Draft Environmental Management Programme (EMPr)

Draft Environmental Management Programme (EMPr) for the Proposed Expansion of The uMhlali Total Energies Fuel Station and the Establishment of a Fast-Food Outlet, KwaDukuza Local Municipality, Ilembe District Municipality, KZN.

A Project of SSS 123 Trading (Pty) Ltd

February 2025

Draft Environmental Management Programme (EMPr) for the Proposed Expansion of the uMhlali Total Energies Fuel Station and the Establishment of a Fast-Food Outlet, KwaDukuza Local Municipality, Ilembe District Municipality, KZN.

FEBRUARY 2025

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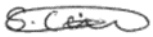
Ms. Sphelele Mhlongo – Cand. EAP (EAPASA) *Environmental Assessment Practitioner*	February 2025/ Durban	
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GLOSSARY OF TERMS

Audit
A verification process that is used to obtain information regarding the implementation of the EMPr. It is an objective tool used to make improvements at the workplace.

Biophysical Environment
All aspects of the natural environment including physical features such as watercourses, groundwater and soils as well as the biological features such as plants and animals.

Bunding
An impervious containment system for potential spillages from tanks / containers stored on site. The bunded area must have a capacity greater than 110% of the total tankage contained. The bunding must be constructed of a material impermeable and resistant to the stored material.

Client
SSS 123 Trading (Pty) Ltd is the client.

Construction Activity
A construction activity is any action taken by the Client, a contractor, his sub-contractors, suppliers or personnel during a construction process.

Contractor
Persons or companies appointed on behalf of the Client to undertake construction or operational activities, as well as their sub-contractors and suppliers.

Construction camp
The area allocated for the establishment of equipment, repair area, lay down and rest areas, etc. It also serves as the central point for the storage of fuel, construction material and contractor offices.

Decommissioning
In relation to the development and its associated buildings, structures and facilities, means the planning for and management and remediation of the closure/cessation of the development.

Environmental Authorisation
Environmental Authorisation obtained in terms of the National Environmental Management Act (NEMA), Act 108 of 1998, and the associated EIA Regulations.

Environmental Control Officer (ECO)
Individual appointed by SSS 123 Trading (Pty) Ltd and who is responsible for monitoring compliance with the implementation of the EMPr, permits and licenses; ensuring liaison between SSS 123 Trading (Pty) Ltd, the contractor and Authorities; and reporting on the verified compliance with the EMPr.

Environmental Site Officer (ESO)
An environmentally knowledgeable or qualified person nominated by the appointed contractor who will ensure the day-to-day implementation of the EMPr by contractors.

Environmental Management Programme (EMPr)
A plan or programme that seeks to achieve a required end state and describes how activities, that have or could have an adverse impact on the environment, will be mitigated, controlled and monitored. The EMPr provides the environmental requirements during the planning, operation and construction phases to SSS 123 Trading (Pty) Ltd and any agent, consultant, contractor and sub-contractors acting on behalf of the Client to ensure that environmental aspects are addressed adequately to prevent or minimise environmental impacts (pollution or degradation) as a result of the activities or proposed activities at the uMhlali Fuel Station.

The EMPr also provides for general instructions that should be included in a contract document for any planning and construction phases of any of the related construction activities under the responsibility of KwaDukuza Local Municipality. The EMPr also details the organisational structure required to ensure the effective implementation of the EMPr and measures to monitor and improve the application of the EMPr.

Environment
The environment means the surroundings within which humans exist and that could be made up of water, air, soil, sand, plants and animals.

Environmental Aspect
An environmental aspect is any component of a contractor's construction activity that is likely to interact with and on the environment.

Environmental Impact
An impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of an activity. An impact may be the direct or indirect consequence of a construction, operational or decommissioning activity.

Environmental Consultant
An independent consultant that is appointed by the Client to compile an Environmental Management Programme and to undertake environmental audits or Control Officer Functions.

Environmental Specifications
Instructions and guidelines for specific activities designed to help prevent, reduce and/or control the potential environmental implications of these activities during the operational, construction or decommissioning/ closure phases of the facilities.

Fauna
Any and all animals identified within or outside of the operational or project area. Animals must not be harmed in any way.

Flora
All species of plants that are found within a specific region, habitat, or time period within or outside of the operational or project areas.

Hazardous Substance
Any substance that poses a significant risk to health and safety, property or the environment. These substances have been classified under the SABS Code 0228: *'The Identification and Classification of Dangerous Goods and Substances'*. Hazardous substances/materials are those that are potentially: poisonous, flammable, carcinogenic or toxic.

Some examples of hazardous substances / materials include:
a. Diesel, Petroleum, Oil, Bituminous products;
b. Cement;
c. Chemicals such as solvent based acids, alkalines;
d. Lubricants such as oil and greases;
e. Pesticides, Herbicides; and
f. LP (Liquefied Petroleum) gas.

Hazardous Waste Landfill Site
A waste disposal site that is designed, managed and permitted by DHWS or DFFE to allow for the disposal of hazardous waste.

Incident
The occurrence of a pollution or degradation event that will have direct or indirect effects on the environment e.g., surface water, groundwater, soils, ambient air, flora, fauna and humans.

Mitigation measures
Mitigation seeks to address poor or inadequate practices, procedures, systems and / or management measures by the implementation of preventative and corrective measures to reduce, limit, and eliminate adverse or negative environmental impacts or improve the positive aspects.

Project
This refers to any new construction activities associated with the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet.

Principal Agent (PA)
Principal Agent or Representative of the Client, responsible for overall management of the construction phase of a project, operational phase or decommissioning/closure of the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet. Duties also include the management of all Contractors.

Rehabilitation
Rehabilitation is defined as the return of a disturbed area, feature or structure to a state that approximates to the state (where possible) that it was before disruption, or to an improved state.

Remediation
The management of a contaminated site to prevent, minimise, or mitigate harm to human health or the environment.

Social Environment
Persons likely to be directly or indirectly affected by construction activities during a project, operational activities, or activities during the decommissioning phase.

Solid Waste
Means all solid waste, including domestic and office waste (food, paper, plastic), waste from operations e.g., empty chemical containers, dried sludge as well as waste from the construction and / or decommissioning phases, chemical waste, excess cement/concrete, inert building rubble, packaging, timber, tins and cans.

Sustainable development / sustainability
The integration of social, economic and environmental factors into planning, implementation and decision-making, to ensure that development serves present and future generations.

Topsoil
The layer of soil covering the earth which provides a sustainable environment for the germination of seeds, allows water penetration, and is a source of micro-organisms and plant nutrients.

Watercourse
A river or spring; a natural channel or depression in which water flows regularly or intermittently; a wetland, lake or dam into which, or from which, water flows; and any collection of water which the Minister may, by notice in the Gazette, declare to be a watercourse.

Waste
Any substance, material or object, that is unwanted, rejected, abandoned, discarded or disposed of, or that is intended or required to be discarded or disposed of, by the holder of that substance, material or object, whether such substance, material or object can be re-used, recycled or recovered.

Workforce
The entire project team including people employed by the Client or the contractor, persons involved in activities related to a project, persons present at or visiting construction areas (including permanent contractors and casual labour), personnel in charge of- or tasked with maintenance of the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet.

GLOSSARY OF ACRONYMS

DFFE:	Department of Forestry, Fisheries and Environment
DMRE	Department of Mineral Resources and Energy
DWS:	Department of Water and Sanitation
DOT:	KZN Department of Transport
EDTEA:	Department of Economic Development, Tourism and Environmental Affairs
EA:	Environmental Autorisation
EAP	Environmental Assessment Practitioners
ECO:	Environmental Control Officer
EIA:	Environmental Impact Assessment
EMPr:	Environmental Management Programme
ESO:	Environmental Site Officer
HSE:	Health, Safety and Environment.
NEMA:	National Environmental Management Act
NWA:	National Water Act
PA:	Principal Agent
SEMA:	Specific Environmental Management Acts
PE:	Project Engineer
PM:	Project Manager
USTs:	Underground Storage Tanks

1. INTRODUCTION

An “Environmental Management Programme” (EMPr) is a plan or programme that sets out guidelines that describe how activities that have or could have an adverse impact on the environment, will be mitigated, controlled, monitored and subsequently achieve a desired operational and/or end state. The EMPr addresses the environmental impacts during the design, construction, operational and decommissioning/closure phases of a project. The purpose of an EMPr provides for preventative, corrective and best practice measures to ensure that activities related to construction, operation and/or closure of a facility and associated activities are done in an environmentally responsible way and is sustainable.

The EMPr is a dynamic document that should be continually updated, as and when required. This EMPr prepared by Wallace and Green concerns the implementation of mitigation measures related to the planning, construction and post construction phases (including rehabilitation, operational and decommissioning phases) of the proposed expansion of the uMhlali Total Energies fuel station and the establishment of a fast-food outlet. It sets out conditions for managing environmental impacts during the planning, construction, post construction and decommissioning phases of the development.

Due consideration has been given to the development in terms of the planning, construction, rehabilitation, operational phases whilst considering the environment and needs of interested and affected parties.

Due regard must be given to environmental management during the entire lifecycle stage of a project. Environmental specifications, conditions and/or recommendations are provided to ensure:

- Minimising the extent of environmental impact during the life of the project, commencing from planning through to closure.
- Ensuring appropriate rehabilitation of areas affected by the construction activities.
- Preventing and remediating long term environmental degradation.

The following is the Environmental Management Programme (EMPr) to mitigate construction impacts associated with the construction of services and infrastructure for the proposed expansion of the uMhlali Total Energies Fuel Station. Principles and instructions contained in this document are to be implemented by the Developer and all Purchasers, Consultants, Contractors and Sub-contractors.

1.1. BACKGROUND INFORMATION

Wallace and Green (Pty) Ltd. were appointed by SSS 123 Trading (Pty) Ltd to provide independent environmental consulting services for the Proposed Expansion of the uMhlali Total Energies Fuel Station and The Development of a Fast-Food Outlet, by conducting a Basic Assessment (BA) study in terms of the Environmental Impact Assessment (EIA) Regulations of 2014 (GNR 326 of December 2014 as amended), as promulgated under the National Environmental Management Act (NEMA) (Act No. 107 of 1998).

The applicant, SSS 123 Trading (Pty) Ltd intends on expanding the existing uMhlali Fuel Station and to develop a fast-food outlet on the properties described as Portion 16 of Lot 72, No. 1526 uMhlali and, Portion 50 of Lot 72, No. 1526 uMhlali. The Fuel Station received approval from the Department of Mineral Resources and Energy (DMRE) in terms of the site and retail license which permits the current fuel station.

