applicable to their operations.
- Ensure there is effective communication with the Project Manager, the environmental control officer, and relevant project staff on matters concerning the environment; and
- Adhering to any instructions issued by the Project Manager on the advice of the ECO.

#### **3.4.2. Environmental Control Officer (ECO)**

A suitably qualified independent ECO must be appointed before the commencement of the construction activities. The ECO shall be responsible for monitoring, reviewing, and verifying compliance by Transnet with the environmental specifications. In addition, the ECO shall be responsible for the planning and management of all environmental activities to ensure the



effective implementation of EA, EMPr, landowner conditions, applicable permits, and licences. More specifically, the ECO will undertake the following responsibilities:

#### **3.4.2.1. Communication Services**

- To liaise closely with Transnet and the Contractor's Environmental Officer (EO).
- To assist in conflict resolution.
- To ensure that the Contractor rehabilitates any damage caused during construction.

#### **3.4.2.2. Environmental Management (EM)**

- Monitoring of site environmental progress in respect of time, deliverables, and quality.
- Liaison between Authorities, Transnet, and Contractor on environmental matters.
- Communicating changes in the EMPr to all relevant parties.
- Issuing Contractors Communications and site instructions.
- Monitoring the performance of Contractor and sub-contractors to ensure compliance with environmental and statutory requirements.
- Checking the Contractor EO's record of environmental incidents (spills, impacts, legal transgressions, etc.) as well as corrective and preventive actions taken.
- Checking the Contractor EO's complaints register in which all complaints are recorded, as well as actions taken.
- Compiling and completing the environmental management-related component of the handing-over documentation and any other related documents.
- Timeously identifying any sensitive site issues which may affect environmental aspects and the reporting of this to Transnet.
- Monitoring that good housekeeping practices are followed and maintained by the Contractor.
- Monitoring that the ground rehabilitation is initiated on time, complying with the EA, EMPr, and to the satisfaction of the landowner.
- Assisting the Contractor and Transnet with the environmental awareness training course for all site staff, targeted at the level of the workers so that they have a basic understanding of the environment that they are working in.
- Ensuring that sensitive areas are demarcated within or alongside the construction areas i.e., sites identified in the EMPr, EA.

#### **3.4.2.3. Monitoring**

- Validating the site environmental monitoring plan.
- Conducting environmental surveillance.
- Validating and recording of certificates proving the legal disposal of waste streams.

#### **3.4.2.4. Reporting**

- To prepare monthly monitoring reports for submission to Transnet and the DFFE, Environmental Compliance Section as and when required.
- Manage the compliance of the Contractor according to the EA, and EMPr. The reports are to include photographic images of compliances, non-compliances, and special occurrences taking place during the reporting period.
- To attend site meetings as required.
- To inform Transnet of any activity that is not in accordance with the EA and respective Conditions, the EMPr, and special conditions or detrimental to the environment.

#### **3.4.2.5. Administration**

- To assure a proper site ECO administration function to cater to all environmental site-related correspondence.
- To execute environmental responsibilities as per the EMPr.
- To promote and maintain sound relationships with the landowner, community, Contractors, and suppliers.

#### **3.4.3. Contractor (including Sub-Contractors)**

The Contractor (including Sub-Contractors) will report to the Project Management Team and will be responsible for:

- The appointment of an Environmental Representative/Environmental Officer who will ensure that all construction activities on site are undertaken in accordance with the EMPr;
- To fulfill all obligations as per the agreed contract;
- To implement the project as per the approved project plan;
- Drafting Environmental Method Statements for all activities to mitigate environmental impacts;
- Informing the workforce of their roles and responsibilities in terms of the EMPr;
- Ensuring that the workforce and sub-contractors comply with this EMPr;
- Ensuring compliance with the EMPr and EA commitments and any other legislative requirements as applicable to their activities;
- Adhering to any instructions issued by the Project Manager on the advice of the ECO;
- Preparation and timeous submission of environmental compliance reports that include updated incident and complaints registers;
- Induction and training of their employees as well as subcontractors before the commencement of construction, taking cognisance of this EMPr and EA;
- To inform and educate all employees about the environmental risks associated with the different construction activities through toolbox talks, environmental notices, and other methods with a specific focus on environmental topics throughout the project;
- To provide all necessary supervision during the execution of the project and must always be available on site;
- To ensure that implementation is conducted in line with the EA and EMPr;

- To comply with special conditions as stipulated by Landowners during the negotiation process; and
- Ensure compliance with pertinent environmental legislation and other legally binding documents.

### 3.5. COMPETENT AUTHORITY

The authorising Department is the Department of Forestry, Fisheries, and Environment (DFFE) and their role is to enforce compliance with the EA and EMPr conditions.

## 4. A DETAILED DESCRIPTION OF THE ASPECTS OF THE ACTIVITY THAT ARE COVERED BY THE EMPR AS IDENTIFIED BY THE PROJECT DESCRIPTION

This EMPr is part of the Basic Assessment process for the proposed upgrade of Transnet Helipad and associated infrastructure. Subsequently, the EMPr incorporates measures for the construction, operation, and decommissioning activities associated with the following proposed project, which includes the following aspects in Table 5 below:

**Table 5: Details of proposed Activities**

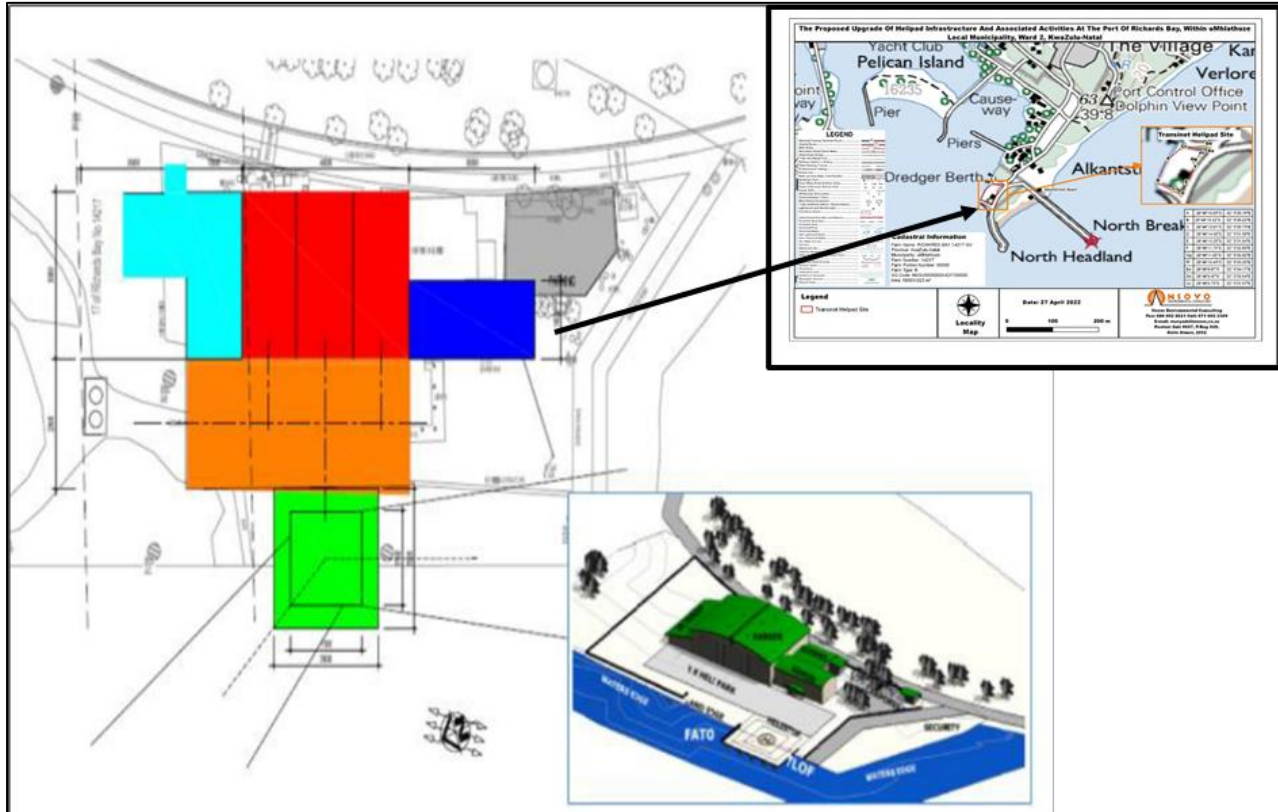
Proposed activities	
Development of Infrastructure	<p>Key infrastructure components:</p> <ul style="list-style-type: none"> <li>• Apron;</li> <li>• Hangar;</li> <li>• Helipad;</li> <li>• Storage space;</li> <li>• Workshop;</li> <li>• Above-ground diesel storage;</li> <li>• Offices; and</li> <li>• Sleeping bunkers.</li> </ul> <p><b>Motivation:</b></p> <ul style="list-style-type: none"> <li>• Development of a new administration building, hangar, and workshop.</li> <li>• The buildings and structures proposed on the layout (see Figure 1 below) ensures optimal operational flows and functional requirements.</li> <li>• The helipad will be a slightly elevated structure which is favourable to the Transnet aviation team as it poses little or no challenges to the flight approach and take-off and landing of the helicopters.</li> </ul>

- The position of the helipad is also favourable for the wind direction needed for the landing and take-off of the helicopters.
- The helipad position is proposed in front of the hangar apron for ease of movement and limited taxi of the helicopters into and out from the hangar to the helipad. The layout of the car park adjacent to the administration building is favourable as visitors and public visiting the administration building are restricted from walking across the hangar apron, as this could be a safety hazard.

**4.1. DESCRIPTION OF STRUCTURES AND INFRASTRUCTURE**

**4.1.1. Proposed Activities**

As detailed above, Transnet proposes to upgrade the existing Helipad and the associated infrastructure. The proposed activities and associated infrastructure will be located within the Transnet property and are illustrated in Figure 3 below.



**Figure 3: Infrastructure Area**

The proposed development triggers listed activities and a Basic Assessment process must be undertaken in accordance with the EIA Regulations, 2014, as amended. The listed activities applicable are listed and briefly described in Table 6 below:

**Table 6: Listed activities under the National Environmental Management Act (Act 107 of 1998) triggered by the proposed development.**

Listed activities	Activity/Project description
<b>GN R 327 of 2017 Listing Notice 1</b>	
<p><b><u>Activity 17</u></b> Development—</p> <ul style="list-style-type: none"> <li>(i) in the sea;</li> <li>(ii) in an estuary;</li> <li>(iii) within the littoral active zone;</li> <li>(iv) in front of a development setback; or</li> <li>(v) if no development setback exists, within a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever is the greater;</li> </ul> <p>in respect of—</p> <ul style="list-style-type: none"> <li>(a) fixed or floating jetties and slipways;</li> <li>(b) tidal pools;</li> <li>(c) embankments;</li> <li>(d) rock revetments or stabilising structures including stabilising walls; or</li> <li>(e) infrastructure or structures with a development footprint of 50 square meters or more.</li> </ul>	<p>This activity is triggered by the portion of the helipad that extends into the estuary as indicated in Figure 5 above as it is estimated to be more than 50 square meters in extent and will increase the development footprint of the port.</p>
<p><b><u>Activity 19A</u></b> <i>The infilling or depositing of any material of more than 5 cubic meters into, or the dredging excavation, removal, or moving of soil, sand, shells grit, pebbles, or rock of more than 5 cubic meters from</i></p> <p><i>(ii) the littoral active zone, an estuary, or a distance of 100 meters inland of the high-water mark of the sea or an estuary, whichever distance is greater.</i></p>	<p>The proposed development will entail anchoring the helipad in the estuary, which may require moving sand, shell grit, pebbles, or rock of more than 5 cubic meters from the estuary.</p>
<p><b><u>Activity 34:</u></b> <i>The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms</i></p>	<p>The proposed development may require a permit from DFFE Oceans and Coasts if water found during excavations is discharged into the sea or estuary. This will be confirmed once the proposed</p>