The current combined capacity of the uMhlali Fuel Station is 79 000 litres (i.e., 79m^3) and comprises of two (2) underground storage tanks (UST’s) (i.e., 39m^3 for diesel and 40m^3 for petrol). It is the intention of the applicant to expand the fuel station to include the following:

- Installation of two UST’s each with a capacity of 20m^3. One UST will be utilised for diesel and one will be utilised for petrol. The total combined capacity of the proposed USTs will be 40 000 litres (i.e.,40m^3); and
- Fast-food outlet including a drive thru and parking bays.

The site is located along the R102 and to the east of the N2 in the uMhlali area; approximately 45 kilometres to the north of Durban. The existing uMhlali Total Energies Fuel Station is located within ward 4 of the KwaDukuza Local Municipality which falls under the iLembe District Municipality.

Table 1-1: Listed and specified activities triggered and being applied for

GNR	Activity Number	Activity as per legislation	Activity applicability
Listing Notice 1 (Basic Assessment)			
Government Notice Regulation (GNR) No. 327 of the EIA Regulation (2014).	Activity 67	Phased activities for all activities — (i) listed in this Notice, which commenced on or after the effective date of this Notice or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices; excluding the following activities listed in this Notice- 17(i)(a-d); 17(ii)(a-d); 17(iii)(a-d); 17(iv)(a-d); 17(v)(a-d); 20; 21; 22; 24(i); 29; 30; 31; 32; 34; 54(i)(a-d); 54(ii)(a-d); 54(iii)(a-d); 54(iv)(a-d); 54(v)(a-d); 55; 61; 64; and 65; or (ii) listed as activities 5, 7, 8(ii), 11, 13, 16, 27(i) or 27(ii) in Listing Notice 2 of 2014 or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices; where any phase of the activity was below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.	The total capacity of the current USTs is 79m^3. The client intends on expanding the total capacity of the USTs to 119m^3 by installing 2 x 20m^3 USTs. The expansion of the USTs by 40m^3 will result to the total capacity of 119m^3 thus exceeds the threshold of 80m^3.

Figures 1-1 and **1-2** below depict the locality and the design for the proposed development:

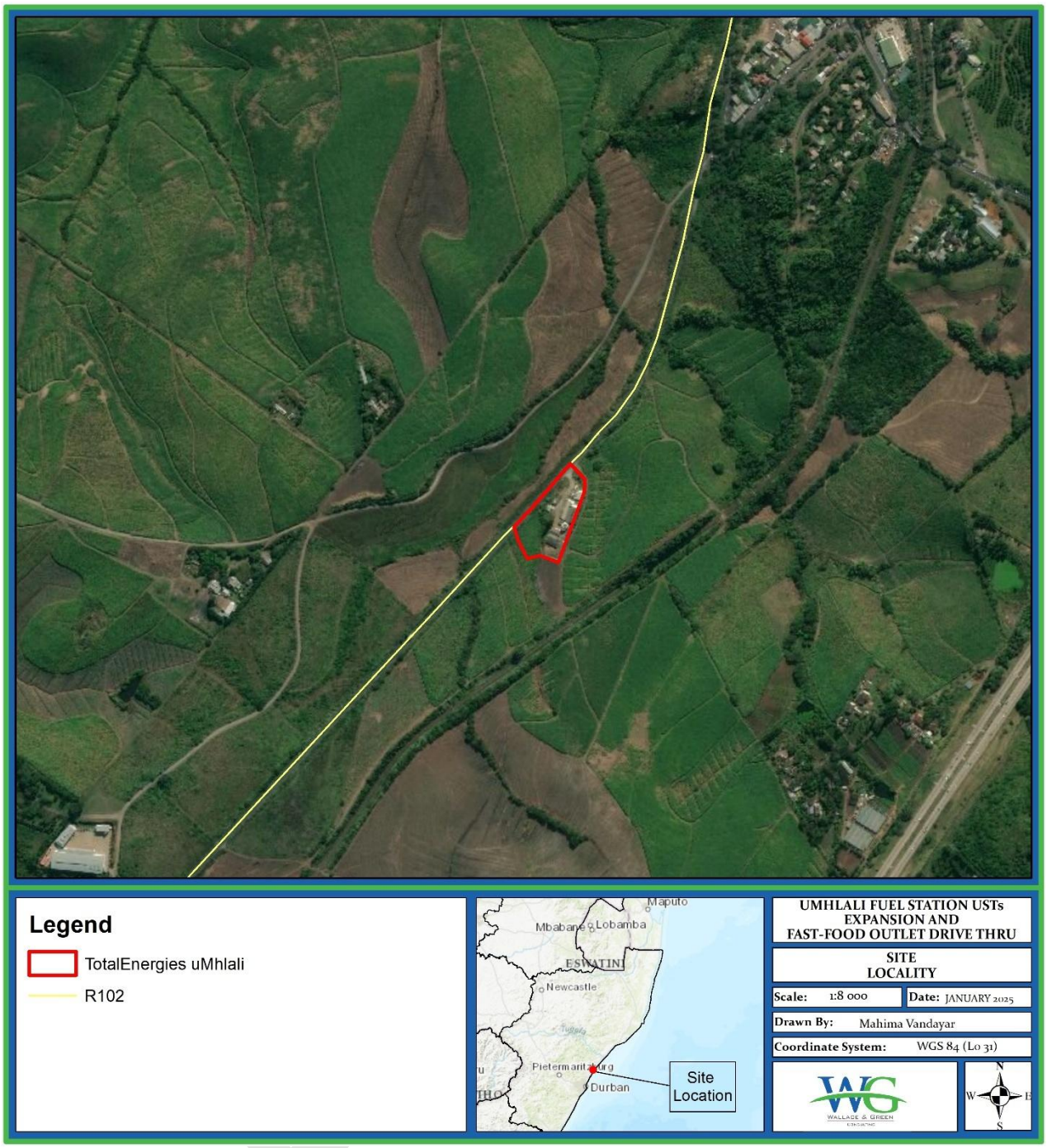

Figure 1-1 Locality map for the site

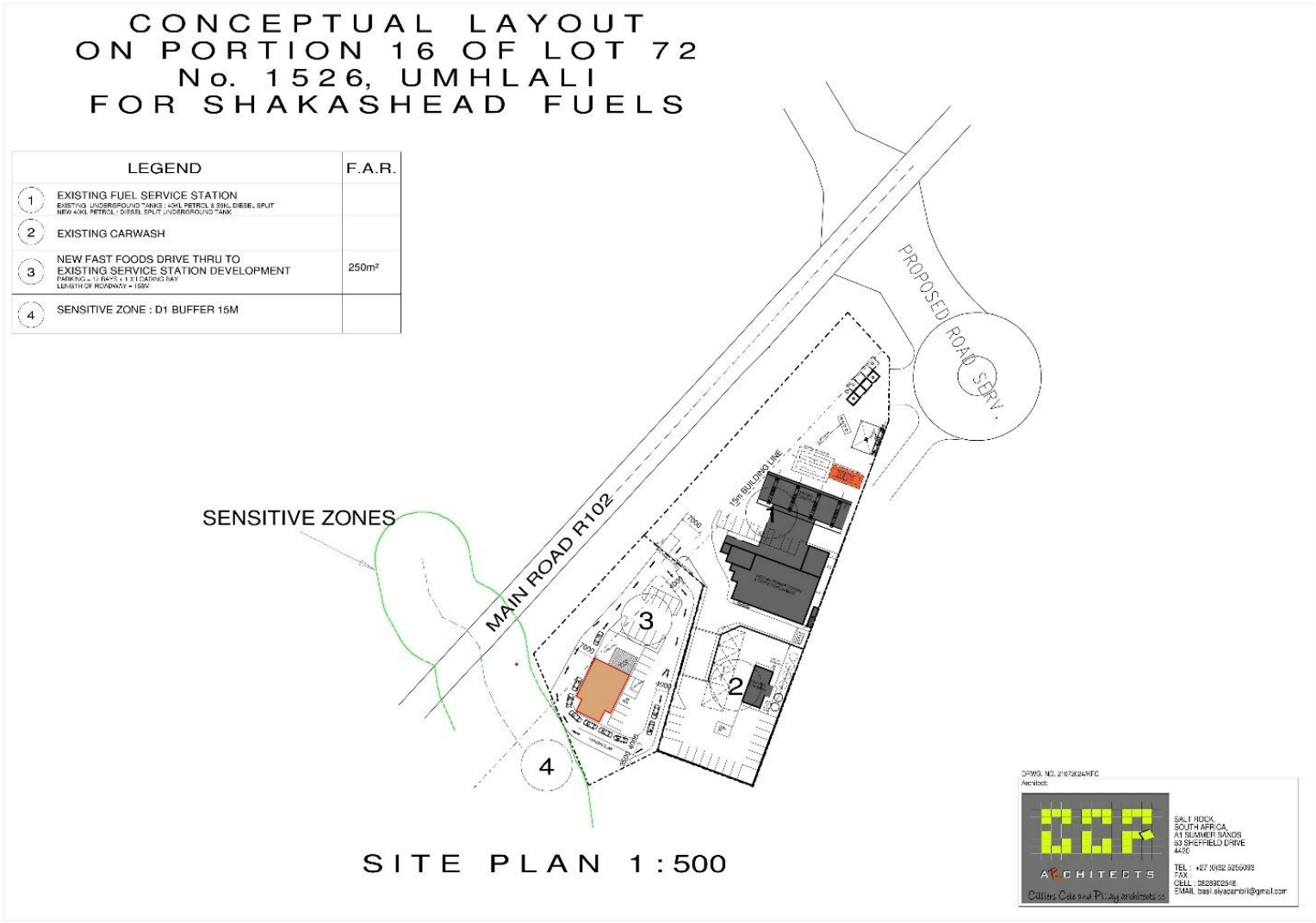

Figure 1-2: Preferred design option for the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet

1.2. SCOPE OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

This document describes the role of the EMPr in Environmental Impact Assessment (EIA) and planning for ecologically sustainable development within the framework of existing legislation and environmental management policies.

The EMPr will be used as a binding document between SSS 123 Trading (Pty) Ltd and the appointed contractors, as well as all other persons involved in the execution of activities related to the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of the fast-food outlet. These conditions must be adhered to for the duration of the construction, post-construction, operation and decommissioning phases.

This EMPr addresses the following phases of the development:

(a) The Planning and Design Phase
The planning phase is the ideal opportunity to incorporate pro-active measures to ensure that environmental impacts arising from the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet are avoided and mitigated from the outset. Proper planning during this phase can ensure that the likelihood of specific impacts taking place is minimised and that the required corrective action is undertaken to further limit potential impacts.

(b) The Construction Phase
The majority of the impacts during the construction phase will have an immediate effect (e.g., noise, dust and pollution / waste generation). If the site is monitored continually during the construction phase, it is possible to identify these impacts as they occur. These impacts will then be mitigated through the implementation of the measures described in the EMPr.

(c) Post-construction Phase and Rehabilitation Activities
Following construction, rehabilitation measures must be followed to minimise the impacts imposed during the construction. This includes ensuring removal of all material and structures that are no longer required used in construction.

(d) Operational Phase
The impacts which are anticipated during the operational phase are deemed to be most significant, and are those impacts which may result from inappropriate management of the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet. By taking proactive measures during the operation of the expanded fuel station and fast-food outlet drive thru, potential environmental impacts emanating during the operational phase will be minimised. In particular the maintenance of underground tanks and related infrastructure (i.e., pumps), monitoring of soil surface and groundwater contamination/ spillages, the prioritisation of safety and prevention of fires will be required during operation.

(e) The Decommissioning Phase
In this phase, potential impacts associated with decommissioning of the fuel station are assessed, and appropriate mitigatory measures are proposed to minimise potential negative impacts and enhance potential project benefits. The decommissioning process will entail the removal of underground storage tanks and pipework, and taking appropriate action to ensure that the sites are left in a suitable condition. This involves preventing any hazardous chemical spills and sampling soil to ensure there is no contamination.

1.3. OBJECTIVES OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

The EMPr plays a vital role in the implementation of consistent and continued environmental management for the duration of a project life cycle.

Specifically, the EMPr:

- Ensures compliance with regulatory authority stipulations and guidelines which may be local, provincial, national and all related legislation thereof.
- Ensures that there is sufficient allocation of resources on the project budget so that the scale of EMPr-related activities is consistent with the significance of project impacts.
- Ensures compliance with legislation and regulations which may be national, provincial or local.
- Outlines the functions and responsibilities or responsible persons.
- Verifies environmental performance through information on impacts as they occur.
- Outlines mitigation measures and environmental specifications which are required to be implemented for all phases of a project in order to minimise the extent of environmental impacts, and to manage environmental impacts associated with the proposed project.
- Creates awareness and specifies measures to prevent long-term or permanent environmental damage or degradation.
- Establishes monitoring methods for environmental management practices for construction of the development.
- Ensures that all health and safety regulations are adhered to.
- Proposes methods to monitor compliance with the EMPr and subsequent reporting.
- Specifies timeframes within which measures set out in the EMPr must be implemented.
- Encourages good management practices through planning and commitment to environmental issues;
- Defines how the management of activities and their impact on the environment is to be reported and how performance should be evaluated;
- Provides practical environmental conditions / requirements to:
  - Minimise disturbance of the natural environment;
  - Ensure water resource protection;
  - Prevent or minimise all forms of pollution;
  - Prevent soil erosion and facilitate the re-vegetation of affected areas;
  - Ensure the maintenance of newly vegetated areas;
  - Restrict noise disturbance;
  - Ensure compliance with all applicable laws, regulations, standards and guidelines for the protection of the environment; and
  - Provide for the best practical means available to prevent or minimise adverse environmental impacts.
- Develops waste management practices based on prevention, minimisation, recycling, treatment or disposal of waste;
- Defines the arrangements that will be put in place to ensure that the mitigation measures are implemented by including recommendations of the roles and responsibilities of the project proponent, environmental management team and contractors;
- Describes all monitoring procedures required to identify impacts on the environment; and
- Trains the Owner of the project, its employees and contractors with regard to their environmental obligations.
- Provides an environmental awareness plan.
- Responds to changes in project implementation not considered in the EIA.
- Responds to unforeseen events.
- Provides feedback for continual improvement in environmental performance.

1.4. AUTHORS OF THE EMPr

Mrs. Perushni Nicole Naidoo – Senior Environmental Assessment Practitioner | Bachelor of Science (Honours) in Environmental Management | Reg. EAP (EAPASA)

Nicole Naidoo is a Water Use License Specialist and Senior Environmental Assessment Practitioner (EAP) at Wallace and Green specializing in Water Use Licenses for a variety of development projects. She is professionally registered as a certified EAP with the Environmental Assessment Practitioners Association of South Africa (EAPASA) and registered as a certificated professional with the South African Council for

Natural Scientific Professions (SACNASP). Nicole holds a BSc (Hons) Degree, majoring in Environmental Management from the University of South Africa (UNISA). She has over nine years' experience in the field of environmental management and has handled assignments in a range of environmental fields for corporate enterprises, private developers, and most spheres of government, as well as a wide variety of work for local landowners.

Ms. Sphelele Mhlongo – Environmental Assessment Practitioner | Bachelor of Science (Honours) in Environmental Management

Sphelele Mhlongo is an Environmental Assessment Practitioner (EAP) at Wallace and Green (Pty) Ltd, who holds a BSc. Honours in Environmental Management, with over four years of experience in environmental management. She is professionally registered as a candidate EAP with the Environmental Assessment Practitioners Association of South Africa (EAPASA). Sphelele has been responsible for compiling, reviewing and commenting on Basic Assessments Reports (BAR), Environmental Management Programmes (EMPr), Scoping and Environmental Impact Reports (EIR) for a variety of road infrastructure, residential dwellings as well as asphalt plants. She has compiled and reviewed Environmental Impact Assessment enquiries and provided responses in line with the EIA Regulations. She has monitored environmental compliance against environmental permits for various projects. She conducts construction monitoring for road constructions, housing, and mixed-use use developments and is also a member of the International Association for Impact Assessment (IAIAsa).

Wallace and Green (Pty) Ltd., is an enterprise of independent environmental consultants, providing a wide range of environmental consulting services to both the private and public sectors throughout South Africa. The Company is a certified Level 1 B-BBEE company with 100% black ownership. Not only are we empowered from an ownership point of view, but our current staff complement also reflects our policies of empowerment and skills transfer, with more than 90% of our staff classified as historically disadvantaged.

Wallace and Green's Environmental Management Systems is ISO 14001 certified and our Quality Management Systems are ISO 9001 certified. These international standard certifications represent all our dedication at W&G to deliver environmental services to our clients of the highest standard and quality.

Wallace and Green recognise that the ability to develop and implement sustainable solutions to complex environmental problems often requires the collaboration of specialists. For each project, we assemble an experienced team of professionals with local knowledge, experience and expertise in disciplines necessary to address the specific challenges of the project at hand.

Wallace and Green recognise the value of academic development and the regulation of professional associations.
Wallace and Green personnel are professionally registered & members of the following associations:

- South African Council for Natural Scientific Professions (SACNASP);
- Environmental Assessment Practitioners Association of South Africa (EAPASA);
- Water Institute of South Africa (WISA);
- Institute of Waste Management of South Africa (IWMSA);
- Green Building Council of South Africa (GBCSA)
- Project Management Institute of South Africa (PMIsa)
- International Association for Impact Assessment South Africa (IAIAsa)

1.5. RESPONSIBILITY FOR ENVIRONMENTAL MANAGEMENT WITHIN KWADUKUZA LOCAL MUNICIPALITY

Details of the applicant are tabulated below.

Table 1-2: Details of the Project Applicant

Name of Owner	SSS 123 Trading (Pty) Ltd		
Contact Person	Manikum Naidoo		
Telephone Number	-	**Fax Number**	-
Mobile number	+27 (0) 83 630 2409 / +27 (0) 81 312 2184	**Email**	selwyn@greenmile.co.za

INDEPENDENT ENVIRONMENTAL ASSESSMENT PRACTITIONER

Wallace and Green was appointed by SSS 123 Trading (Pty) Ltd as the Independent Environmental Assessment Practitioner (EAP) to compile the EMPr. Table 1-3 indicates the details of the EAP:

Table 1-3: Environmental Assessment Practitioner

Name of Consultancy	Wallace and Green (Pty) Ltd		
Contact Person	Mrs. Perushni Nicole Naidoo		
Telephone Number	+27 (0) 31 563 4466	**Fax Number**	086 613 8535
Mobile number	+27(0) 83 711 5321	**Email**	nicolen@wallaceandgreen.co.za

The Competent Authority responsible for environmental authorisation and compliance within KwaDukuza Local Municipality is the Department of Economic Development, Tourism and Environmental Affairs (EDTEA).

Table 1-4: KZN **EDTEA Contact Detail - EIA**

Name of Authority	Department of Economic Development, Tourism and Environmental Affairs		
Contact Person	Mr Linda Sibiya		
Telephone Number	-	**Fax Number**	-
Mobile number	+27 (0) 71 302 9196	**Email**	Linda.Sibiya@kznedtea.gov.za

Table 1-5: KZN **EDTEA Contact Detail – Compliance Monitoring and Enforcement**

Name of Authority	Department of Economic Development, Tourism and Environmental Affairs		
Contact Person	Mr David Maritz		
Telephone Number	032 437 7513	**Fax Number**	032 551 5787
Mobile number	082 461 8547	**Email**	David.Maritz@kznedtea.gov.za

1.6. STRUCTURE OF THE ENVIRONMENTAL MANAGEMENT PROGRAMME

Section 1 is a brief introduction and background to the project and outlines the scope as well as objectives of the EMPr. Section 2 reviews the legislation, guidelines and necessary documentation relevant to achieving an environmentally sustainable project. Section 3 outlines the methodology of the EMPr. Section 4 explains management and compliance monitoring. Section 5 provides detailed descriptions of organisational structures, roles and responsibilities, monitoring, reporting procedures and non-compliance. Section 6 provides a summary of activities causing impacts. Section 7 presents a comprehensive environmental management programme. Section 8 is the concluding section of this EMPr.

2. APPLICABLE LEGISLATION, GUIDELINES AND DOCUMENTATION

This document describes the role of the EMPr to any existing environmental authorisations, permits, licenses and EMP's in environmental assessment and planning for ecologically sustainable development within the framework of existing legislation and environmental management policies.

South Africa is a constitutional democracy, which means the constitution and Bill of Rights are the supreme law. Our Constitution guarantees certain human rights and is one of the most progressive in the world. In line with a constitutional democracy everyone has responsibilities.

In terms of The Constitution of the Republic of South Africa (Act No. 108 of 1996) everyone has the right:

- to clean water;
- to an environment that is not harmful to their health or well-being and to have the environment protected, for benefit of present and future generations, through reasonable legislation and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

The overarching legislative framework that governs all environmental activities is the National Environmental Management Act (No 107 of 1998). NEMA aims to provide for co-operative environmental governance by establishing principles for decision-making on matters affecting the environment, institutions that will promote co-operative governance and procedures for co-ordinating environmental functions exercised by organs of state; to provide for certain aspects of the administration and enforcement of other environmental management laws; and to provide for matters connected therewith. NEMA can help deal with problems at a municipal level and enables one to determine whether proper Integrated Environmental Management (IEM) procedures have been followed.