Listed activities	Activity/Project description
<p><i>of national or provincial legislation governing the release of emissions, effluent, or pollution.</i></p>	<p>solution for such discharge has been confirmed by Transnet and through further engagement with DFFE Oceans and Coasts (if required).</p>
<p><b>Activity 55</b>  <i>Expansion</i>  <i>(ii) in an estuary</i>  <i>(iv) in front of a development setback line; or</i>  <i>(v) if no development setback exists, within a distance of 100 meters inland of the high-water mark of the sea or estuary whichever is greater;</i>  <i>In respect of</i>  <i>f) Coastal harbours or ports</i></p>	<p>The portion of the helipad that extends into the estuary as indicated in Figure 5 above is the only element of the proposed development that triggers this activity as it is estimated to be more than 50m<sup>2</sup> in extent and will increase the development footprint of the port.</p>
<p><b>Activity 65</b>  <i>The expansion and related operation of—</i>  <i>(i) an anchored platform; or</i>  <i>(ii) any other structure or infrastructure;</i>  <i>on or along the sea bed, where the expansion will constitute an increased development footprint,</i></p>	<p>The portion of the helipad that extends into the estuary as indicated in Figure 5 above is the only element of the proposed development that triggers this activity as it is estimated to be more than 50m<sup>2</sup> in extent and will increase the development footprint of the port.</p>
<p><b>GN R 324 of 2017 Listing Notice 3</b></p>	
<p><b>Activity 10</b>  <i>The development and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of 30 but not exceeding 80 cubic meters.</i></p> <p><i>d KwaZulu-Natal</i>  <i>i. In an estuarine functional zone;</i>  <i>vi. Within 500 metres of an estuarine functional zone;</i>  <i>ix. Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</i>  <i>x. Core areas in biosphere reserves;</i></p>	<p>The proposed development includes a diesel storage facility with a capacity of 30m<sup>3</sup> to be established within 100m of the high-water mark of the sea.</p>

Listed activities	Activity/Project description
<p><i>xii. Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</i></p> <p><i>xiv. Inside urban areas:</i></p> <p><i>(bb) Area's seawards of the development setback line or within 100 metres from the high-water mark of the sea if no such development setback line is determined;</i></p>	
<p><b><u>Activity 12</u></b></p> <p><i>The clearance of an area of 300 square meters or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan</i></p> <p><i>d KwaZulu Natal</i></p> <p><i>(vi) Within the littoral active zone or 100 metres inland from the high water mark of the sea or an estuarine functional zone, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas</i></p>	<p>It is anticipated that approximately 300m<sup>2</sup> or more, of indigenous vegetation, will be cleared.</p>

**5. A MAP AT AN APPROPRIATE SCALE THAT SUPERIMPOSES THE PROPOSED ACTIVITY, ITS ASSOCIATED STRUCTURES, AND INFRASTRUCTURE ON THE ENVIRONMENTAL SENSITIVITIES OF THE PREFERRED SITE, INDICATING ANY AREAS THAT SHOULD BE AVOIDED, INCLUDING BUFFERS**

Based on the baseline environment of the proposed upgrade, sensitivity mapping has been developed to identify areas of sensitivity and create both regulated and non-regulated buffers to protect and preserve such areas. The sensitivity map below (Figure 4) and attached as **Appendix A** focuses on the proposed activities that still need to be authorised.

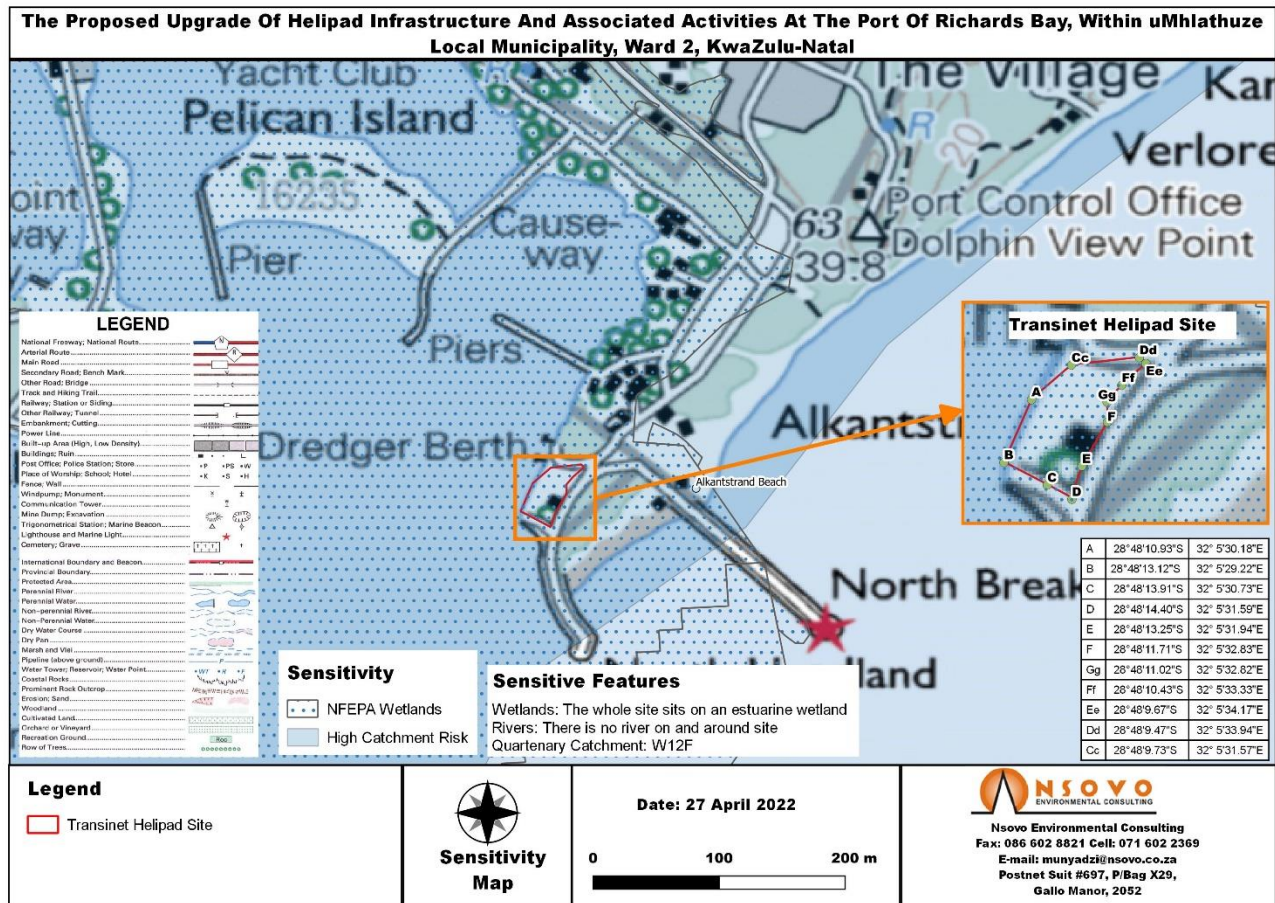


Figure 4 : Sensitivity Map- Proposed Activities.

Based on the sensitivity mapping conducted, the site is situated within an estuarine wetland. No other sensitivities of concern have been identified.

**6. A DESCRIPTION OF THE IMPACT MANAGEMENT OUTCOMES, INCLUDING MANAGEMENT STATEMENTS, IDENTIFYING THE IMPACTS AND RISKS THAT NEED TO BE AVOIDED, MANAGED AND MITIGATED AS IDENTIFIED THROUGH THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS FOR ALL PHASES IMPACT MANAGEMENT OUTCOMES**

**6.1. IDENTIFIED RISKS THAT NEED TO BE AVOIDED**

The tables below provide the impacts identified for the construction, operational, and decommissioning phases of the project, respectively. The risk identification was guided by the findings of specialist studies undertaken as part of this plan and are summarized according to the project phases, as follows:



### 6.1.1. CONSTRUCTION PHASE

**Table 7 : Impacts identified for construction**

Aspect	Impact
<b>Construction Activities</b>	
Movement of construction personnel	<ul style="list-style-type: none"> <li>• Impact on sensitive environments</li> <li>• Trespassing</li> <li>• Safety and security</li> </ul>
Site preparation and excavations	<ul style="list-style-type: none"> <li>• Loss of topsoil</li> <li>• Damage to the Marine ecosystem</li> <li>• Disturbance or destruction of sensitive environments such as estuary</li> <li>• Increase in soil erosion</li> <li>• Contamination of Soil</li> <li>• Disturbance of fauna</li> <li>• Damage to flora</li> <li>• Surface Water Consumption</li> <li>• Groundwater Contamination</li> <li>• Generation of Dust</li> <li>• Generation of Smoke</li> <li>• Generation of waste</li> </ul>
Vehicle movement and refueling activities	<ul style="list-style-type: none"> <li>• Damage to sensitive areas.</li> <li>• Erosion and loss of topsoil.</li> <li>• Generation of Dust</li> <li>• Contamination of Soil</li> <li>• Could result in fuel spillages that could potentially contaminate ground and surface water resources</li> </ul>

### 6.1.2. OPERATIONAL PHASE

**Table 8: Impacts Identified for the Operational Phase**

Aspect	Impact
Climate Change	<p><b>Increased temperature</b></p> <ul style="list-style-type: none"> <li>• Wildfires may damage infrastructure and facilities.</li> </ul>

Aspect	Impact
	<p><b>Sea Level Rise</b></p> <ul style="list-style-type: none"> <li>• Rising sea levels may cause flooding of operational areas.</li> </ul> <p><b>Extreme events</b></p> <ul style="list-style-type: none"> <li>• Floods, cyclones, and storms may cause the following: <ul style="list-style-type: none"> <li>○ Damage to infrastructure and facilities;</li> <li>○ Discharge of contaminated water into surrounding areas; and</li> <li>○ Reduced accessibility due to flooding of roads.</li> </ul> </li> </ul> <p><b>Wind Impacts</b></p> <ul style="list-style-type: none"> <li>• High wind speeds and gusts may damage infrastructure; may result in increased dust generation.</li> </ul>
Helipad operation	<ul style="list-style-type: none"> <li>• Could result in fuel spillages that could potentially contaminate ground and surface water resources</li> <li>• Alteration (both physical and chemical status) and pollution of soil forms</li> <li>• Increase in Noise pollution</li> <li>• Contamination of Marine ecosystem</li> <li>• Groundwater Contamination</li> <li>• Generation of Dust</li> </ul>
Pillar Failure:	<ul style="list-style-type: none"> <li>• Surface subsidence</li> </ul>

### 6.1.3. DECOMISSIONING AND REHABILITATION

A detailed risk assessment was undertaken to determine the environmental risks during the decommissioning phase and are shown in Table 9 below.

**Table 9: Risks Identified for the Decommissioning and Rehabilitation Phases**

Aspect	Impact
<b>Water Facilities</b>	
Building fire	Destruction of buildings and equipment by fire.

Aspect	Impact
Climate change	Floods, cyclones, and storms that may cause damage to infrastructure and facilities and floods, cyclones and storms that may cause reduced accessibility due to flooding of roads.
<b>Building Infrastructures</b>	
Alien invasive plants	Encroachment of alien invasive plants
Failure to remediate contaminated soil	Failure to remove all/some of the fuel storage and dispensing facilities
Leakages and spills	The leakages and spills of hazardous substance
Waste Management	Leakages and spills of hazardous substances
Soil disturbance	Soil erosion where the offices were located
Stormwater Management	Stormwater runoff which erodes the ore and waste stockpiles

## 6.2. IMPACT MANAGEMENT OUTCOMES

Table 10 below outlines the range of approaches to be implemented to manage the potential environmental impacts/risk of the project activities throughout the project cycle.

**Table 10: Approach to Impact Management**

Impact Management	Description
Avoidance	Avoiding activities that could result in adverse impacts and/or resources or areas considered sensitive.
Prevention	Preventing the occurrence of negative environmental impacts and/or preventing such an occurrence from having negative impacts.
Preservation	Preventing any future actions that might adversely affect an environmental resource.
Minimisation	Limiting or reducing the degree, extent, magnitude, or duration of adverse impacts
Mitigation	Measures are taken to minimise adverse impacts on the environment.
Enhancement	Magnifying and/or improving the positive effects or benefits of a project.
Rehabilitation	Repairing affected resources, such as natural habitats or water resources.

Impact Management	Description
Restoration	Restoring affected resources to an earlier (more stable and productive) state, typically 'background' or 'pristine' condition. These resources may include soils and biodiversity.
Compensation	Compensating for lost resources, and where possible, the creation, enhancement, or protection of the same type of resource at another suitable and acceptable location.

Following a detailed description of the impact management approaches, this section describes the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed, and mitigated throughout all phases.