Accompanying NEMA is a set of Specific Environmental Management Acts (SEMA's). Known by the abbreviation of SEMA's, Specific Environmental Management Acts, all fall under the auspices of the overarching National Environmental Management Act (NEMA). To date five SEMA's have been promulgated, with the most recent one being Waste Act in 2008. The full list of SEMA's is:

1. National Environmental Management: Protected Areas Act (57 of 2003), known as the NEM:PAA
2. National Environmental Management: Biodiversity Act (10 of 2004), known as the NEM:BA
3. National Environmental Management: Air Quality Act (39 of 2004), known as the NEM:AQA
4. National Environmental Management: Integrated Coastal Management Act (24 of 2008), known as the NEM:ICM
5. National Environmental Management: Waste Act (59 of 2008), known as the NEM:WA

The Environmental Impact Assessment Regulations were published in Government Notice R982 to R985 (December 2014), and promulgated in terms of Chapter 5 of the National Environmental Management Act. The purpose of the regulations is to regulate the procedure and criteria relating to the submission, processing and consideration of, and decision on, applications for environmental authorisations for the commencement of activities in order to avoid detrimental impacts on the environment, or where it cannot be avoided, ensure mitigation and management of impacts to acceptable levels, and to optimise positive environmental impacts, and for matters pertaining thereto.

Section 28 of NEMA (Duty of care and remediation of environmental damage) states that every person who causes, has caused or may cause significant pollution or degradation to the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment.

This EMPr must be read in conjunction with any Environmental Authorisation (once issued) for the proposed pipeline sites and any other relevant documentation by provincial government and national government. These could include but not be limited to: a general water use license, waste management license, conditions for establishment and health permits for sanitation from provincial health officials.

2.1. APPLICABLE ENVIRONMENTAL LEGISLATION

The following Environmental legislation was considered, in the evaluation of the activities and development of the EMPr. It must be noted that only some sections of Acts have been listed below, these were deemed

pertinent and specific to the scope of this EMPr. These Acts must always be considered and adhered to in their entirety.

The list of applicable legislation and permits provided is intended to serve as a guideline only and is not exhaustive.

Table 2-1: Applicable Environmental Legislation

Legislation	Section	Relates to
The Constitution (No 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental rights.
National Environmental Management Act (No 107 of 1998 [as amended])	Section 2	Defines the strategic environmental management goals and objectives of the government. Applies through-out the Republic to the actions of all organs of state that may significantly affect the environment.
	Section 24	Provides for the prohibition, restriction and control of activities which are likely to have a detrimental effect on the environment.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
	Section 30	Deals with the control of emergency incidents, including the different types of incidents, persons responsible for the incidents and reporting procedures to the relevant authority.
National Environmental Management: Waste Act (No 59 of 2008)		Provides for specific waste management measures and the remediation of contaminated land.
		Regulations for waste management licensee activities
National Environmental Management: Biodiversity Act (No 10 of 2004) **Threatened or protected species (GN 388)** **Lists of species that are threatened or protected (GN 389)** **Alien and invasive species regulations (GNR 506)** **Publication of exempted alien species (GNR 509)** **Publication of National list of invasive species (GNR 507)** **Publication of prohibited alien species (GNR 508)**		Provides for the management and conservation of biodiversity, protection of species and ecosystems, and sustainable use of indigenous biological resources.
Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983)		The objects of this Act are to provide for the conservation of the natural agricultural resources of the Republic by the maintenance of the production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants. Section 5 details measures for the prohibition of the spreading of weeds.
National Environmental Management: Air Quality Act (No 39 of 2004)	Section 32	Control of dust
	Section 34	Control of noise
	Section 35	Control of offensive odours

National Heritage Resources Act (No 25 of 1999) and regulations	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or paleontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.
	Section 38	This section provides for Heritage Impact Assessments (HIAs), which are not already covered under the ECA. Where they are covered under the ECA the provincial heritage resources authorities must be notified of a proposed project and must be consulted during the HIA process. The Heritage Impact Assessment (HIA) will be approved by the authorising body of the provincial directorate of environmental affairs, which is required to take the provincial heritage resources authorities' comments into account prior to making a decision on the HIA.
Occupational Health and Safety Act (No 85 of 1993)	Section 8	General duties of employers to their employees
	Section 9	General duties of employers and self-employed persons to persons other than their employees.
National Water Act (No 36 of 1998) and regulations	Section 19	Prevention and remedying the effects of pollution.
	Section 20	Control of emergency incidents.
	Section 21	Licenses for water use.
Hazardous Substances Act (No 15 of 1973) and regulations		Provides for the definition, classification, use, operation, modification, disposal or dumping of hazardous substances.
National Veld & Forest Fire Act		Provides for a variety of institutions, methods and practices to prevent and combat veld, forest and mountain fires.
National Road Traffic Act (No 93 of 1996)		Provides for controlling transport of dangerous goods, hazardous substances and general road safety.
Spatial Planning and Land Use Management Act (No. 16 of 2013).		Provides the framework for spatial planning and land use management in South Africa at the different spheres of government and for the establishment, functions and operations of Municipal Planning Tribunals.
Occupational Health and Safety Act (No 85 of 1993) and regulations		Addresses occupational health and safety aspects.
SANS 10103 (Noise Regulations)		The measurement and rating of environmental noise with respect to annoyance and to speech communication.
KwaZulu-Natal Planning and Development Act, (No. 6 of 2008);		Strategic spatial development intentions for the municipality based on the IDP and SDF, influenced by and in alignment with adjacent municipalities.

KZN Nature Conservation Ordinance (Ordinance No. 15 of 1974)		Protected indigenous plants in general are controlled under the relevant provincial Ordinances or Acts dealing with nature conservation. In KwaZulu-Natal the relevant statute is the 1974 Provincial Nature Conservation Ordinance. In terms of this Ordinance, a permit must be obtained from Ezemvelo KZN Wildlife to remove or destroy any plants listed in the Ordinance.
KwaZulu Natal Heritage Act (Act 4 of 2008)		To provide for the conservation, protection and administration of both the physical and the living or intangible heritage resources of the Province of KwaZulu-Natal; to establish a statutory Council to administer heritage conservation in the province.
Climate Change Act (Act No. 22 of 2024)		To enable the development of an effective climate change response and a long-term, just transition to a low-carbon and climate-resilient economy and society for South Africa in the context of sustainable development; and to provide for matters connected therewith.
Petroleum Products Act (Act 120 of 1977)		To provide measures for the saving of petroleum products and an economy in the cost of the distribution thereof, and for the maintenance of a price therefor; for the rendering of services of a particular kind, or services of a particular standard, in connection with motor vehicles; and to provide for matters incidental thereto.

The potential environmental impacts associated with the current project are required to be considered in compliance with the EIA Regulations (2014) as well as all the SEMA's. It must also be noted that the list of Acts and their associated regulations must be frequently updated to ensure that all activities are done according to and comply with the most current legislation.

Table 2-2: Current Environmental Legislation

Regulations and Guidelines
Environmental Impact Assessment Regulations, 2014 (as amended).
The General Policy on Environmental Conservation (January 1994).
DEA (2017), Guideline on Need and Desirability, Department of Environmental Affairs (DEA), Pretoria, South Africa.
Department of Environmental Affairs (2017), Public Participation guideline in terms of NEMA EIA Regulations, Department of Environmental Affairs, Pretoria, South Africa.
Disaster Management Act (57/2002): Directions Regarding Measures to Address, Prevent and Combat the Spread of COVID-19 Relating to National Environmental Management Permits and Licences

Table 2-3: Current Municipal By-Laws

By-Laws
KwaDukuza Municipality: Land Use Scheme Bylaw, 2021
KwaDukuza Municipality: SPLUMA Bylaw Amendment, 2018

Please note that all bylaws relevant to the construction and operational phases need to be adhered to. Any bylaws adopted by the Municipality, which come into effect during the construction stage, must be adhered to.

3. ENVIRONMENTAL MANAGEMENT PROGRAMME

3.1. EMPr METHODOLOGY

The methodology adopted is that of an Environmental Management Programme (EMPr) as described in the Integrated Environmental Management (IEM) Guidelines published by the Department of Environmental Affairs in 1992 as well as the EIA Regulations in 2014.

The EMPr has been structured to include:

- Specific goals of the Environmental Management Programme;
- Details of management actions;
- Parties responsible for carrying out management recommendations;
- Timing and duration of management actions;
- Personnel training and financial obligations; and
- Guidelines for monitoring and auditing of compliance.

The EMPr specifies the minimum requirements to be implemented as per the scope of works and scope of the EMPr, in order to minimise and manage the potential environmental impacts and ensure sound environmental management practices.

The provisions of this EMPr are binding on KwaDukuza Local Municipality, during the life of the project. It is essential that the EMPr requirements be carefully studied, understood, implemented, and always adhered to.

To simplify the EMPr requirements, each aspect related to the EMPr has been addressed below. Each action within the EMPr is supported by the priority of when the specific action will need to be implemented. Each of these aspects is briefly described below for ease of reference.

ENVIRONMENTAL ASPECT

This section highlights the various aspects associated with the project i.e., the Applicant/Contractor's activities that will interact with the environment.

ENVIRONMENTAL MEASURES AND ACTION PLANS

This section indicates the actions required to either prevent and/or minimise the potential impacts on the environment that is associated with the project.

TIMEFRAMES

This section in the table indicates when the actions for that specific aspect must be implemented and/or monitor.

RESPONSIBILITY

This section indicates the party responsible for implementing the environmental measures and action plans laid out in the EMPr.

4. MANAGEMENT AND COMPLIANCE MONITORING

4.1. ORGANISATIONAL STRUCTURE, ROLES AND RESPONSIBILITIES

The Project Manager (PM) is ultimately responsible for ensuring compliance with the environmental specification and upholding SSS 123 Trading (Pty) Ltd Environmental commitment to compliance with all National, Provincial and local legislation that relates to management of this environment. This includes compliance with all environmental regulatory and good management practice requirements for the duration of the project, in order to ensure effective minimisation of all environmental impacts. The PM is also responsible for the overall management and implementation, administration and enforcement of the EMPr. All major decisions must be approved by the Project Manager.

The Project Engineer (PE), appointed by SSS 123 Trading (Pty) Ltd, reports directly to the Project Manager and oversees all technical aspects of the various projects. The Engineer oversees construction programmes and all construction activities performed by the Contractor, and as such also any EMP implementation, EMP compliance and environmental related activities, issues and impacts.

It is the Contractor's role to implement and comply with recommendations and conditions of the EMPr at all times.

SSS 123 Trading (Pty) Ltd, the Contractor or Project Engineer shall appoint an Environmental Site Officer (ESO) for the duration of a construction period. The ESO shall be a senior member of the construction company or on-site team and have overall environmental management responsibilities for the site. The ESO shall monitor the activities of the Main Contractor and all subcontractors and shall ensure that mitigation measures contained in this document are implemented and adhered to. The ESO shall liaise with the Environmental Control Officer (ECO), where applicable, on a regular basis to inform the ECO of the adherence to and effectiveness of the prescribed management measures. In the absence of an ECO, an ESO will take on the duties of an ECO. It is recommended that each facility has a person designated to the duties of an ESO.

The ECO shall be appointed by the Project Manager or Project Engineer. All further duties of the ESO and ECO shall be relevant as detailed in the EMPr and Section 4.1.2.

The ECO must be independent (with a relevant BSc. Honours qualification) and be appointed by the Project Manager or Project Engineer. All further duties of the ESO and ECO shall be relevant as detailed in the EMPr and Section 4.1.2. The ECO must fulfil an advisory consultancy, monitoring and reporting role with regard to overseeing the effective implementation and updating of the EMPr. The ECO must also make recommendations for addressing EMPr and/or environmental legal non-compliances. The ECO is also responsible for liaising with the relevant Environmental Authorities on any environmental issues to confirm their requirements, as and when required and communicating such requirement to the Project Manager and/or Project Engineer.

Formal responsibilities are necessary to ensure that key procedures are executed. Specific responsibilities of the Project Manager, Engineer, Contractor, Environmental Site Officer and Environmental Control Officer are as detailed below.

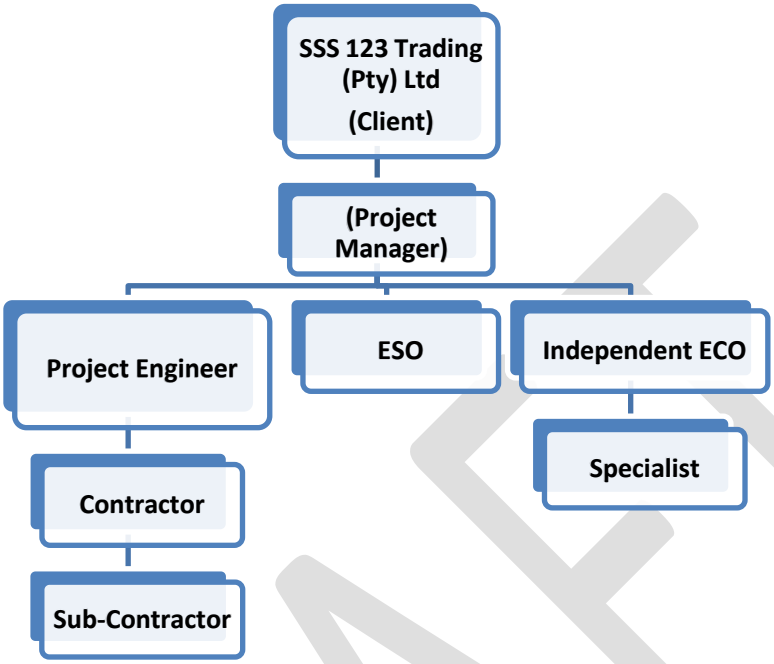

Figure 4-1: Organogram of formal responsibilities and reporting structure for the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet.

FORMAL RESPONSIBILITIES

Formal responsibilities are necessary to ensure that key procedures are executed. Specific responsibilities of the Project Manager, Site Manager, Project Engineer, Contractor/s, Environmental Site Officer and Environmental Control Officer are as detailed below.

PROJECT MANAGER (PM)
The Project Manager must: • Be fully conversant with the EMPr for the project; • Ensure that the Project Engineer and the Contractor/Operator are aware of all specifications, legal constraints, standards and procedures pertaining to the project specifically with regard to the environment; • Ensure that all stipulations within the EMPr are communicated and adhered to by the Project Engineer and the Contractor/Operator; • Arrange information meetings for or consults with I&APs about the impending construction activities; • On the recommendation of the Engineer and / or Environmental Officer, order the Contractor to suspend any or all works on site if the Contractor or his Sub-Contractor / Supplier fails to comply with the said specifications; • Order the removal of any person(s) and/or equipment in contravention of the specifications of the EMPr. • All of the issues described and discussed in this document will require monitoring, and it will be the responsibility of SSS 123 Trading (Pty) Ltd to undertake this monitoring according to the specifications of this EMPr. – To draft and implement a monitoring programme to assess compliance with the EMP.

- To appoint an Environmental Control Officer (ECO) during the Construction Phases.
- To undertake the monitoring of operations during the operational phase. Any problems that are identified or encountered must be reported to SSS 123 Trading (Pty) Ltd so that appropriate action may be taken to rectify the situation.

- Monitor the implementation of the EMPr throughout the project by means of regular site visits and meetings.
- Monitor and verify that environmental impacts are kept to a minimum
- Review and approve construction methods where necessary;
- Maintain a register of complaints and queries by members of the public at the site office.

PROJECT ENGINEER

The Project Engineer must:

- Enforce the environmental specification on site;
- Monitor and ensure compliance with the requirements of the specification;
- Assess the Contractor's environmental performance in consultation with the Environmental Officer from which a brief monthly statement of environmental performance is drawn up for record purposes and to be reported to project meetings;
- Liaise with the Project Manager and Contractor/Operator on matters concerning the environment
- Prevent actions that will harm or may cause harm to the environment, and take steps to prevent pollution of the site
- Implement remedial measures in the event of pollution incidents or environmental impacts
- Ensure the documentation, in conjunction with the Contractor, the state of the site prior to construction activities commencing. This documentation will be in the form of photographs or video record.

ENVIRONMENTAL CONTROL/SITE OFFICER

The Environmental Control/Site Officer must:

- Be familiar with the recommendations and mitigation measures of the associated EMPr for the project.
- Ensure site protection measures are implemented on site.
- Ensure that the Contractor, sub-contractors, construction teams are in compliance with the EMPr at all times during the project.
- Monitor all site activities weekly for compliance.
- Conduct monthly audits of the site according to the EMPr, and report findings to the PA.
- Recommend corrective action for any environmental non-compliance at the site.
- Compile a monthly report highlighting any non-compliance issues as well as progress and compliance with the EMPr prescriptions. These monthly reports are to be submitted to the Client and the PA.
- Conduct once-off training with the Contractor on the EMPr and general environmental awareness. It must be noted that the responsibility of the ECO is to monitor compliance and give advice on the implementation of the EMPr and not to enforce compliance.

CONTRACTOR

The Contractor must:

- Be fully conversant with the EMPr;
- Provide information on previous environmental management experience and company environmental policy in terms of the relevant forms contained in the Contract Document.
- Supply method statements timeously for all activities requiring special attention as specified and/or requested by the ECO and/or PA during the duration of the Contract.
- Be conversant with the requirements of this environmental specification/ EMPr. Brief all his/her staff about the requirements of the environmental specification;
- Comply with requirements of the Environmental Officer in terms of this specification and the project specification, as applicable, within the time period specified.
- Ensure any Sub-Contractors/Suppliers who are utilised within the context of the contract comply with the environmental requirements of the project, in terms of the specifications. The Contractor will be held responsible for non-compliance on their behalf.
- Bear the cost of any delays, with no extension of time granted, should he or his Sub-Contractors / Suppliers contravene the said specifications such that the Principal Agent orders a suspension of

work. The suspension will be enforced until such time as the offending party(ies), procedure, or equipment is corrected.

- Bear the costs of any damages/compensation resulting from non-adherence to the said specifications or written site instructions.
- Bear the costs of fines/directives levied against the developer by the Department of Environmental Affairs, the Department of Water and Sanitation or KwaDukuza Local Municipality, for any incidents occurring on site, e.g., major spills.
- Comply with all applicable legislation.
- Ensure that he informs the PA timeously of any foreseeable activities which will require input from the ECO.
- The Contractor will conduct all activities in a manner that minimizes disturbance to the natural environment as well as directly affected residents and the public in general.

4.2. TRAINING AND ENVIRONMENTAL AWARENESS

It is important to ensure that the Contractor has the appropriate level of environmental awareness and competence to ensure continued environmental due diligence and ongoing minimisation of environmental harm. Training needs should be identified based on the available and existing capacity of site personnel (including the Contractors and Sub-contractors) to undertake the required EMPr management actions and monitoring activities. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

The environmental training is aimed at:

- Promoting environmental awareness;
- Informing the Contractor of all environmental procedures, policies and programmes applicable;
- Providing generic training on the implementation of environmental management specifications; and
- Providing job-specific environmental training in order to understand the key environmental features of the construction site and the surrounding environment.

Training must be done in a verbal format. In addition to training, general environmental awareness must be fostered among the project's workforce to encourage the implementation of environmentally sound practices throughout its duration. This ensures that environmental accidents are minimised, and environmental compliance maximised. Training must be conducted by the ESO to all construction and site personnel.

During the construction phase, Environment - Health and Safety Toolbox Talks must be held on a regular basis to discuss to address potential environmental risks, near misses or incidents and how they can be avoided in future. Regular drills are to be held to ensure that all staff are aware of the spill contingency and other environmental emergency procedures as applicable and can perform these procedures in reasonable timeframes.

5. 5. ENVIRONMENTAL MANAGEMENT COMPLIANCE, MONITORING AND REPORTING

5.1. ENVIRONMENTAL OFFICERS

The Environmental Officer shall be responsible for the implementation of environmental management measures with monitoring and reporting. SSS 123 Trading (Pty) Ltd and the Contractor/Project Engineer shall appoint an Environmental Site Officer (ESO) for the duration of the construction period. The Contractor ESO shall be at least a Supervisor of the construction on-site team and have overall environmental management responsibilities for the site daily.

The ESO (Client and Contractors) shall monitor the activities of the Contractor and all subcontractors daily and shall ensure that mitigation measures contained in this document are implemented and adhered to and corrective measures taken as per reports and instructions. Where relevant (e.g., significant environmental

incidents and complaints), actions plan with timeframes and responsibilities shall be developed and implemented by the ESO's. The ESO shall liaise with the Environmental Control Officer (ECO) on a regular basis to inform the ECO of the adherence to and effectiveness of the prescribed management measures. All further duties of the ESO and ECO shall be relevant as detailed in the EMPr and Section 7.1.

5.2. EMPr COMPLIANCE MONITORING AND AUDITING WITH TIMEFRAMES

Cognisance must be taken of the National Environmental Management Act, Act No. 107 of 1998 (S.28). In terms of these acts those responsible for environmental damage must pay the repair costs, both to the environment and human health, and implement preventative measures, to reduce or prevent further pollution and or environmental damage. Compliance with all other applicable legislation is required.

Environmental monitoring is the continual evaluation of the status of the environment and condition of environmental elements. Its purpose is to detect activities that may have a negative impact on the environment as well as change that takes place in the environment over time. It therefore involves the checking and correcting of onsite activities as well as the measuring of physical, social and economic variables associated with development impacts. Monitoring will be ensured in terms of the Environmental Authorisation, Permits, Licenses and EMPr as per conditions and relevant authority requirements by the Holder of the Authorisations as undertaken by the Holder and Contractor ESO and ECO appointments.

The timeframes for monitoring are specified as per the relevant conditions of the various phases i.e., planning and design, construction and post construction with rehabilitation and operational. The specific conditions related to the monitoring requirements per timeframe have been specified as per relevant condition and must be ensured. Where the phase (timeframe) had been indicated e.g., "during construction" and no specific frequency was stipulated, it means that the condition must be complied with through-out the phase e.g., every day and all day as long as activities are taking place or the phase is active.