### 6.2.1. Pre-Construction Phase

**Table 11: Pre-construction Objectives**

Aspect	Objective
Social	<ul style="list-style-type: none"> <li>• To increase local employment.</li> <li>• To reduce the impacts on local cultural sense of place.</li> <li>• To minimise social pathogens and unhealthy behavior.</li> <li>• Protection of archaeological, historical, and any other site or land considered of cultural value.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>• To prevent erosion, sedimentation, surface water contamination, and reduction in water quality.</li> <li>• To minimise land use alternation and soil erosion.</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>• To ensure adequate planning to prevent habitat destruction.</li> <li>• To prevent a significant increase in alien invasive species abundance and spread and to prevent habitat fragmentation with specific reference to the proposed activities.</li> <li>• To conserve species of conservation concern</li> <li>• To minimise the impact on plants of conservation concern through the implementation of Search and rescue according to the plan.</li> </ul>
Sensitive Environments	To prevent the destruction of the marine ecosystem.

### 6.3. CONSTRUCTION PHASE

**Table 12: Construction Objectives**

Aspect	Objective
Social	<ul style="list-style-type: none"> <li>• To protect the social - economic environment of local land users.</li> <li>• To support the local economy through the utilisation of local resources.</li> <li>• To conserve heritage artefacts and buildings.</li> <li>• To minimise impacts on infrastructure and land occupiers during excavation and piling activities.</li> </ul>
Water	<ul style="list-style-type: none"> <li>• To prevent groundwater contamination.</li> <li>• To protect surface water flow, water quality, and associated pollution.</li> <li>• To conserve water usage during construction.</li> </ul>
Air Quality	<ul style="list-style-type: none"> <li>• To minimise emissions to the atmosphere affecting employees, local land users, and climate change.</li> <li>• To reduce greenhouse gas emissions.</li> </ul>
Soil	<ul style="list-style-type: none"> <li>• To prevent soil contamination and ensure rehabilitation of contamination.</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>• To prevent a significant increase in alien invasive species abundance and spread.</li> <li>• To minimise the loss of floral habitat.</li> <li>• To minimise loss of floral biodiversity.</li> <li>• To protect floral habitats and diversity.</li> <li>• To reduce the impacts on faunal ecological integrity by curbing erosion and poaching.</li> <li>• To minimise cumulative loss of natural vegetation in the region.</li> </ul>
Sensitive Environments	<ul style="list-style-type: none"> <li>• To protect the estuary</li> <li>• To protect the identified avifauna-sensitive area.</li> </ul>

### 6.4. OPERATIONAL PHASE

**Table 13: Operation Objectives**

Aspect	Objective
Social	<ul style="list-style-type: none"> <li>• Improve the local financial capital for local communities.</li> <li>• Protect social – the economic environment of local land users.</li> </ul>

Aspect	Objective
	<ul style="list-style-type: none"> <li>• Prevent negative social impacts on the health and safety of land users and employees.</li> </ul>
Water	<ul style="list-style-type: none"> <li>• Prevent groundwater contamination.</li> <li>• Protect surface water flow, water quality, and associated pollution.</li> </ul>
Air Quality	<ul style="list-style-type: none"> <li>• To minimize atmospheric pollution</li> <li>• Reduce Greenhouse gas emissions</li> </ul>
Soil	<ul style="list-style-type: none"> <li>• Prevent soil contamination and ensure rehabilitation of contamination.</li> <li>• To reduce soil pollution and degradation.</li> <li>• To reduce sediment movement offsite.</li> <li>• To prevent compaction of soils on site.</li> </ul>
Biodiversity	<ul style="list-style-type: none"> <li>• To prevent a significant increase in alien invasive species abundance and spread.</li> <li>• To protect floral habitats and diversity.</li> </ul>
Sensitive Environment	<ul style="list-style-type: none"> <li>• To protect the estuary</li> <li>• To prevent flooding of the estuary.</li> <li>• To reduce the amount of sediment entering the estuary and associated change in turbidity</li> <li>• To avoid alteration of water quality toxic contaminants including toxic metal ions and hydrocarbons.</li> <li>• To reduce ecological impacts and ecosystem functioning.</li> <li>• To prevent the spread of alien invasive species.</li> </ul>
Climate Change	<ul style="list-style-type: none"> <li>• To communicate and implement an effective climate change response strategy.</li> <li>• To prevent increased temperature and wildfires due to climate change.</li> <li>• To avoid depletion of water resources resulting from drought.</li> <li>• To minimize the occurrence of floods, cyclones, and storms.</li> <li>• To minimize damage if infrastructure cause by sea level rise, floods, cyclones, and storms.</li> <li>• To minimize impact caused by high wind speeds and gusts.</li> </ul>

## 7. LEGISLATIVE FRAMEWORK

The EIA Regulations of 2014, as amended, under Appendix 2 Section 1(e), requires a description of applicable legislation in the EIA Report. This section lists and describes the acts and legislation relevant to the proposed project and associated

infrastructure. A list of the current South African environmental law pertinent to the proposed development is described in Table 14 below.

In addition to the national legislative requirements, the EMPr must take equal cognisance of Transnet's internal policies as well as best practices. **Table 14** below provides a list of policies and guidelines that must be applied to ensure effective management of the environment.

**Table 14: Legislation pertaining to the proposed project**

Aspect	Relevant Legislation	Brief Description
Environment	<ul style="list-style-type: none"> <li>• National Environmental Management: Act 1998, (Act No. 107 of 1998) as amended.</li>   <li>• Environmental Impact Assessment Regulations, December 2014 as amended</li>   <li>• City of uMhlathuze Environmental Health Bylaws</li> </ul>	<p>The overarching principles of sound environmental responsibility as reflected in the National Environmental Management Act, 1998 (Act No. 107 of 1998) apply to all listed projects. Construction and operation of activities must be conducted in line with the accepted principles of sustainable development, integrating social, economic, and environmental factors.</p> <p>The EIA process followed complies with the NEMA and the EIA Regulations of December 2014 as amended. The proposed development involves “listed activities,” as defined by NEMA. Listed activities are an activity that may potentially have detrimental impacts on the environment and therefore require an EA from the relevant Competent Authority, in this, case DFFE.</p> <p>To enable the Council to protect and promote the long-term health and well-being of people in the municipal area.</p>
Biodiversity	<ul style="list-style-type: none"> <li>• National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004)</li> </ul>	<p>The purpose of the National Environmental Management Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA) is to provide for the management and conservation of South Africa's biodiversity within the framework of the NEMA and the protection of species and ecosystems that warrant national protection. As part of its implementation strategy, the National Spatial Biodiversity Assessment was developed.</p>

	<ul style="list-style-type: none"> <li>• KwaZulu-Natal Nature Conservation Management Act, 1997 (Act No. 9 of 1997)</li> </ul>	To provide institutional structures for nature conservation in KwaZulu-Natal; to establish control and monitoring bodies and mechanisms, and to provide for matters incidental thereto.
Protected Areas	National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003)	The purpose of this Act is to provide for the protection, conservation, and management of ecologically viable areas representative of South Africa's biological diversity and its natural landscapes.
Heritage Resources	National Heritage Resources Act, 1999 (Act No. 25 of 1999)	The National Heritage Resources Act, 1999 (Act No. 25 of 1999) legislates the necessity for cultural and heritage impact assessment in areas earmarked for development, which exceed 0.5 ha. The Act makes provision for the potential destruction of existing sites, pending the archaeologist's recommendations through permitting procedures. Permits for this specific project would be administered by the KwaZulu-Natal Heritage Agency or South African Heritage Resources Agency (SAHRA). A heritage study has been undertaken as required.
Air quality management and control	National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004)	<p>The objective of the Act is to protect the environment by providing reasonable measures for the protection and enhancement of air quality and to prevent air pollution. The Act makes provision for measures to control dust, noise, and offensive odours.</p> <p>Section 32 of The National Environmental Management: Air Quality Act, 2004 (Act 39 of 2004) deals with dust control measures in respect of dust control. The Minister or MEC may prescribe measures for the control of dust in specified places or areas, either in general or by specified machinery or in specified instances, the steps to be taken to prevent nuisance or other measures aimed at the control of dust. The National Dust Control Regulations (2013) provide for the management and monitoring of dust.</p>
Noise Management and Control	<ul style="list-style-type: none"> <li>• Noise Control Regulations in terms of the Environmental</li> </ul>	The assessment of impacts relating to noise pollution management and control, where appropriate, must form



	<p>Conservation, 1989 ( Act 73 of 1989)</p> <ul style="list-style-type: none"> <li>• City of uMhlathuze Nuisance Bylaws</li> </ul>	<p>part of the EMPr. Applicable laws regarding noise management and control refer to the National Noise Control Regulations issued in terms of the Environment Conservation, 1989 (Act 73 of 1989).</p> <p>To enable the Council to protect its inhabitants from a nuisance (including noise).</p>
Water Resources Management	<ul style="list-style-type: none"> <li>• National Water Act, 1998 (Act 36 of 1998)</li> <li>• City of uMhlathuze Stormwater Management Bylaws</li> </ul>	<p>This Act provides for fundamental reform of the law relating to water resources and use. The preamble to the Act recognises that the ultimate aim of water resource management is to achieve sustainable use of water for the benefit of all users and that the protection of the quality of water resources is necessary to ensure the sustainability of the nation's water resources in the interests of all water users.</p> <p>Enables the council to effectively manage stormwater within its boundaries.</p>
Human	<p>The Constitution of South Africa, 1996 (Act No. 108 of 1996)</p>	<p>The Constitution provides for an environmental right (Section 24). The State is obliged "to respect, protect, promote and fulfill the social, economic and environmental rights of everyone..."</p> <p>The environmental right states that:</p> <p>"Everyone has the right -</p> <ol style="list-style-type: none"> <li>To an environment that is not harmful to their health or well-being; and</li> <li>To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that -</li> </ol> <ul style="list-style-type: none"> <li>• Prevent pollution and ecological degradation;</li> <li>• Promote conservation; and</li> <li>• Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development." </li></ul>

Waste	<ul style="list-style-type: none"> <li>• National Environmental Management: Waste Act, 2008 (Act 59 of 2008)</li> <li>• City of uMhlathuze Solid Waste Bylaws</li> </ul>	<p>This Act provides fundamental reform of the law regulating waste management to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development. This Act also ensures the provision of national norms and standards for regulating the management of waste by all spheres of government. Further, it provides for specific waste management measures; licensing and control of waste management activities; remediation of contaminated land; compliance and enforcement; and for matters connected therewith.</p> <p>To enable and enforce proper waste management within the municipality.</p>
Coastal Management	<ul style="list-style-type: none"> <li>• National Environmental Management: Integrated Coastal Management Act 24 of 2008.</li> </ul>	<p>The main aim of this act is to establish a system of integrated coastal and estuarine management in the Republic of South Africa, including norms, standards, and policies, to promote the conservation of the coastal environment, and maintain the natural attributes of coastal landscapes and seascapes, and to ensure that development and the use of natural resources within the coastal zone is socially and economically justifiable and ecologically sustainable.</p>

**Table 15: List of Associated Policies and Guidelines**

Aspect	Document	Brief Description
Municipal systems	<ul style="list-style-type: none"> <li>• Local Government: Municipal Systems Act (Act 32 of 2000)</li> </ul>	<p>Details all the systems issues that municipalities must be compliant with and allocate various functional requirements for various tiers of officials, as well as issues of municipal planning and performance management. This includes the review and comments of the Environmental Impact Assessment reports for development undertaken within the Municipality.</p>

Aspect	Document	Brief Description
Spatial Planning and Development	City of uMhlathuze Spatial Development Framework 2022/2023 – 2026/2027	<p>Represents the Fifth Generation Spatial Development Framework (SDF) for uMhlathuze Municipality for 2022/23 – 2026/2027 and aims to achieve the following:</p> <ul style="list-style-type: none"> <li>• Include any updated information, specifically sector plan information, available since the preparation and subsequent reviews of the 2017/2018 – 2021/2022 SDF in 2017.</li> <li>• Further interrogate areas where strategic intervention is required and where strategic opportunities exist and provision indicative mapping of such.</li> <li>• Update mapping is given any new/updated information available.</li> <li>• Address comments received from the provincial Department of Cooperative Governance and Traditional Affairs (CoGTA) on the assessment of the fourth review of the 2017/2018 – 2021/2022 SDF as adopted in May 2021.</li> <li>• Consider alignment and cross-border issues from the King Cetshwayo District family.</li> <li>• Consider improved alignment between the uMhlathuze Land Use Scheme and the uMhlathuze SDF.</li> <li>• Provide any information from government departments and other services.</li> </ul>
Water	Water Services Act	Sets out the parameters and regulatory issues around the management of water and sanitation issues within the Municipality.
Climate Change	United Nations Framework Convention on Climate Change (UNFCCC)	The UNFCCC is an international treaty formed by the United Nations in 1992. The objective of the treaty is to stabilise greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.
	Kyoto Protocol	The Kyoto Protocol is an international treaty among industrialised nations that sets mandatory limits on GHG

Aspect	Document	Brief Description
		emissions. The purpose of the Kyoto Protocol is to even out human-generated emissions at a level that will not inflict further harm on the atmosphere.
	21 <sup>st</sup> Conference of Parties (COP 21) Paris Agreement	A historic agreement to combat climate change towards a low-carbon, resilient and sustainable future was agreed by 165 nations in Paris in December 2015. The 21 <sup>st</sup> COP 21 Paris Agreement confirms the irreversible transition to a low carbon, safer and healthier world.
	South African National Climate Change Response White Paper	The South African National Climate Change Response White Paper (White Paper), published by the Department of Environmental Affairs (DEA, 2011), prioritises both climate change mitigation and adaptation in moving towards a climate-resilient and lower-carbon economy and society.
	Climate Change Bill (GG No. 41689, Notice 580)	The purpose of the Bill is to communicate and implement an effective nationally determined climate change response, including mitigation and adaptation actions, which represents South Africa's fair contribution to the global climate change response.
	National Greenhouse Gas Emission Reporting Regulations (GG No. 40762, Notice 275)	The purpose of the regulations is to introduce a single national greenhouse gas (GHG) reporting system, which will be used to inform policy formulation and help South Africa to meet its international obligations such as targets set under the United Nations Framework Convention on Climate Change.
	Draft National Climate Change Adaptation Strategy (GG No. 42446, Notice 644) (NCCAS) Ambient Air Quality Guidelines and Standards	The NCCAS serves as South Africa's National Adaptation Plan and fulfills South Africa's commitment to its international obligations as outlined in the Paris Agreement under the UNFCCC. The NCCAS will be used as the basis for meeting South Africa's obligations in terms of the adaptation commitments outlined in the National Determined Contributions. This guideline provides a basis for protecting public health from adverse effects of air pollution and for eliminating, or reducing to

Aspect	Document	Brief Description
		<p>a minimum, those contaminants of air that are known or likely to be hazardous to human health and well-being. Once the guidelines are adopted as standards, they become legally enforceable. The South African Bureau of Standards (SABS), in collaboration with DEA (currently known as DEFF), established this ambient air quality standards for gravimetric dust fallout to manage air pollution.</p>

### 7.1. METHOD STATEMENTS FOR THE ACTIVITIES TO BE CONDUCTED

The environmental specifications are required to be underpinned by a series of Method Statements (MS), within which the Contractors and Service Providers are required to outline how any identified environmental risks will be mitigated and managed for the duration of the contract and how specifications within this EMPr will be met. That is, the Contractor will be required to describe how specified requirements will be achieved through the submission of written Method Statements to Transnet before the commencement of activities on site:

The Method Statements must cover relevant details regarding:

- Site layout.
- Emergency/disaster incident and reaction procedures.
- Construction procedures;
- Delivery and storage of materials and equipment to be used;
- How the equipment/material will be moved while on-site;
- The containment (or action to be taken if containment is not possible) of leaks or spills of any liquid or material that may occur;
- Compliance/non-compliance with the Specifications; and
- Any other information deemed necessary by Transnet and ECO.

Specific method statements required may include but are not limited to:

- Vegetation clearing;
- Dredging;
- Site establishment and site layout plan;
- Fauna and Flora management;
- Excavations;
- Chemical/hazardous substance storage;

- Workshop and Material Equipment Storage;
- Plant- Refuelling
- Cement/concrete use;
- Environmental awareness training;
- Fire management;
- Emergency response;
- Stormwater and soil erosion management;
- Waste management;
- Contaminated water management;
- Temporary site closure;
- Site rehabilitation;
- Alien plants management and use of herbicides and pesticides;
- Dust management; and
- Noise control.

The above is not an exhaustive list of the required MS; there may be other activities/aspects that may require same before the commencement of the work. Additional MS may be required as the project progresses.

## **8. DESCRIPTION OF MITIGATION MEASURES**

This section serves to prescribe mitigation measures to prevent, reduce, eliminate, or compensate for impacts to acceptable/insignificant levels.

### 8.1. PRE-CONSTRUCTION MANAGEMENT PROGRAMME

The pre-construction management programme is to be used as a guideline during the planning, design, and detailing of the development components. This part of the programme is to be referenced by all personnel involved in decision-making during the planning and design phases. The responsible agents indicated in Table 16 are abbreviated as follows:

**Table 16: Responsible Agent**

Title	Abbreviation
Contractor Environmental Officer	CEO (where applicable)
Transnet SOC Limited	Transnet
Environmental Control Officer	ECO
Transnet Environmental Officer	TEO

**Table 17: Pre-construction activities**

Objective	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Ensure that proper environmental conditions are established before commencement of construction activities by informing all parties of appropriate environmental measures.</li> </ul>	<ul style="list-style-type: none"> <li>The project must be designed with consideration for the environment</li> <li>The successful tendering Contractors/third parties must be made aware of the contents of this EMPr and any penalties arising from non-compliance prior to the commencement of the work.</li> <li>Appoint a suitably qualified environmental manager who must be responsible to monitor compliance with the EMPr.</li> </ul>	<ul style="list-style-type: none"> <li>Design Report</li> <li>Signed Declaration by the contractor.</li> <li>Appointment Letter.</li> <li>Proof of submission of ECO appointment to DFFE.</li> </ul>	<ul style="list-style-type: none"> <li>Transnet</li> </ul>	<ul style="list-style-type: none"> <li>Pre-construction.</li> </ul>

## 8.2. CONSTRUCTION ENVIRONMENTAL MANAGEMENT PROGRAMME

This section relates to the construction activities at Transnet and may also be implemented during any other construction activities that do not trigger the listed activities.

### 8.2.1. Site establishment

Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Disturbance on the natural environment.</li> <li>Disturbance to soil and vegetation</li> </ul>	<ul style="list-style-type: none"> <li>To ensure minimal disturbance of the environment during the construction site establishment.</li> </ul>	<ul style="list-style-type: none"> <li>NEMA (36 of 1998).</li> <li>Construction Regulations.</li> </ul>	<p>Before the establishment of the construction campsite and associated infrastructure, TEO and the CEO must identify suitable areas for the establishment of the site office and lay down areas on the least sensitive locations, preferably within already disturbed areas. Such areas must be approved by the ECO.</p> <p>Once these items have been addressed, site establishment shall take place in an orderly manner, and all amenities must be installed before the main workforce moves onto the site. Construction camps on the site must be de-established post-construction. Rehabilitation must be done in accordance with the rehabilitation plan and/or approved Method Statement.</p>	<ul style="list-style-type: none"> <li>Site Establishment Method Statement</li> <li>Site Plan.</li> </ul>	<ul style="list-style-type: none"> <li>TEO</li> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>Before site establishment.</li> </ul>



Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>The Contractor must designate a restricted area for eating. Adequate bins must be provided and emptied regularly to prevent scavengers and stray animals.</p> <p><b>8.2.1.1. Site Plan</b> Documentation for the proposed campsite must be prepared by the Contractor before the commencement of construction activities and submitted to Transnet for approval. This documentation must include those listed in Section 7 above.</p> <p><b>8.2.1.2. Site Camps</b> The following restrictions must be placed at the site camp for the construction workforce in general:</p> <ul style="list-style-type: none"> <li>● The use of welding equipment, oxy-acetylene torches, and other bare flames where veld fires can be a hazard;</li> <li>● Poaching of any form; and</li> <li>● Use of surrounding veld as toilets.</li> </ul>			

Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p><b>8.2.1.3. Vegetation clearing:</b></p> <ul style="list-style-type: none"> <li>• The natural vegetation encountered on site must be conserved and left intact as much as possible.</li> <li>• Only vegetation within the approved construction footprint must be cleared and clearance must be as per the approved Method Statement in line with other requirements of this EMPr.</li> <li>• Should protected species be found the specialist recommendations regarding the same must be consulted.</li> <li>• Only the immediate footprint must be cleared for construction.</li> <li>• Disturbed areas must be rehabilitated according to the approved rehabilitation plan.</li> </ul> <p><b>8.2.1.4. Water for human consumption:</b></p>			

Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>Potable water must always be made available during all the phases of the project.</p> <p><b>8.2.1.5. Sewage Treatment:</b></p> <ul style="list-style-type: none"> <li>• Chemical toilets must be supplied (1 per fifteen persons) and must be regularly cleaned and maintained by the Contractor.</li> <li>• The Contractor must arrange for regular emptying of toilets by a registered service provider and must be entirely responsible for enforcing their use and maintenance.</li> <li>• The ablution facilities must be placed at locations approved by the TEO and ECO.</li> <li>• All ablution facilities must be anchored to avoid being toppled by the wind.</li> <li>• Ensure that sites responsible for sewage waste have the necessary legislative approvals necessary legislative approvals, and final</li> </ul>			

Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			sewage waste disposal sites have the necessary legislative approvals and are registered.			

### 8.2.2. Environmental Induction Training

Possible Impact	Objective/s	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Destruction of the environment due to inadequate knowledge of staff</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure all employees/staff conducting work on-site understand their duty to care for the environment</li> <li>• To ensure all employees/staff conducting work on site are aware of the requirements of this EMPr and conduct their duties accordingly</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA (107 of 1998).</li> </ul>	All staff must undergo environmental induction training before conducting any work on-site.	<ul style="list-style-type: none"> <li>• Environmental Induction Material</li> <li>• Environmental Induction Attendance Registers</li> </ul>	<ul style="list-style-type: none"> <li>• CEO.</li> </ul>	<ul style="list-style-type: none"> <li>• Before to construction commencement.</li> </ul>

### 8.2.3. Sensitive Ecology

Possible Impact	Objective/s	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impact on sensitive ecology</li> </ul>	<ul style="list-style-type: none"> <li>To ensure that sensitive areas are not disturbed.</li> <li>To ensure minimal or no disturbance to vegetation on and around the site.</li> <li>To prevent negative impact on both flora and fauna.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: BA (10 of 2004).</li> </ul>	<p>The following plan and Method Statements must be prepared:</p> <ul style="list-style-type: none"> <li>Implement an alien invasive plant monitoring and management plan whereby the spread of alien and invasive plant species is regularly removed, and re-infestation monitored on-site.</li> <li>Applicable Method Statement as indicated in Section 7 must be prepared and approved by the ECO.</li> </ul> <p>The following conditions must be adhered to:</p> <ul style="list-style-type: none"> <li>Demarcate the authorised construction footprint to avoid unnecessary vegetation clearing and clearing must be in accordance with the approved Method Statement.</li> <li>Ensure that 'No-Go' areas are demarcated and/or delineated before construction activities commence.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Site plan.</li> </ul>	<ul style="list-style-type: none"> <li>TEO;</li> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>Prior to construction commencement.</li> </ul>

Possible Impact	Objective/s	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>• The access barriers must be maintained in good condition throughout the course of the construction.</li> <li>• No open fires are permitted.</li> <li>• The use of existing roads and tracks is promoted while creating new unauthorised routes through vegetated areas is prohibited.</li> <li>• Only manual removal of weed will be permitted on site. Chemical and mechanical (TLB, bulldozer) control is not allowed on site.</li> <li>• Any fauna threatened by construction activities must be removed to safety by a suitably qualified person.</li> <li>• Avoid sensitive faunal habitats such as the Ornithological hot spot.</li> </ul>			

### 8.2.4. Materials handling, use, and storage

Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impact on human health.</li> <li>Impact on soils and water resources.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure safe handling, storage, use, and disposal of hazardous substances.</li> <li>To ensure full compliance with the requirements of the applicable legislation.</li> </ul>	<ul style="list-style-type: none"> <li>OHSA (85 of 1993).</li> <li>Construction Regulations (2013).</li> </ul>	<p><b>8.2.4.1. Safety:</b></p> <ul style="list-style-type: none"> <li>All the necessary handling and safety equipment required for the safe use of hydrocarbons must be provided to be used and/or worn by the staff.</li> <li>Transnet must comply with the Occupational Health and Safety Act, 1993 (Act 85 of 1993) and Construction Regulations (2003).</li> </ul> <p><b>8.2.4.2. Hazardous Material Storage:</b></p> <ul style="list-style-type: none"> <li>Hydrocarbons and other hazardous substances must only be stored in a secured, designated area with restricted entry.</li> <li>Storage of hazardous products must be stored in suitable containers. Safety Data Sheets (SDS) of the hazardous material</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Incident Report.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous.</li> </ul>