An ECO must be appointed to monitor the compliance with the pre-commencement and planning and design phase. The first construction ECO report must provide a description on compliance measures for this phase.

The ESO's shall monitor the site activities daily during the construction phase and submit proof of inspections with findings and corrections to the ECO for consideration during the ECO visits to be conducted during the construction phase.

The ECO shall audit the site for compliance with the monitoring specifications / requirements once a month and compile and submit an ECO report during the construction phase to the Client and EDTEA as per the frequency indicated in the Environmental Authorisation.

In this regard, monitoring measures stipulated in this document for the various phases pertain to, but are not restricted to:

- Water quality management;
- Erosion control;
- Waste management;
- Maintenance of storage facilities and infrastructure;
- Noise levels;
- Emergency and Safety equipment;
- Fire incidents;
- Stormwater Management Plan;
- Alien invasive management Plan;
- Rehabilitation of disturbed areas;
- Compliance with the EA and EMPr conditions.

The ESO shall monitor the works on a day-to-day basis and shall report any problems in terms of adherence with the EMPr directly to the Project Manager and ECO.

Environmental Inspections and Audits shall be undertaken by the ECO with the assistance of the ESO on a monthly basis during the Construction Phase. The ESO shall have all necessary documentation available during the audits. The results of these audits will be included in EMPr Compliance Reports.

The Contractor is deemed not to have complied with the Environmental Specification/EMPr if:

- There is evidence of contravention of clauses within the boundaries of the site and wetlands;
- Environmental damage ensues due to negligence;
- The Contractor ignores or fails to comply with corrective or other instructions issued by the Project Manager or Engineer within a specified time; and
- The Contractor fails to respond adequately to complaints from the public.

Application of a penalty clause will apply for incidents of non-compliance (See Section 4.5 for details).

The Operational phase monitoring responsibilities and frequencies to be conducted by the Environmental Officer/ECO as per stipulated criteria and environmental authorisations. Where the frequency had been stipulated as “ongoing”, compliance to the required condition must be ensured through-out the lifetime of the operational phase. Compliance will thus be monitored on a monthly basis by the ECO.

5.3. COMPLAINTS AND ENVIRONMENTAL INCIDENTS

Identifying, recording and reporting complaints and environmental incidents further ensures the monitoring and auditing of environmental compliance and assessment of performance against the actual and perceived environmental aspects and impacts on site.

DOCUMENTATION

The following documentation must be kept on site in order to record compliance with the EMPr:

- Record of Complaints
- Non-conformance Reports
- Written Corrective Action Instructions
- Notification of Emergencies and Incidents.

The following inspection sheet and report templates are recommended and included in **Appendices B-E** respectively.

- Project Start Up Inspection Sheet
- Routine Site Inspection Sheet
- Construction Site Decommissioning Inspection Sheet
- Site Inspection Report Structure

COMPLAINT RECORDS

The Contractor must record any complaints received. The lodged complaint must be brought to the attention of the ECO/PM who will respond accordingly. The following information will be recorded:

- *Details of complainant*
- *Time, date and nature of the complaint*
- *Response and investigation undertaken*
- *Actions taken and by whom*

The complaints must be communicated to the Site Manager and ECO who will respond accordingly. An investigation must ensue and a response to the complainant must be provided within seven working days.

All environmental incidents occurring on the site will be recorded by the Contractor/ECO and submitted to the PM and copied to the EDTEA. The following information will be documented:

- *Time, date, location and nature of the incident*

- *Actions taken and by whom*
- *Response to complainant*
- *Close Out.*

The ECO, in conjunction with the Engineer and Contractor, will identify and authorise remediation action where necessary.

The following additional information may be added to the complaints and incident records:

- *Party/parties responsible for causing complaint/incident*
- *Additional corrective or remedial action taken and/or to be taken to address and to prevent reoccurrence of the complaint/incident*
- *Timeframes and the parties responsible for the implementation of the corrective or remedial actions*
- *Procedures to be undertaken and/or penalties to be applied if corrective or remedial actions are not implemented*
- *Copies of all correspondence received regarding complaints/incidents*

As mentioned, EMPr compliance is the responsibility of all the parties that make up the project team. Similarly, all these parties have a role to play in EMPr compliance monitoring and reporting in accordance with the authority structure. For example, sub-contractors must monitor their own compliance and report any discrepancies, non-compliances or incidents to the contractor, while the contractor must in turn monitor the sub-contractor compliance. In turn, the Engineer must monitor the Contractor's EMPr compliance on a day-to-day basis while the ECO has the role to undertake regular site inspections and audits and prepare audit reports.

The above records will form an integral part of the Contractors' Records. These records will be kept with the EMPr, and will be made available for scrutiny if so, requested by the Client or Project Manager.

Outlined below are steps relating to increasing severity of environmental problems, which will be implemented. The principle is to keep as many issues within the first few steps as possible.

Step 1
The ECO discusses the problem with the contractor or guilty party, and they work out a solution together. The ECO records the discussion and the solution implemented.

Step 2
The ECO or Client observes a more serious infringement, and notifies the guilty party in writing, with a deadline by which the problem must be rectified. All costs will be borne by the contractor.

Step 3
The ECO shall order the contractor to suspend part, or all, the works. The suspension will be enforced until such time as the offending party/parties, procedure or equipment is corrected and/or remedial measures put in place if required. No extension of time will be granted for such delays and all cost will be borne by the contractor.

Step 4
Breach of contract - One of the possible consequences of this is the removal of a contractor and/or equipment from the site and/or the termination of the contract, whether a construction contract or an employment contract. Such measures will not replace any legal proceedings that SSS 123 Trading (Pty) Ltd may institute against the contractor.

5.4. NON-COMPLIANCE, PENALTIES AND 'SUSPENDED WORK' ORDERS

The Engineer, in consultation or on the advice of the ECO, shall issue penalties ('spot fines') if the Contractor infringes environmental specifications set out in this EMPr. The Contractor shall be advised in writing of the nature of the infringement and the amount of the spot fine. The Contractor shall be liable for the fine and it is his responsibility to recover the fine from the relevant employee. The Contractor shall also take the necessary steps (e.g., training) to prevent a recurrence of the infringement.
The Contractor is also advised that the imposition of spot fines does not replace any legal proceedings the authorities, landowners and/or members of the public may institute against the Contractor. Spot fines shall be between R100.00 and R20 000.00, depending upon the severity of the infringement. A list of typical EMPr non-compliance incidents for which penalties may incur and associated fine value is included in **Appendix F**. For each subsequent similar offence, the penalty may, at the discretion of the Engineer or ECO be doubled in value to the maximum value to be determined by the Engineer and ECO.

This list may be amended provided it is formally issued to the Contractor prior to an incident for which a penalty is imposed. The decision on when to impose a penalty will be at the discretion of the Engineer or ECO and will be final. In addition to the spot fine, the Contractor shall be required to make good any damage caused as a result of the infringement at his own expense.

LIST OF INFRINGEMENTS THAT RESULT IN SPOT-FINES

A preliminary list of infringements for which spot fines can be imposed is as follows:

- Using any areas outside the working areas without permission
- Clearing and/or levelling areas outside of the working areas
- Spillage onto the ground or water bodies of oil, diesel, etc.
- Picking/damaging plant material
- Damaging/killing animals/birds
- Untidiness and litter on site
- Inappropriate use of bins and poor waste management on site
- Making fires on site
- Discharging effluent and/or storm water onto the ground or into surface water
- Repeated contravention of the specifications or failure to comply with instructions
- Additional fines as determined by the ECO and added to this list
- Damage to any identified heritage sites.

A more comprehensive list of incidents and associated penalty values is provided in **Appendix F**. The Engineer shall retain records for spot fines issued. Monies for the spot fines will be deducted from the Contractor's monthly certificate. The penalty imposed will be per incident. Unless otherwise stated in the project specification, the penalties imposed per incident or violation will be a set amount.

The Engineer at his own discretion, or on recommendation from the ECO, may also order the Contractor to place on hold or suspend part or all the works if the Contractor repeatedly causes damage to the environment by not adhering to the EMPr (i.e., more than 3 cases of infringements). The suspension will be enforced until such time as the offending actions, procedure or equipment is corrected. No extension of time will be granted for such delays and all costs will be borne by the Contractor. Work may also be placed on hold if a heritage artefact or feature or grave is uncovered or to prevent a potential significant incident from occurring or spreading.

5.5. METHOD STATEMENTS

Method Statements indicate how the Contractor will achieve compliance with environmental legislation, good management practice and the Environmental Specifications during the construction phase. Method Statements may be required for any identified specific activity or group of activities for which it is considered necessary to implement a detailed method to mitigate potential environmental impacts. In addition to the

Method Statements identified in this EMPr, the Contractor, Engineer and/or ECO may require additional Method Statements for effective environmental management and as the project unfolds.

PROCEDURES AND CONTENT

The Contractor shall submit a written Method Statement to the Engineer for approval and shall only implement a Method Statement once he has received the Engineer's approval in writing. On receipt of a Method Statement the Engineer shall forward a copy thereof to the ECO. Both the Engineer and ECO shall review the Method Statement and come to an agreement as to whether the Method Statement is acceptable or requires amendments.

The Method Statement shall state clearly:

- Timing of activities
- Materials to be used
- Equipment and staffing requirements
- Proposed construction procedure designed to implement the relevant environmental specifications
- The system to be implemented to ensure compliance with the above
- Other information deemed necessary by the Contractor, Engineer and/or ECO.

The Method Statement shall be submitted at least 14 working days prior to the projected commencement of work on an activity, to allow the Engineer and ECO time to study and approve the Method Statement. The Engineer shall strive to review and approve the Method Statement within 7 working days of receipt thereof.

Once a Method Statement is approved it is binding and the Contractor must therefore ensure that all activities to which the approved Method Statement applies are carried out accordingly.

Due to changing circumstances, it may be necessary to modify Method Statements. In such cases, the proposed modifications must be reviewed by the PE and ECO. The Contractor may only implement a revised Method Statement once he receives formal written approval from the PE to do so. The Contractor must also obtain approval from the PE for any deviation from a Method Statement.

The ECO and PE must retain records of any amendments to any Method Statement and ensure that the most current version of all Method Statements is being used.

REQUIRED METHOD STATEMENTS

Method Statements that are identified and required from the Contractor in terms of this EMPr may cover, for example, the following activities:

- Location, layout and preparation of the construction camp(s) and materials storage areas
- Location, layout and preparation of cement/concrete batching facilities including the methods employed for the mixing of concrete and the management of runoff water from such areas
- Stormwater management plan
- Contaminated water management plan, including the containment of runoff and polluted water
- Incidence Response Method Statements (including details of methods for fuel spills and clean-up operations)
- Solid waste management and removal of waste from site

As mentioned, additional Method Statements may be identified and required by the Contractor, Engineer and/or ECO as the project unfolds.

5.6. LIMITATIONS AND ASSUMPTIONS REGARDING ASSESSMENT AND MITIGATING OF IMPACTS

The assumption is that all significant issues have been identified during the development of the EMPr.

Environmental issues, concerns and development constraints were identified using professional judgement, project information, experience of similar projects, a review of available literature, site visits and consultation with the authorities.

The significance of environmental issues was evaluated, and mitigation and management measures were identified as part of the EMPr development.

The effectiveness of the EMPr is limited by the level of adherence to the conditions set forth in this report by the Client and the various contractors and agents acting on behalf of the Client.

It is further assumed that compliance with the EMPr will be monitored and audited on a regular basis as set out in the EMPr. It should also be noted that this EMPr is a dynamic document that must be continually updated, as and when required. Also, all other documents from the Client must be referred to in addition to this EMPr.

6. SUMMARY OF ACTIVITIES AND ASPECTS CAUSING IMPACTS

The construction of the proposed can potentially result in negative impacts on the receiving environment. These potentially significant negative impacts have been identified and summarised by the Environmental Assessment Practitioner (EAP).

- Energy
- Storm water
- Pollution
- Safety and security
- Erosion
- Alien vegetation
- Waste management
- Fire incidents
- Noise, dust and odours

The above-mentioned aspects can potentially cause negative impacts that may occur during the planning, construction, post construction (rehabilitation and operational) or decommissioning phases of the proposed project:

In order to prevent and/or minimise these impacts, care must be taken with, *inter alia*, the disposal of waste, spillage, storage, noise, dust control, sediment management, the demarcation of sensitive areas and management of the different phases of construction and operation. This can be achieved by effective implementation of the necessary mitigation measures as stipulated in this EMPr. With adequate management, the associated risks and significant negative impacts of the proposed project can be minimised and/or entirely negated. These will all be dealt with in this EMPr.

7. DETAILED ENVIRONMENTAL MANAGEMENT PROGRAMME

This Section provides environmental specifications that must be adhered to during the planning, construction and post construction/rehabilitation phases of the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet. It is essential that all listed specifications are considered and appropriately incorporated into the planning, design and/or contract documentation, and adhered to during the respective phases of the project.

The listed environmental specifications should be regarded as the minimum range of environmental constraints, controls, procedures and/or standards. They should not be regarded as exhaustive and therefore improvements and/or amendments should be made where reasonable and required.

Such requirements may be identified by stakeholders and/or other interested and affected parties, upon which the EMPr and the relevant environmental specifications may require revision. Environmental specifications have been listed in tables in the sub-sections as per the following phases:

- Planning and design phase
- Construction phase
- Post-construction and Rehabilitation Phase
- Operational Phase
- Decommissioning Phase

For each timeframe and specification, the responsible monitoring party/parties and frequency, where relevant, is indicated.