Possible Impact	Objective	Applicable Legislation	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>stored must always be available on-site and in safety files.</p> <ul style="list-style-type: none"> <li>● All hydrocarbons, irrespective of the volumes, must be stored on a smooth, impermeable surface or containment. The impermeable containment shall be 110% of the total capacity of all the storage tanks.</li> <li>● Gas welding cylinders and LPG cylinders must be stored in a secure, well-ventilated area. The Contractor must supply sufficient fire-fighting equipment in the event of an incident.</li> <li>● No smoking allowed where fuel is stored and used.</li> </ul>			



### 8.2.5. Water supply

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation/Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Surface Water Consumption.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure availability of water for various uses as and when required.</li> <li>To ensure that water usage is minimized.</li> <li>To conserve water resources at all times.</li> <li>To encourage a 3R (Reduce, Reuse, Recycle).</li> </ul>	<ul style="list-style-type: none"> <li>NWA (36 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>Water conservation through reducing reusing and recycling must be implemented throughout.</li> <li>Transnet must make provision for drinking water.</li> </ul>	<ul style="list-style-type: none"> <li>Water consumption records.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>Contractor.</li> </ul>	<ul style="list-style-type: none"> <li>On-going during the construction phase.</li> </ul>

### 8.2.6. Movement of construction personnel and equipment

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impact on sensitive environs.</li> <li>Trespassing</li> </ul>	<ul style="list-style-type: none"> <li>To ensure controlled and managed movement of personnel and equipment.</li> </ul>	<ul style="list-style-type: none"> <li>NEMA (107 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor must ensure that all construction personnel, labourers, and equipment always remain within the demarcated construction sites.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report.</li> <li>Security registers.</li> <li>Complaints register.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>Contractor.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous throughout the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Safety and security.</li> </ul>			<ul style="list-style-type: none"> <li>Where construction personnel move outside the boundaries of the site, the Contractor/labourers must obtain permission from the EO.</li> <li>All equipment moved on- or off-site is subject to the legal requirements as well as Transnet specifications for the transport of such equipment. The Contractor must meet these safety requirements under all circumstances.</li> <li>All equipment transported must be clearly labelled as to their potential hazards according to specifications.</li> <li>All the required safety labelling on the containers and trucks used must be adhered to.</li> <li>The Contractor must ensure that all the necessary precautions against damage to</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>the environment and injury to persons are taken in the event of an accident and shall provide a Method statement to that effect.</p> <ul style="list-style-type: none"> <li>The Contractor must ensure that no machinery, personnel, material, or equipment enters 'No-Go' areas.</li> </ul>			

**8.2.7. Protection of flora and fauna**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impacts on vegetation and listed or protected species.</li> <li>Direct faunal impacts</li> </ul>	<ul style="list-style-type: none"> <li>To conserve vegetation.</li> <li>To ensure the control of alien invasive species and to ensure that rehabilitation is as close as possible to the original state.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: BA (10 of 2004).</li> </ul>	<ul style="list-style-type: none"> <li>Preconstruction environmental induction for all construction staff on-site to ensure that basic environmental principles are adhered to. This includes topics such as waste management, handling of pollution and chemical</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report</li> <li>Complaints register.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous during the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Loss of vegetation and habitat types</li> </ul>			<p>spills, fire hazards, wildlife interactions, etc.</p> <ul style="list-style-type: none"> <li>Avoid areas of Very High and High avifaunal sensitivity.</li> <li>Demarcate all areas to be cleared with construction tape or other appropriate and effective means. Caution must be exercised to avoid using material that might harm fauna.</li> <li>All vehicles must stay within the demarcated tracks or roads.</li> <li>To avoid impacts on the estuary, all spills of hazardous material must be cleared according to the nature and identity of the spill and all contaminated soil removed from the site.</li> <li>Avoid sensitive faunal habitats such as the ornithological hot spot.</li> <li>Weed eradication and control must be actively managed during the</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>construction, operational, and decommissioning phases.</p> <ul style="list-style-type: none"> <li>• All areas disturbed during construction must be monitored regularly to ensure the re-establishment of natural vegetation and to monitor signs of erosion (these should be restored as soon as possible).</li> <li>• Avoid any disturbance to the No-Go habitats, i.e., the Ornithological hot spot.</li> <li>• Minimise the physical destruction of any remaining primary vegetation.</li> </ul>			

### 8.2.8. Heritage / Archaeological sites

Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Destruction of sites of archaeological and heritage significance.</li> <li>• Loss of historic cultural landscape.</li> <li>• Loss of heritage value due to change in land use.</li> </ul>	<ul style="list-style-type: none"> <li>• To preserve any heritage, cultural or archaeological sites that might be encountered during the construction phase.</li> <li>• Protection of known sites against destruction, vandalism, and theft.</li> <li>• Preservation and appropriate management of any new archaeological sites should this be discovered during construction.</li> </ul>	<ul style="list-style-type: none"> <li>• NHRA (25 of 1999)</li> </ul>	<p>Phase 1 Archaeological and Cultural Heritage identified no significant cultural or archaeological impacts on the footprint of the proposed area. Though there are no significant archaeological materials identified on the footprint of the proposed site; several structures scarred across the proposed area were noted. These structures are however of low significance since they are less than 60 years old and do not possess any social or aesthetic value.</p> <p>However, the following general conditions must be adhered to:</p> <ul style="list-style-type: none"> <li>• Should any archaeological material be unearthed accidentally during the course of construction (e. g. excavation), KwaZulu-Natal Amafa and Research Institute should be alerted immediately, and</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO;</li> <li>• CEO; and</li> <li>• Archaeologist.</li> </ul>	<ul style="list-style-type: none"> <li>• On-going during all excavations.</li> </ul>

Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>construction activities be stopped within a radius of at least 10m of such indicator.</p> <ul style="list-style-type: none"> <li>• A chance find procedure must be developed and/or included in the Method Statement and adhered to.</li> <li>• If any archaeological material (e.g., fossils, bones, artefacts, etc.) is found during excavation, the Contractor shall stop work immediately and inform the ECO and Transnet.</li> <li>• The area should then be demarcated by a danger tape.</li> <li>• A professional archaeologist or and SAHRA should be contacted immediately to arrange for a registered heritage specialist for inspection, and if necessary, excavate the material, subject to acquiring the necessary approval.</li> <li>• If required, it will be the responsibility of the EO and Contractor to protect</li> </ul>			

Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>the site from publicity (i.e., media) until a mutual agreement between the client and the consultant is reached.</p> <ul style="list-style-type: none"> <li>• The Contractor shall not recommence working in that area until written permission has been received from Amafa.</li> <li>• Under no circumstances may any heritage material be destroyed or removed from the site until the necessary approval has been obtained from Amafa. Should any remains be found on site (potential human remains) the South African Police Services (SAPS) must be contacted.</li> <li>• Any measure to cover up the suspected archaeological material or to collect any resources is illegal and punishable by law under Section 35(4) and 36(3) of the NHRA, Act 25 of 1999.</li> </ul>			



Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>The developer must induct field workers about archaeology, and steps that should be taken in the case of exposing archaeological materials. This induction must include information on:                             <ul style="list-style-type: none"> <li>Flaked stone tools, bone tools, and loose pieces of flaked stone;</li> <li>Ash and charcoal;</li> <li>Bones and shell fragments;</li> <li>Artefacts (e.g., beads or hearths)</li> </ul> </li> </ul>			

**8.2.9. Servicing and re-fuelling of construction equipment**

Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria/ Performance Indicator	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impact on soil and estuary due to accidental spillages.</li> </ul>	<ul style="list-style-type: none"> <li>To preserve soils, surface, and groundwater.</li> <li>To prevent spillages of hazardous substances.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: WA (59 of 2008);</li> <li>NWA (36 of 1998); and</li> </ul>	<p>During the construction phase, the maintenance of construction materials and equipment may lead to environmental degradation and pollution. Therefore, the following</p>	<ul style="list-style-type: none"> <li>On-going monitoring with regular inspections; and Service Records.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>On-going during the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria/ Performance Indicator	Responsible Agent	Monitoring Frequency
		<ul style="list-style-type: none"> <li>OHS Act (85 of 1993).</li> </ul>	<p>mitigation measure must be adhered to:</p> <ul style="list-style-type: none"> <li>All maintenance and repair work must be conducted within an area designated for this purpose and equipped with necessary pollution containment measures.</li> <li>Refuelling, greasing, or oiling of vehicles and construction machinery must be done on a drip tray or bunded surface.</li> <li>Effective drip trays must always be placed under stationary construction vehicles and machinery.</li> <li>Vehicles or equipment with leaks or causing spills must be prohibited on site.</li> <li>Fuel required during construction must be stored at a central depot that must be located on a slab and be contained within a bund capable of</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria/ Performance Indicator	Responsible Agent	Monitoring Frequency
			containing at least 110% of the total volume in the containers. <ul style="list-style-type: none"> <li>• Temporary fuel storage tanks and transfer areas must be located on a bunded surface to contain accidental spillages.</li> <li>• Transnet must be responsible for ensuring that any party delivering potentially dangerous chemicals and oil to the site is aware of the appropriate storage and drop-off locations and procedures.</li> </ul>			

**8.2.10. Waste management**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Visual Impact</li> <li>• Water resources contamination</li> <li>• Land pollution</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure the efficient management of waste on-site.</li> </ul>	<ul style="list-style-type: none"> <li>• NEM:WA(59 of 2008); and</li> <li>• NWA (36 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>• Transnet must implement a waste management strategy during the construction phase.</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection Report</li> <li>• Waste Disposal Records</li> </ul>	<ul style="list-style-type: none"> <li>• ECO; and</li> <li>• CEO.</li> </ul>	<ul style="list-style-type: none"> <li>• Daily throughout construction</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
	<ul style="list-style-type: none"> <li>To ensure minimal waste impacts on the surrounding environment.</li> <li>Minimise waste material being strewn in the environment.</li> </ul>		<ul style="list-style-type: none"> <li>The Contractor must prepare a Waste Management Method Statement for approval by the ECO.</li> <li>Waste management must form part of the induction process to ensure that all workers on site have a full understanding of all practices involved with proper waste management.</li> </ul> <p><b>Solid Waste Management:</b></p> <ul style="list-style-type: none"> <li>Waste must be separated at source (e.g., general, scrap metals, and hazardous waste).</li> <li>An adequate number of scavenger-proof refuse bins must be provided at the construction site and must be clearly labelled (general/ hazardous, etc.) according to waste streams.</li> <li>All waste must be transported appropriately and disposed of at a licensed waste disposal facility.</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>Proof of safe disposal must be kept on site.</p> <ul style="list-style-type: none"> <li>• The Contactor may not dispose of any waste and/or construction debris by burning or burying it.</li> <li>• Waste bins must be emptied on-call based on inspection such that they do not overflow.</li> <li>• The Contractor must maintain 'good housekeeping practices and ensure that all work sites and the construction camp are kept tidy and litter-free.</li> </ul> <p><b>8.2.10.1. Liquid Waste Management:</b></p> <ul style="list-style-type: none"> <li>• An adequate number of suitable waste containers with lids must be provided at the construction site.</li> <li>• All waste must be transported appropriately and disposed of at a licensed waste disposal site.</li> </ul>			

### 8.2.11. Surface water management

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Contamination of the estuary.</li> <li>• Mobilisation of sediment and suspended solids into the water column during driving of piles and sheet piles.</li> <li>• Wash-out of suspended solids and sediments from the fill material.</li> <li>• Water quality impact of the nearshore.</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure that the estuary is protected and incur minimal negative impact from the development.</li> </ul>	<ul style="list-style-type: none"> <li>• NWA (36 of 1998).</li> </ul>	<p>The following mitigation measures must be implemented in relation to the estuary:</p> <ul style="list-style-type: none"> <li>• If possible, schedule works when tides, currents, and waves will be most favourable for minimising disturbance and spread of sediments and disturbed materials.</li> <li>• The Contractor must take reasonable precautions to prevent the pollution of surface water resources as a result of construction activities.</li> <li>• No spills may be hosed/disposed of into the surrounding natural environment.</li> <li>• An emergency spill response plan must be provided and approved in case of spills (or accidents that may cause spills) of fuel or oil or other contaminants into the estuary;</li> <li>• All machinery should be readily serviced and inspected for leaks. Machinery needing repairs should not</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection Report; and</li> <li>• Design Plans.</li> </ul>	<ul style="list-style-type: none"> <li>• CEO; and</li> <li>• ECO.</li> </ul>	<ul style="list-style-type: none"> <li>• Continuous through the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>be used for construction at the site until repaired and fully operational.</p> <ul style="list-style-type: none"> <li>• Any work or maintenance on the machinery should be done far away from the watercourse, preferably in a work yard or on a concrete surface;</li> <li>• Refuelling of the machinery must take place away from the watercourse and on a concrete surface to prevent seepage</li> <li>• All machinery should be parked off-site, and away from the edge of the watercourse when not in use; and</li> <li>• Should fuel be stored on-site, this must be done in an area enclosed by bunded walls with proper drainage facilities.</li> </ul>			

### 8.2.12. Groundwater management

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Groundwater contamination through seepage of hazardous spillages.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure the protection of groundwater.</li> </ul>	<ul style="list-style-type: none"> <li>NWA (36 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>All contaminated soil must be excavated to the depth of contaminant penetration, placed in suitable drums/containers, and removed to a hazardous waste facility.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>CEO; and</li> <li>ECO.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous through the construction phase.</li> </ul>

### 8.2.13. Hazardous materials

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impact on soils and water resources.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure safe and proper handling of hazardous material.</li> </ul>	<ul style="list-style-type: none"> <li>OHSA (85 of 1993).</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor must comply with all National, Regional and Local legislations regarding the storage, transport, use, and disposal of petroleum, chemical, harmful and hazardous substances, and materials.</li> <li>Equipped spill kits must always be made available on site.</li> </ul>	<ul style="list-style-type: none"> <li>Hazardous material data sheet</li> <li>Incident reports.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous throughout the construction phase.</li> </ul>



Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>• The Contractor EO must conduct training and education of all personnel on-site who will be managing the material. This training should include the proper use, handling, and disposal of hazardous materials.</li> <li>• Storage of all hazardous material must be safe, tamper proof and under strict access control.</li> <li>• All hazardous containers must be marked to indicate contents, quantities, and safety requirements,</li> <li>• Exercise extreme care with the handling of diesel and other toxic solvents to ensure that spillage is avoided.</li> <li>• Any accidental chemical/fuel spills must be remediated immediately.</li> <li>• The management of chemicals and hydrocarbons must form part of the emergency preparedness and response program. No activities</li> </ul>			

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>associated with hydrocarbons and or chemicals (i.e., wash bays etc.) may be undertaken outside of an effectively designed contained area.</p> <ul style="list-style-type: none"> <li>• Suitably qualified safety officers must undertake regular safety checks and maintenance of the storage tanks.</li> <li>• In addition, the storage tanks, and any other areas where spillages and leakages could occur must be contained within a bunded area.</li> <li>• All construction materials liable to spillage must be stored in appropriate structures with impermeable flooring.</li> <li>• In the case of pollution of any surface water resources i.e., Estuary, DWS must be notified within 24 hours of such occurrence.</li> <li>• Provide bins for construction workers and staff at appropriate locations, particularly where food is consumed.</li> </ul>			

### 8.2.14. Oil Spill Management

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Soil structure contamination due to waste contamination and spillages being created during the construction activities</li> <li>• Spillages of hydrocarbons or any other chemical could lead to surface water pollution.</li> </ul>	<ul style="list-style-type: none"> <li>• To avoid ground and surface water contamination</li> <li>• To ensure proper and safe handling of oil spillages.</li> </ul>	<ul style="list-style-type: none"> <li>• OHS Act (85 of 1993).</li> </ul>	<ul style="list-style-type: none"> <li>• Oil management must form part of the induction process together with the incident management system including procedures and training for dealing with incidents.</li> <li>• No activities associated with hydrocarbons and or chemicals (i.e., wash bays etc.) may be undertaken outside of an effectively designed contained area.</li> <li>• All spills must be reported to the ECO immediately.</li> <li>• Major spillage incidents must be reported to the DFFE Ocean and Coast (where applicable). Appropriate remedial measures must then be implemented in consultation with these regulatory authorities.</li> <li>• The Contractor must always be in possession of a mobile oil spill kit.</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection Report.</li> <li>• Incident report.</li> </ul>	<ul style="list-style-type: none"> <li>• ECO; and</li> <li>• CEO.</li> </ul>	<ul style="list-style-type: none"> <li>• On-going during the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>The oil spill procedure and emergency preparedness plan must be implemented.</li> </ul>			

**8.2.15. Stormwater Management**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Contamination of the estuary due to contaminated stormwater.</li> <li>Water quality impact of the nearshore due to contaminated stormwater.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure proper management of stormwater run-off that causes erosion and siltation/sedimentation.</li> <li>To reduce the potential impact of runoff in sensitive areas to reduce the potential impact.</li> </ul>	<ul style="list-style-type: none"> <li>NWA (36 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor must ensure that rainwater pollutants from construction activities do not run off into natural areas and thus result in potential pollution.</li> <li>Stormwater must be diverted from the construction works possible into a containment facility but not into the surface water resources.</li> <li>Stormwater management measures must be as per the Stormwater Management Method Statement prepared by the Contractor for ECO and approved by TEO.</li> </ul>	<ul style="list-style-type: none"> <li>Site Plan; and</li> <li>Design Plans.</li> </ul>	<ul style="list-style-type: none"> <li>CEO;</li> <li>TEO; and</li> <li>ECO.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous through the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>• Increased runoff due to vegetation clearance and/or soil compaction must be managed, and steps must be taken to ensure that stormwater does not lead to excessive levels of silt entering the nearby watercourses.</li> <li>• Stormwater leaving the construction site must not be contaminated by any substance, whether solid, liquid, or gas.</li> <li>• Stormwater management systems must be constructed, operated, and maintained suitably throughout the project.</li> <li>• Erosion control measures must be put in place to control storm water runoff.</li> <li>• Stormwater management measures must be as per approved Storm Water Management Plan.</li> </ul>			

### 8.2.16. Fire

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Destruction of property.</li> <li>• Loss of life.</li> </ul>	<ul style="list-style-type: none"> <li>• To prevent open fires.</li> <li>• To ensure that the workforce is aware of emergency procedures in the event of an incident.</li> </ul>	<ul style="list-style-type: none"> <li>• NEMA (107 of 1998); and</li> <li>• OHSA (85 of 1993)</li> </ul>	<ul style="list-style-type: none"> <li>• A fire management Method Statement must be put in place by the Contractor. The Method Statement must be accepted by the ECO and TEO.</li> <li>• Fuels or chemicals must be stored at the designated storage area.</li> <li>• Gas and liquid fuels must not be stored in the same storage area.</li> <li>• Serviced fire-fighting equipment must always be made available and accessible and routinely inspected.</li> <li>• No open fires for heating or cooking will be permitted on site unless approved by the ECO and Transnet and only in designated areas.</li> <li>• Designated smoking areas must be provided, with special bins for discarding cigarette stumps.</li> <li>• Fire incidence must be reported to the ECO immediately.</li> <li>• Firebreaks must be put in place.</li> </ul>	<ul style="list-style-type: none"> <li>• Fire Management Plan</li> <li>• Daily checks</li> </ul>	<ul style="list-style-type: none"> <li>• ECO;</li> <li>• Contractor; and</li> <li>• CEO</li> </ul>	<ul style="list-style-type: none"> <li>• On-going throughout the construction phase.</li> </ul>

### 8.2.17. Air Pollution

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Dust emissions resulting from the movement of vehicles during construction.</li> <li>Increase in rainfall which will lead to increased flood events and a rise in sea level.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure proper mitigation of air pollution.</li> <li>To avoid dust nuisance from construction.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: AQ (39 of 2004);</li> <li>National Dust Control Regulations;</li> </ul>	<ul style="list-style-type: none"> <li>In the case of use of gravel roads, dust suppression must be implemented daily.</li> <li>It is recommended that the engineers responsible, must select the design best suited to withstand rising sea levels and an increased likelihood of flood events.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Complaints register.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO</li> </ul>	<ul style="list-style-type: none"> <li>On-going throughout the construction phase.</li> </ul>

### 8.2.18. Noise impact

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Construction phase will generate noise</li> </ul>	<ul style="list-style-type: none"> <li>To ensure minimal noise disturbance</li> </ul>	<ul style="list-style-type: none"> <li>Noise Control</li> </ul>	<p>The following mitigation measures must be adhered to:</p>	<ul style="list-style-type: none"> <li>Noise monitoring.</li> </ul>	<ul style="list-style-type: none"> <li>CEO; and</li> <li>ECO.</li> </ul>	<ul style="list-style-type: none"> <li>On-going throughout the</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<p>from the following activities:</p> <ul style="list-style-type: none"> <li>• Site clearing and grubbing of footprint</li> <li>• Earthmoving activities</li> <li>• Excavation/drilling of foundations and associated activities.</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure proper mitigation measures of noise.</li> <li>• To avoid noise nuisance from operating construction equipment.</li> </ul>	<p>Regulations (ECA); and</p> <ul style="list-style-type: none"> <li>• SANS 10103 of 2008.</li> </ul>	<ul style="list-style-type: none"> <li>• Machinery with noise levels that complies with the manufacturer's specifications must be used.</li> <li>• Construction activities must take place during daytime period only.</li> <li>• Implement noise monitoring quarterly to ensure that construction noise is within acceptable standards.</li> <li>• Noise associated with the construction activities must be mitigated by limiting the construction operation to business hours.</li> <li>• Where noise becomes a nuisance, management measures must be investigated and implemented to address these.</li> <li>• Offending machinery and vehicles must be banned from use on-site until they have been repaired.</li> <li>• Install silencers for fans. Use mufflers on engine exhausts and</li> </ul>	<ul style="list-style-type: none"> <li>• A register of complaints.</li> </ul>		<p>construction phase.</p>



Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>compressor components. Use vibration isolation for mechanical equipment.</p> <ul style="list-style-type: none"> <li>Any complaints pertaining to noise must be recorded and reported to the ECO and addressed accordingly.</li> <li>Workers must be provided with hearing protection as and when required.</li> </ul>			

**8.2.19. Visual impact**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Negatively impacting the visual quality as a result of construction machinery.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure proper mitigation measures of potential visual impacts.</li> <li>To maintain the site's aesthetics.</li> </ul>	NEMA (107 of 1998)	<ul style="list-style-type: none"> <li>Storage facilities and other temporary structures on site must be located in a manner that they have as little visual impact on residents as possible.</li> <li>The site must be clean and tidy at all times.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Complaints register.</li> </ul>	<ul style="list-style-type: none"> <li>ECO;</li> <li>Contractor; and</li> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>On-going during the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>Screen the construction site and lay down yards by enclosing the entire area with a dark green or black shade cloth on less than 2m height.</li> <li>All temporary structures placed on site for the project's construction phase must be removed upon completion of the project.</li> <li>Lighting must be sufficient to ensure security but will not constitute 'light pollution' to the surrounding areas.</li> </ul>			

**8.2.20. Traffic impact**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Possible traffic increase.</li> <li>Car accident.</li> <li>Impact on road safety, congestion,</li> </ul>	<ul style="list-style-type: none"> <li>To maximise road safety and minimise congestion.</li> <li>To ensure that traffic impacts as a result of the</li> </ul>	<ul style="list-style-type: none"> <li>NLTA (5 of 2009).</li> </ul>	<ul style="list-style-type: none"> <li>Effective traffic control must take place throughout the construction phase.</li> <li>The Contractor must maintain access roads. Furthermore, access</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Complaints register.</li> </ul>	<ul style="list-style-type: none"> <li>CEO; and</li> <li>ECO.</li> </ul>	<ul style="list-style-type: none"> <li>On-going during the construction phase.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
wear and tear of the road surface.	construction-related activities are minimized.		<p>roads to the site must be of suitable quality to eliminate soil erosion and channel stormwater. Where possible strategic positioning of entry and exit points must be established to ensure as negligible impact/ effect as possible on the traffic flow.</p> <ul style="list-style-type: none"> <li>• Monitor adherence to traffic regulations.</li> <li>• Monitor drivers for use of alcohol and other substances that could impair judgment and driving.</li> <li>• Ensure that loads on trucks are properly secured during transport.</li> <li>• Schedule arrival and departure of heavy vehicles to avoid morning and afternoon peak hours.</li> <li>• Speed limit within the construction area should be limited to &lt;40km/hour.</li> </ul>			

### 8.2.21. Excavation and Groundworks

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Erosion.</li> <li>Injury to humans and animals.</li> </ul>	<ul style="list-style-type: none"> <li>To prevent erosion.</li> <li>To ensure safety for both humans and animals.</li> </ul>	<ul style="list-style-type: none"> <li>OHSA (85 of 1993); and</li> <li>NEMA (107 of 1998).</li> </ul>	<p>While working in areas prone to erosion, the following must be adhered to:</p> <ul style="list-style-type: none"> <li>Excavations must not be left open for longer than 14 days without soil protection measures, or infilling.</li> <li>Excavations must always be barricaded/ fenced off.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Incident report.</li> </ul>	<ul style="list-style-type: none"> <li>CEO;</li> <li>ECO;</li> <li>and</li> <li>TEO</li> </ul>	<ul style="list-style-type: none"> <li>On-going excavations.</li> </ul>

### 8.2.22. Erosion and Control

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Impact on soils and habitats and sensitive environs.</li> <li>Compaction of soil, leading to increased runoff rate.</li> </ul>	<ul style="list-style-type: none"> <li>To prevent erosion and sedimentation.</li> </ul>	<ul style="list-style-type: none"> <li>NWA (36 of 1998).</li> </ul>	<p>Any erosion problems must be rectified as soon as possible using the appropriate re-vegetation and erosion control works.</p> <ul style="list-style-type: none"> <li>The Contractor must protect areas susceptible to erosion by installing necessary temporary and/or</li> </ul>	<ul style="list-style-type: none"> <li>Complaints register; and</li> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>CEO; and</li> <li>ECO.</li> </ul>	<ul style="list-style-type: none"> <li>On-going particularly during excavations.</li> </ul>

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>permanent drainage and by taking suitable measures to prevent surface water concentration into nearby roadways.</p> <ul style="list-style-type: none"> <li>• Stripped topsoil must be stockpiled separately from the subsoil and rocky material. The soil must be stripped in a phased manner to retain vegetation cover for as long as possible.</li> <li>• Stockpiled topsoil must not be compacted and must be reused as the final soil layer.</li> <li>• Topsoil stockpiles must not be contaminated with oil, diesel, petrol, or waste, which may inhibit the later growth of vegetation and micro-organisms in the soil.</li> <li>• The timing of clearing and grubbing must be coordinated as much as possible to avoid prolonged exposure of soils to wind and water erosion.</li> <li>• If topsoil will be stockpiled for a longer period, it must be either vegetated</li> </ul>			

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>with indigenous grasses or covered with a suitable material to prevent erosion and invasion by weeds.</p> <ul style="list-style-type: none"> <li>• To limit the introduction of alien species into the area, no soil may be imported onto the site.</li> <li>• Where required, cut-off trenches can be installed to divert substantial run-off and prevent erosion as and when necessary.</li> <li>• Where new roads are constructed, water diversion berms must be constructed to prevent erosion.</li> <li>• Topsoil and subsoil stripping must be conducted up to a suitable depth for construction purposes, at least 400mm. Different soils must be stockpiled separately in designated areas.</li> <li>• All re-vegetated areas must be monitored to ensure the successful re-establishment of natural</li> </ul>			

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>vegetation and to prevent invasion by alien species.</p> <ul style="list-style-type: none"> <li>• Vegetation and soil must be retained in position for as long as and wherever possible, and only removed immediately ahead of construction/earthworks in that area (DWAF, 2005).</li> <li>• Runoff from roads must be managed to avoid erosion and pollution problems.</li> <li>• All areas susceptible to erosion must be protected (e.g., silt screens, sandbags, swales, hay bales, etc.) and ensure that there is no undue soil erosion resultant from activities within and adjacent to the construction camp and or work areas.</li> <li>• Areas exposed to erosion due to construction must be vegetated with appropriate species naturally occurring in the area.</li> </ul>			

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>Surface water or stormwater must not be allowed to concentrate, or flow down cut or fill slopes without erosion protection measures being put in place.</li> </ul>			

**8.2.23. Use of cement and concrete**

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Soil, surface, and groundwater pollution.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure the protection of soils, surface, and groundwater.</li> <li>To minimise waste concrete from polluting the environment.</li> </ul>	<ul style="list-style-type: none"> <li>NEMA (107 of 1998)</li> <li>NEM: WA (59 of 2003)</li> </ul>	<p>Cement is considered hazardous to the natural environment due to its high pH and the chemicals contained therein.</p> <p>To avoid pollution of the environment, the following must be implemented:</p> <ul style="list-style-type: none"> <li>Pre-mix concrete must be the preferred option where possible.</li> <li>If concrete mixing is undertaken on site, the batching / mixing area must be properly designated, indicated on</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report; and</li> <li>Site Plan.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>Throughout the construction phase.</li> </ul>



Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			the site plan, and always kept neat and tidy. <ul style="list-style-type: none"> <li>No batching / mixing activities must be conducted on a permeable surface or bare ground.</li> <li>Unused cement bags must be stored separately from other wastes and disposed of appropriately.</li> </ul>			

**8.2.24. Social Impact**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Influx of jobseekers into the area where they see construction activities starting</li> <li>Inflow of Temporary workers.</li> </ul>	<ul style="list-style-type: none"> <li>Promote local employment.</li> </ul>		<ul style="list-style-type: none"> <li>Encourage the Contractor to increase the local procurement practices and promote the employment of people from local communities, as far as feasible, to maximise the benefits to the local economies.</li> <li>Engage with local authorities and business organisations to investigate the possibility of procuring</li> </ul>	<ul style="list-style-type: none"> <li>HR Record.</li> </ul>	<ul style="list-style-type: none"> <li>PM.</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing.</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>construction materials, goods, and products from local suppliers where feasible.</p> <ul style="list-style-type: none"> <li>• Sub-contract to local construction companies particularly SMME's and BBBEE compliant and women-owned enterprises where possible.</li> <li>• Use local suppliers where feasible and arrange with the local SMME's to provide transport, catering, and other services to the construction crews.</li> <li>• Where possible, local labour should be considered for employment to increase the positive impact on the local economy.</li> <li>• Recruit local labour as far as feasible to increase the benefits to the local households.</li> <li>• If possible, set up a recruitment office in Richards Bay and adhere to strict labour recruitment practices that would reduce the desire of potential job seekers to loiter around the</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>properties in the hope of finding temporary employment.</p> <ul style="list-style-type: none"> <li>• Control the movement of workers between the site and areas of residence to minimise loitering around the site. This should be done through the provision of scheduled transportation services between the construction site and area of residence.</li> <li>• Establish a management forum comprising key stakeholders to monitor and identify potential problems that may arise due to the influx of job seekers to the area.</li> <li>• Ensure that any damages or losses to nearby buildings or recreational facilities that can be linked to the conduct of construction workers are adequately reimbursed.</li> <li>• Assign a community liaison officer to deal with complaints and concerns of affected parties.</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>• Provide adequate signage along relevant road networks to warn the motorists of the construction activities taking place on the site.</li> <li>• Engage with local authorities and inform them of the development as well as discuss with them their ability to meet the additional demands on social and basic services created by the in migration of workers.</li> <li>• As far as possible, local small and medium enterprises should be approached to investigate the opportunities for supply inputs required for the maintenance and operation of the helipad and related infrastructure.</li> <li>• The developer should consider establishing vocational training programmes for the local labour force to promote the development and transfer of skills.</li> </ul>			

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>A social development and economic development programme should be devised by the developer throughout the project's lifespan.</li> </ul>			

### 8.2.25. Construction Site clean-up and rehabilitation

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>Erosion</li> <li>Spread of alien invasive plant species</li> </ul>	<ul style="list-style-type: none"> <li>To conserve soils, surface, and groundwater.</li> <li>To minimise waste concrete from polluting the environment.</li> </ul>	<ul style="list-style-type: none"> <li>NEMA (107 of 1998)</li> <li>NEM:BA (10 of 2004)</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor must ensure that all temporary structures, materials, waste, and facilities used for construction activities are removed upon completion of the project.</li> <li>Fully rehabilitate all disturbed areas according to an approved rehabilitation plan.</li> <li>All replaced equipment and excess gravel, stone, concrete, bricks, temporary fencing, and the like must be removed from the site upon completion of the work.</li> </ul>	<ul style="list-style-type: none"> <li>Rehabilitation Plan; and</li> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>ECO; and</li> <li>CEO.</li> </ul>	<ul style="list-style-type: none"> <li>On completion of construction</li> </ul>

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>No waste materials of any nature shall be buried on site or on any other land within the site.</li> <li>The Contractor must dispose of all excess material from site at a registered disposal facility.</li> <li>Reusable material must be taken off site and reused elsewhere.</li> </ul>			

**8.3. OPERATIONAL ENVIRONMENTAL MANAGEMENT PROGRAMME**

Possible Impact	Objective	Applicable Legislation/ Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>The use of diesel, oil and other hazardous chemical substances may lead to the contamination of soils.</li> </ul>	<ul style="list-style-type: none"> <li>To prevent contamination of soil.</li> </ul>	<ul style="list-style-type: none"> <li>CARA (43 of 1983).</li> <li>NEMA (107 of 1998).</li> <li>NEM:WA (59 of 2008).</li> <li>OHSA (85 of 2003).</li> </ul>	<p><b>8.3.1.1. Waste Management</b></p> <ul style="list-style-type: none"> <li>Disposal of waste must be conducted in accordance with relevant legislative requirements.</li> </ul> <p><b>8.3.1.2. Health and Safety</b></p> <ul style="list-style-type: none"> <li>Safety and security issues must be addressed as a priority in accordance with Transnet’s policies.</li> </ul>	<ul style="list-style-type: none"> <li>Incident report.</li> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing.</li> </ul>

			<p><b>8.3.1.3. Stormwater management</b></p> <ul style="list-style-type: none"> <li>• Ensure the diversion of contaminated stormwater away from the estuary.</li> </ul> <p><b>8.3.1.4. Noise control</b></p> <ul style="list-style-type: none"> <li>• Helicopter Flight schedules should be communicated to the affected nearby residents. Any deviation to flight must be communicated to the affected.</li> <li>• All hydrocarbons must be stored in designated, bunded areas with a capacity of at least 110% of the volume stored.</li> <li>• Spill kits must be readily available, and all employees must be trained in the utilisation thereof.</li> <li>• Should a spill take place the area should be cleaned immediately, and the contaminated area must be rehabilitated as appropriate. In the event of a major spill that could result in major soil and water contamination the DWS must be informed immediately, and a remediation strategy should be enforced.</li> <li>• Employees must be educated by means of training and the Environmental Awareness Plan to</li> </ul>			
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Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<p>make them aware of the necessity to prevent spillages by the implementation of good housekeeping practices.</p> <ul style="list-style-type: none"> <li>The management of chemicals and hydrocarbons must form part of the emergency preparedness and response programme.</li> </ul>			
<ul style="list-style-type: none"> <li>The utilisation of hydrocarbons and other chemicals during the removal of buildings or infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>To prevent soil contamination.</li> <li>To prevent contamination into the Estuary.</li> </ul>	<ul style="list-style-type: none"> <li>NEM:WA (107 of 1998).</li> <li>NWA (36 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>All hydrocarbons should be stored in designated, bunded areas with a capacity of at least 110% of the volume stored.</li> <li>Should a spill take place in the demolition area, the area should be cleaned immediately, and the contaminated area be rehabilitated appropriately.</li> <li>Employees must be trained on the Environmental Awareness Plan to make them aware of the necessity to prevent spillages by the implementation of good housekeeping practices.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>During operation</li> </ul>



Possible Impact	Objective	Applicable Legislation/Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>• The management of chemicals and hydrocarbons should form part of the emergency preparedness and response procedure.</li> <li>• In the event of a major spill that could cause major soil and water contamination, the DWS, DFFE and Coastal and oceans should be informed immediately, and a remediation strategy should be enforced.</li> <li>• No activities associated with hydrocarbons and or chemicals (i.e., wash bays etc.) may be undertaken outside of an effectively designed contained area.</li> </ul>			

**8.4. DECOMMISSIONING PHASE ENVIRONMENTAL MANAGEMENT PROGRAMME**

It should be noted that decommissioning at the time of this EMPr compilation will be in the form of demolition of some of the existing infrastructures to facilitate the successful upgrading of the Transnet Helipad and the associated infrastructures. Therefore, in this report, decommissioning will be referred to as Demolition.

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<b>Waste</b>						
<ul style="list-style-type: none"> <li>The removal of all infrastructures such as buildings may lead to contamination of the nearby water resource (Estuary and Ocean)</li> </ul>	<ul style="list-style-type: none"> <li>To prevent soil contamination.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: WA (59 of 2008).</li> <li>GN1147</li> </ul>	<ul style="list-style-type: none"> <li>The detailed waste management strategy must be implemented during construction and operation must also be implemented during the Decommissioning Phase.</li> <li>Transnet must ensure that waste is removed and disposed of in a prescribed and correct manner.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>TEO</li> </ul>	<ul style="list-style-type: none"> <li>During demolition.</li> </ul>
<b>Hazardous substances</b>						
<ul style="list-style-type: none"> <li>The utilisation of hydrocarbons and other chemicals during the removal of buildings or infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>To prevent soil contamination.</li> <li>To prevent contamination into the Estuary.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: WA (107 of 1998).</li> <li>NWA (36 of 1998).</li> </ul>	<ul style="list-style-type: none"> <li>All hydrocarbons should be stored in designated, banded areas with a capacity of at least 110% of the volume stored.</li> <li>Should a spill take place in the demolition area, the area should be cleaned immediately, and the contaminated area is rehabilitated appropriately.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>During demolition</li> </ul>

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>• Employees must be trained on the Environmental Awareness Plan to make them aware of the necessity to prevent spillages by the implementation of good housekeeping practices.</li> <li>• The management of chemicals and hydrocarbons should form part of the emergency preparedness and response procedure.</li> <li>• In the event of a major spill that could cause major soil and water contamination, the DWS, DFFE, and Coastal and oceans should be informed immediately, and a remediation strategy should be enforced.</li> <li>• No activities associated with hydrocarbons and or chemicals (i.e., wash bays, etc.) may be undertaken outside of an</li> </ul>			

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			effectively designed contained area.			
<b>Estuary</b>						
<ul style="list-style-type: none"> <li>Removal of infrastructure may lead to the destruction and disturbance of the ocean or an estuary</li> </ul>	<ul style="list-style-type: none"> <li>To prevent disturbances to wetlands.</li> </ul>	<ul style="list-style-type: none"> <li>NWA (36 of 1998)</li> <li>NEM: BA (10 of 2004).</li> </ul>	<ul style="list-style-type: none"> <li>The Contractor must ensure that there is no disturbance to the estuary.</li> <li>No stockpiling of decommissioned materials near the estuary.</li> </ul>	<ul style="list-style-type: none"> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>Contractor; and</li> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>During demolition</li> </ul>
<b>Ecology (Flora and fauna)</b>						
<ul style="list-style-type: none"> <li>Increase in alien invasive species. Due to the removal of infrastructure activities, the potential for the spreading of invasive alien plant species increases.</li> </ul>	<ul style="list-style-type: none"> <li>To prevent the distribution of alien invasive species.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: BA (10 of 2004).</li> </ul>	<ul style="list-style-type: none"> <li>Transnet will maintain a regular weed-control program to eradicate existing invader plants and to prevent new invasions during ongoing operations and decommissioning.</li> </ul>	<ul style="list-style-type: none"> <li>Alien Invasive Management Plan.</li> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>During demolition</li> </ul>
<b>Surface water</b>						

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
<ul style="list-style-type: none"> <li>• Mobilisation of sediment and suspended solids into the water column during driving of piles and sheet piles.</li> <li>• Water quality impact of the nearshore.</li> <li>• Contamination of surface water due to the generation of waste during the removal of infrastructure and the use of hydrocarbons.</li> </ul>	<ul style="list-style-type: none"> <li>• To ensure that the estuary is protected and incurs minimal negative impact from the development.</li> </ul>	<ul style="list-style-type: none"> <li>• NWA (36 of 1998).</li> </ul>	<p>The following mitigation measures must be implemented in relation to the estuary:</p> <ul style="list-style-type: none"> <li>• If possible, schedule works when tides, currents, and waves will be most favourable for minimising disturbance and spread of sediments and disturbed materials.</li> <li>• The Contractor must take reasonable precautions to prevent the pollution of surface water resources as a result of construction activities.</li> <li>• No spills may be hosed/disposed of into the surrounding natural environment.</li> <li>• Refuelling of the machinery must take place away from the watercourse and on a concrete surface to prevent seepage</li> </ul>	<ul style="list-style-type: none"> <li>• Inspection Report; and</li> <li>• Design Plans.</li> </ul>	<ul style="list-style-type: none"> <li>• CEO; and</li> <li>• ECO.</li> </ul>	<ul style="list-style-type: none"> <li>• During demolition</li> </ul>

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>All machinery should be parked off-site, and away from the edge of the watercourse when not in use.</li> <li>All hydrocarbons must be stored in designated, bunded areas with a capacity of at least 110% of the volume stored.</li> <li>Spill kits must be readily available, and all employees must be trained in the utilisation thereof. Should a spill take place the area should be cleaned immediately, and the contaminated area rehabilitated as appropriate.</li> </ul>			
<b>Noise</b>						
<ul style="list-style-type: none"> <li>Demolition activities will cause noise pollution to the closer by residents and the environment.</li> </ul>	<ul style="list-style-type: none"> <li>To reduce noise impact.</li> </ul>	<ul style="list-style-type: none"> <li>Noise Regulations</li> <li>NEMA (107 of 1998).</li> </ul>	<p>The implementation of noise mitigation measures will ensure that the impact will remain low. Such measures include:</p>	<ul style="list-style-type: none"> <li>Complaints register.</li> <li>Inspection Report.</li> </ul>	<ul style="list-style-type: none"> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>During demolition</li> </ul>

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
However, this activity is temporary.			<ul style="list-style-type: none"> <li>All noise management measures implemented during the operational phase.</li> <li>Machinery with low noise levels which complies with the manufacturer’s specifications to be used.</li> <li>Activities to take place during the daytime period only.</li> </ul>			
<b>Dust</b>						
<ul style="list-style-type: none"> <li>Demolition and Removal of all infrastructure (incl. transportation off-site).</li> </ul>	<ul style="list-style-type: none"> <li>To reduce the impact on ambient air quality.</li> </ul>	<ul style="list-style-type: none"> <li>NEM: AQ;</li> <li>National Dust Control Regulations;</li> <li>Ambient Air Quality Guidelines and Standards</li> </ul>	<ul style="list-style-type: none"> <li>Dust suppression must be conducted regularly;</li> <li>The Contractor must avoid unnecessary dust generation during demolition.</li> </ul>	<ul style="list-style-type: none"> <li>Dust monitoring;</li> <li>Complaints register; and</li> <li>Inspection Report</li> </ul>	<ul style="list-style-type: none"> <li>TEO.</li> </ul>	<ul style="list-style-type: none"> <li>During demolition</li> </ul>
<b>Social Impact</b>						
<ul style="list-style-type: none"> <li>Job creation.</li> </ul>	<ul style="list-style-type: none"> <li>To ensure that there are enough employees</li> </ul>	<ul style="list-style-type: none"> <li>SLP</li> </ul>	<ul style="list-style-type: none"> <li>Control the influx of new job seekers by employing more local people.</li> </ul>	<ul style="list-style-type: none"> <li>Implementation of the SLP.</li> </ul>	<ul style="list-style-type: none"> <li>Project Manager.</li> </ul>	<ul style="list-style-type: none"> <li>During demolition.</li> </ul>

Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
	<p>or Contractors for the demolition activities.</p>		<ul style="list-style-type: none"> <li>• Implement a 'locals first' policy with regard to labour needs. This can be incorporated into a Workforce Recruitment Policy. The Workforce Recruitment Policy should include:                             <ul style="list-style-type: none"> <li>○ A clear definition of who is considered to be residents; known as the Project Affected People (PAP). The purpose of demarcating the PAP is to develop a criterion of characteristics considered to identify a given job seeker as a PAP. Once this criterion is known; all subsequent job seekers can be screened against it to determine whether they receive preference for employment.</li> <li>○ A database of local residents and their relevant skills and experience;</li> </ul> </li> </ul>			



Possible Impact	Objective	Applicable Legislation /Policy	Mitigation / Management Action	Monitoring Criteria	Responsible Agent	Monitoring Frequency
			<ul style="list-style-type: none"> <li>○ The selection criteria for allocating jobs;</li> <li>○ Reserve employment, where practically possible, for residents; and</li> <li>○ Should be contractually binding.</li> <li>● Where possible, subcontract to local construction companies.</li> <li>● Consultation with local authorities is essential to manage job creation expectations and ensure that all eligible workers in the primary study area are informed of the opportunities.</li> <li>● Contracts ensuring that on-the-job training is included and enforced as a condition for the development of this project.</li> </ul>			

## 9. ENVIRONMENTAL GENERIC CONDITIONS

To ensure compliance with Transnet's environmental policy as well as environmental legislation requirements, the following general conditions are applicable:

### 9.1. SITE DOCUMENTATION MONITORING

The standard Transnet site documentation shall be used to keep records on-site. All documents shall be kept on site, and be available for monitoring, and auditing purposes. Site inspections by an Environmental Audit Team may require access to this documentation for auditing purposes. All parties shall sign the documentation to ensure that such documents are legitimate. Regular monitoring (At least monthly) of all work on site by the Environmental Control Officer is imperative to ensure that all problems encountered are solved punctually and amicably. The Transnet Environmental Officer must be on site daily to ensure implementation of the EMPR., the Transnet Construction Manager shall keep abreast of all works to ensure no problems arise.

Monthly Environmental Monitoring reports shall be submitted to the appointed Transnet Environmental Officer by the CEO with all information relating to environmental matters. The following Key Performance Indicators must be reported on a fortnightly basis:

- Complaints received from Landowners and actions taken.
- Environmental incidents, such as oil spills, concrete spills, etc., and actions taken (litigation excluded).
- Incidents leading to litigation and legal contraventions.
- Environmental damage that needs rehabilitation measures to be taken.
- The following documentation shall be kept on site:
  - Access negotiations and physical access plan.
  - Complaints register.
  - Site daily dairy.
  - Records of all remediation/rehabilitation activities.
  - Copy of the EMPr.

The ECO shall further prepare monthly Environmental Monitoring reports which will cover the activities undertaken as well as the status of compliance on site. Copies of the monthly reports must be submitted to Transnet, as well as the DFFE. Furthermore, monthly reports must be kept on-site either as hard or soft copies.

## **9.2. AUDITS**

Audits must be undertaken in accordance with the requirement of Appendix 7 of the EIA Regulations of December 2014 as amended.

During the construction period, the ECO must conduct at least monthly Environmental Audits to determine compliance with the recommendations of the EMPr and conditions of the EA.

The appointed ECO, as well as the Contractors on site, are responsible for ensuring compliance with the EMPr. It is recommended that periodic EMPr compliance reports (audits) are compiled by the ECO and submitted to CEO for correction of non-compliance issues. It is the responsibility of the ECO to report any non-compliance, which is not correctly rectified to the DFFE.

## **9.3. ACCESS TO DOCUMENTS**

Interested and Affected Parties must be allowed access to the EMPr document should they so wish. They have the right to monitor specific aspects of the EMPr in conjunction with the ECO and Contractor, reasonably and informally without unreasonably disrupting construction activities.

## **9.4. PROCESS FOR IDENTIFYING EMERGENCY PROCEDURES**

- A plan of action must be drawn up in the case of an emergency (veld fire, vegetation problems, etc.)
- Adjacent property owners or occupiers must be treated with respect and courtesy at all times;
- The culture and lifestyles of the communities living nearby the proposed development must be respected;
- Environmental clauses (as referred to in this Construction and Operation EMPr) must be included in the contract documents for all contractors; and
- A register of all complaints or queries received as well as action taken must be kept on-site at all times.

## **10. FAILURE TO COMPLY WITH THE ENVIRONMENTAL CONSIDERATIONS**

The ECO will, acting reasonably, have the authority to order the Contractor to suspend part or all of the works if it causes unacceptable damage to the environment by not adhering to the specifications set out below. The suspension will be enforced until the offending parties' actions, procedures, and/or equipment are corrected, and adequate mitigation measures implemented.

## **11. AMANDEMENT OF THE EMPR**

Any issue that may arise during the construction or operational phase of the development and is not provided for in this EMPr may be addressed as an addendum to this EMPr. An addendum must be submitted to the client for approval before the implementation of the provisions contained.

## 12. REFERENCES

1. Cruz Environmental (2022) Proposed Upgrade of Transnet Helipad and Associated Infrastructure. Aquatic and Terrestrial Biodiversity Assessment.
2. Confluent Environmental (Pty) Ltd (2022). Estuarine Assessment for the Proposed Upgrade of Transnet Heliport and associated Infrastructure.
3. Kijani (2022) Climate Change Vulnerability Risk Assessment for the Proposed Upgrade of Transnet Heliport and associated Infrastructure.
4. Vhubvo Archaeo-Heritage Consultant Cc (2022) Phase 1 Archaeological Report for Transnet Helipad.