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

7.1. PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.1.1. Administrative and Legal Requirements			
Impact Management Outcome: • ***To ensure administrative and legal requirements such as licenses and approvals are in place prior to the construction and operation of the uMhlali Total Energies Fuel Station and Fast-Food Outlet*** • ***Determine the roles and responsibilities of staff, contractors etc.*** • ***Ensure all site staff are aware of the EMPr and its conditions.***			
Planning Requirements	1. All Environmental legal requirements must be authorised prior to the commencement of the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet.	Project Developer / Contractor / ECO / Project Engineer	During design and prior to, construction
	2. Appointment of an EAP is required to conduct the required environmental processes in terms of the NEMA and NWA to ensure legal compliance, when relevant.	Project Manager	Prior to, construction
	3. Prior to construction the Environmental Control Officer (ECO) must approve the location of the construction working servitude and the site camp.	Project Developer / Contractor /Engineer	During design and prior to, construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	4. Where feasible, environmentally responsible lay-out and sustainable designs must be considered and implemented to reduce resource consumption (electricity, water) and prevent potential pollution and /or environmental degradation during the operational phase of the project.	Project Developer / Contractor / ECO / Project Engineer	During design and prior to, construction
	5. Where feasible favourable socio-economic options / solution, including but not limited to low maintenance infrastructure, incorporation with existing facilities and infrastructure must be considered and implemented.	Project Developer / Contractor / ECO / Project Engineer	During design and prior to, construction
Roles Responsibilities for Environmental Management and Environmental Awareness	1. The overall responsibility for ensuring the implementation of this environmental management plan rests with the Project Developer / Contractor / ECO.	Project Manager / Contractor / ECO	Prior to, during and after construction
	2. Responsibility for on-site implementation of environmental management as well as the associated cost with the implementation of the EMPr rests with all appointed contractors, sub-contractors and suppliers.	Project Engineer/ Contractor	Prior to, during and after construction
	3. SSS 123 Trading (Pty) Ltd and appointed contractors must ensure that all permanent and temporary staff, sub-contractors and suppliers adhere to this EMPr.	Project Developer / Contractor / ECO.	During construction
	4. Prior to the commencement of construction as well as during construction, proper signage must be erected along the fuel station warning both pedestrians and motorists of earthworks being undertaken.	Contractor	Prior to, during and after construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. SSS 123 Trading (Pty) Ltd / Project Engineer / Main Contractor must appoint a senior staff member directly involved in the site construction activities as the Environmental Site Officer (ESO). This person must ensure the implementation of and adherence to the EMPr in the contractor's execution of the day-to-day construction activities.	Project Manager	Prior to construction
	6. The environmental responsibility of the ESO must be specified in this person's duties, which must also include: • Liaison with the appointed ECO; • Ensuring environmental awareness among members of the workforce; • Ensuring that the Contractor/s and members of the construction workforce are aware of the requirements of the EMPr; • The on-site implementation of the EMPr; • Monitoring inappropriate behaviour, environmental impacts, including pollution and environmental incidents; and • The implementation of corrective action.	Project Developer	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	Environmental Control Officer (ECO) 7. SSS 123 Trading (Pty) Ltd must appoint a person with a qualification in environmental management or science as the ECO. The ECO must be the responsible person for monitoring and reporting on compliance in respect of the implementation of the EMPr. Requirements include: • Monitoring of activities to comply with the EMPr as per the frequency indicated in the Environmental Authorisation; • Liaison and ongoing communication with the Environmental Site Officer; • Ensuring the Implementation of preventative and corrective actions in accordance with the requirements of the EMPr and outcomes of environmental monitoring / auditing; • Reporting of environmental incidents that may occur on site in accordance with the requirements of the EMPr and environmental legislation;	Project Developer / Contractor / ECO.	Prior to and during construction
	8. The contractor and Environmental Site Officer must inform the ECO prior to the commencement of any significant construction activity.	Contractor / ESO	Prior to construction
	9. Measures must be taken to prevent the wastage of natural resources. These must include closing taps and valves, switching off lights during daytime and preventing spillages of consumables.	Contractor	During construction
	10. All members of the construction workforce working on the site (particularly the roads) must be provided with proper high visibility clothing to be distinguished from the general public and be seen by motorists.	Contractor	During construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	11. All construction workers handling chemical or hazardous substances must be trained in the use of such substances and the environmental, health and safety consequences of incidents.	Contractor	Prior to and during construction
	12. An after-hours number must be provided which must be contacted to lodge complaints, such as excessive dust.	Contractor	Prior to and during construction
	13. The conduct of the construction staff when dealing with the public or other stakeholders must be in a manner that is always polite and courteous. Failure to adhere to this requirement will result in the removal of staff from the site.	Contractor	During construction
Compliance	1. All persons appointed / employed by SSS 123 Trading (Pty) Ltd or their contractors on this project must abide by the requirements of the EMPr.	Project Developer / Contractor / ECO.	Prior to and during construction
	2. SSS 123 Trading (Pty) Ltd or contractors must not direct a person to undertake any activity which would place them in contravention of the specifications contained within the EMPr.	Project Developer / Contractor / ECO.	Prior to and during construction
	3. Any member of the construction, operation or maintenance workforce found to be in breach of any of the specifications contained within the EMPr will be ordered to leave the site. The order must be given orally or in writing. Confirmation of an oral order in writing must be provided, but the absence of a written order must not be cause for an offender to remain on site. No extension of time must be granted for any delay or disadvantage to SSS 123 Trading (Pty) Ltd brought about by an offender ordered to leave the site.	Project Developer / Contractor / ECO.	Prior to and during construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	4. If a contractor be in breach of any of the specifications contained in the EMPr, SSS 123 Trading (Pty) Ltd / ECO / Engineer must, verbally or in writing, instruct the responsible Contractor regarding corrective and/or remedial action required, specify a timeframe for implementation of these actions, and/or indicate that work must be suspended in the event non-compliance continue. Contractors must be responsible and will bear the cost of any delays, corrective or remedial actions required as a result of non-compliance with the specifications and clauses of the EMPr.	Project Developer / Contractor / ECO. / Engineer	During construction
Environmental Training and Induction	1. All personnel involved in the project must be aware of, and familiar with, the EMPr, the key environmental issues and consequences of non-compliance to the EMPr.	Contractor / ESO	Prior to and during construction
	2. All construction staff must be educated about the importance and sensitivity of environmental areas near the construction site. Frequent inspection of the site must be done to ensure that the integrity of sensitive areas is maintained at all times (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor / ESO	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. To ensure compliance to the EMPr by contractors, sub-contractors and employees, SSS 123 Trading (Pty) Ltd /Main Contractor must ensure that the EMPr forms part of the formal site induction for all contractors, sub-contractors and casual labourers. The main contractor/ESO must prepare and submit the training material to the ECO for approval. The induction training must, as a minimum, include the following: • The environmental impacts, actual or potential, of their work activities such as the digging of trenches and the importance of separation of soil and subsoil; • Why the environment must be protected; • Their roles and responsibilities in achieving compliance with the EMPr, including emergency preparedness and response requirements; and • The potential consequences of departure from specified operating procedures. • Procedure to be followed in the event of a fire.	Project Developer / Contractor / ECO / Project Engineer	Prior to construction
Worker Conduct on Site	4. A general regard for the social and ecological well-being of the site and community is expected of the site staff. Workers must be made aware of the following general rules: • No alcohol / drugs to be present on site; • No firearms and hunting weapons allowed on site or in vehicles transporting staff to / from site, (unless used by security personnel); • Prevent unsocial behaviour; • Driving under the influence of alcohol is prohibited.	Contractor/ ESO	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.1.2. No-Go Areas			
Impact Management Outcome: Prevent access to No – Go areas minimising impacts to private properties not associated with the project/outside the project boundary.			
No-go areas	1. Any no-go areas must be demarcated, and workers must be informed that no activities are to occur in these areas.	Project Developer / Contractor / ECO. / Project Engineer	Prior to construction
	2. Unauthorised entry, stockpiling, dumping or storage of equipment, material or waste outside the project boundaries is strictly prohibited.	Project Developer / Contractor / ECO. / Project Engineer	Prior to construction
	3. Unauthorised access onto/into private properties is strictly prohibited.	Project Developer / Contractor / ECO. / Project Engineer	Prior to construction
	4. Activities in the surrounding agricultural areas is prohibited.	Project Developer / Contractor / ECO. / Project Engineer	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.1.3. Site Establishment			
Impact Management Outcome: Minimise impact on the environment when establishing site camp. Ensure the development foot print of the site camp is minimal and kept to demarcated areas.			
Planning	1. Natural features must be considered, and potential impacts must be minimised and/or prevented where feasible.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
Site Access	1. Reasonable speeds must be maintained at all times in order to prevent accidents, excessive noise and dust and road fatalities of migrating animals (Ecological Survey, C.L. Cook, 2020).	Project Developer / Contractor / ECO. / Project Engineer	During construction
	2. Choice of access routes must have minimal / no disruption to residents and businesses neighbouring the development.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
	3. All parking facilities and accesses are to be designed and dimensioned in accordance with the schedule of guidelines as per the Municipality of KwaDukuza Municipality standards and specifications for parking (Traffic Impact Assessment, Trans-Traffix (Pty) Ltd, 2021).	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
Setting of Construction Site Camp	1. The site selected for a construction camp must ensure potential negative impacts on the biophysical environment are kept to a minimum.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
	2. The construction site must be defined, fenced off and limited to authorised contractors only.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Invasive alien plants/weeds must be continuously removed on site.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
Design of Construction Site Camp site	1. The construction site camp must comprise of: • Site office; • Designated first aid area; • Eating areas; • Storage areas; • Maintenance and refuelling areas (if required).	Contractor	During site Establishment, prior to construction
	2. Development must be kept within the footprint and not extend into any areas outside of the footprint design/project area.	Contractor	During site Establishment
	3. The footprint of the construction camp must be kept to a minimum.	Contractor	During site Establishment
	4. Enough parking must be provided for site staff and visitors at the construction camp.	Contractor	During site Establishment
	5. Drainage from the site must be planned to prevent standing water and erosion occurring from run-off. Temporary cut-off drains are required to capture stormwater and promote infiltration.	Project Engineer	During design and prior to, construction
	6. Prior to construction commencing the construction areas, stockpile areas, excavation areas, storage facilities, must be demarcated for the duration of the construction period.	Contractor	During site Establishment, prior to construction
Sanitation / Ablutions at Camp Site	1. Employees must use the existing ablution facilities at the uMhlali TotalEnergies Fuel Station. This facility is linked to an existing conservancy tank.	Contractor	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
Waste Management at Camp Site	1. Bins and / or skips must be provided at frequent intervals for disposal of waste at the construction area and construction camp.	Contractor	During site set-up
	2. All waste must be moved to a single location for easier and more effective waste management.	Contractor	During site set-up
	3. The excavation and use of rubbish pits on site are forbidden. All waste must be reused, recycled or disposed of by registered companies or at a registered waste disposal site.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
	4. The storage of waste must comply with the norms and standards as stipulated in the National Environmental Management: Waste Act.	Project Developer / Contractor / ECO. / Project Engineer	During design and prior to, construction
7.1.4. Equipment, Vehicle Maintenance and Secured Storage Areas			
Impact Management Outcome: To ensure that equipment and materials are appropriately stored and handled.			
Establishing Equipment, Vehicle and Storage Areas	1. The equipment and vehicle maintenance area must be situated within the boundaries of the construction camp only.	Contractor	Prior to construction
	2. Fire prevention materials must be present at all storage areas and fire breaks must be planned and implemented where required.	Contractor	Prior to and during construction
Hazardous substances and material	1. Refuelling areas, if required, must be bunded with an impermeable liner to prevent potential pollution from spillage.	Contractor	Prior to construction
	2. Material Safety Data Sheets (MSDS's) must be readily available on site for all chemicals and hazardous substances to be used on site. MSDS's must include information on ecological impacts and measures to minimise negative environmental impacts during accidental releases or escapes.	Contractor	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Contractors must submit a method statement / procedure for the storage and handling of hazardous materials and relevant emergency procedures.	Contractor	Prior to construction
	4. Staff dealing with these materials / substances must be aware of their potential impacts and follow the proper safety measures.	Contractor	Prior to and During construction
	5. Symbolic safety signs (in accordance with SABS 1186) must be erected at storage facilities and tank capacities must be clearly indicated (in accordance with SABS 0232).	Contractor	Prior to Construction
Transport of Materials/Components	1. Secure and safe passage for components and materials between destinations must be ensured. Loads including, but not limited to sand, fine vegetation, and cement, must have proper cover to prevent it from spilling over the side of the vehicle during transit.	Contractor	Prior to Construction
	2. If a spillage occurs resulting from the failure by staff or supplier to properly secure materials to be transported (as per previous condition) then the contractor must be responsible for remediation and cleaning-up measures.	Contractor	Prior to Construction
7.1.5. Materials Management – Sourcing			
Impact Management Outcome: Source legal and sustainable materials.			
Source of Materials	1. Materials used during construction must be legally sourced.	Contractor	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	2. Contractors must prepare a source statement indicating the sources of all materials (including topsoil, sands, natural gravels, crushed stone, asphalt, clay liners etc.) and submit these to the project manager, engineer and ECO for approval prior to commencement of any work. Where applicable, a signed document from the supplier of natural materials must be obtained confirming that they have been obtained in a sustainable manner and in compliance with the relevant legislation.	Contractor	Prior to construction
7.1.6. Water and Drainage Management			
Impact Management Outcome: To ensure the provisions for the proper management of stormwater and to reduce its impacts to the environment.			
Stormwater and Drainage Planning	1. To prevent stormwater damage, the increase in stormwater run-off resulting from construction activities must be estimated and the drainage system assessed accordingly.	Project Developer / Contractor / ECO. / Project Engineer	During the design and prior to, construction
	2. The conditions of the Stormwater Management Plan by Delca Systems (2019) must be complied with.	Project Developer / Contractor / ECO. / Project Engineer	During the design and prior to, construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Stormwater disposal systems must be maintained by: • Keeping inlets to catchpits clear of silt, leaves and rubbish • Periodically checking that the attenuation facility is kept clear of weeds and sediments • Checking and repairing structures and embankments if required after storms (Stormwater Management Plan, Delca Systems, 2019)	Project Developer / Contractor / ECO. / Project Engineer	During the design and prior to, construction
	4. Allowance must be made for dewatering measures and / or cut-off drains during design and construction due to the risk of intermittent groundwater activity across the greater majority of the site (Geotechnical and Hydrogeological Report, Geosure, 2023).	Project Developer / Contractor / ECO. / Project Engineer	During the design and prior to, construction
	5. A formal stormwater system must be implemented to cater for the following objectives: • To dispose of runoff from developed areas without causing soil saturation or erosion/sloughing. • To provide overland flow routes through developments to cater for major storms. • To function with low maintenance in the long term and must cater for silting. (Geotechnical and Hydrogeological Report, Geosure, 2023)	Project Developer / Contractor / ECO. / Project Engineer	During design and construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	6. Suggested stormwater disposal options: • Stormwater Soakpits • Discharge to Road Hardenings (Geotechnical and Hydrogeological Report, Geosure, 2023)	Project Developer / Contractor / ECO. / Project Engineer	During design and construction
Water Quality	1. Storage areas that contain liquids, that could be hazardous to the environment, must be bunded with an approved impermeable liner. Bunds must have the capacity to hold 110% of the quantity of liquid stored.	Contractor	During set-up
	2. A spill contingency plan must be compiled and implemented. The following must be considered in the event of a spill: • Stop the source of the spill; • Contain the spill; • All significant spills must be reported to the relevant authorities; • Remove the spilled product for treatment of authorised disposal; • Determine if there are soil, water, environmental or any other impact; • The incident must be documented.	Contractor	During design and construction
	3. All sensitive areas in close proximity the development site must be clearly identified before construction activities begin.	Contractor	Prior to construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.1.7. Fauna and Flora Management			
Impact Management Outcome: Minimise disturbance and negative impacts to fauna and flora.			
Fauna and Flora Management	1. All alien invasive plant species must be removed and disposed of in environmentally friendly manner, prior to the commencement.	Contractor/ ECO. / Project Engineer	Prior to construction
	2. Exposed areas of soil must be stabilised through landscaping.	Contractor	Prior to and During construction
7.1.8. Security and Lighting			
Impact Management Outcome: To ensure a safe and controlled access to the site.			
Security	1. The camp site must be secured with a fence to ensure the safety and security of the site and infrastructure as well as the safety of the general public.	Contractor	During set-up
Safety Considerations	1. Safety precautions must be adhered to by all staff, and the general public, on site during the construction period. This must include protective clothing requirements for all types of construction activities on site, e.g., protection against dust, noise, falling objects.	Contractor/ ESO	Prior to construction
	2. It must be ensured that there is fire-fighting equipment on site at all times (which must include, but not limited to, fire extinguishers, protective clothing).	Contractor	Prior to and During construction

PLANNING AND DESIGN PHASE & PRE-CONSTRUCTION ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
Lighting	1. Lighting on site must be set out to provide maximum security and to enable easier policing of the site, without creating a visual nuisance to the surrounding residences.	Project Developer / Contractor / ECO. / Project Engineer	During design and construction
	2. Yellow sodium lights must be prescribed as they do not attract as many invertebrates (insects) at night and will not disturb the existing wildlife (Ecological Survey, C.L. Cook, 2020).	Project Developer / Contractor / ECO. / Project Engineer	During design and construction

7.2. CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.2.1. Administrative and Legal Requirements			
Impact Management Outcome: • ***To ensure administrative and legal requirements such as licenses and approvals are in place prior to construction and operation of uMhlali Total Energies Fuel Station and Fast-Food Outlet.*** • ***Determine the roles and responsibilities of staff, contractors etc.*** • ***Ensure all site staff are aware of the EMPr and its conditions.***			
Legal Requirements and Roles and Responsibilities for Environmental Management	1. The construction activities must comply with applicable SANS noise standards.	Contractor	During construction
	2. All procedures must comply with and equipment must be used in accordance with the Occupational Health and Safety Act Regulations (OHSA) of South Africa, Act no. 85 of 1993.	Contractor	During construction
	3. All contractors, sub-contractors or agents and their employees must be responsible for the implementation of the EMPr and adherence to the conditions of the EMPr and Environmental Authorisations.	Contractor	During construction
	4. The ECO must be the responsible person for monitoring and reporting on compliance in respect of the implementation of the EMPr.	Project Developer / Contractor / ECO.	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. The Environmental Site Officer must be responsible for on-site implementation and daily monitoring of implementation of the EMPr. The ESO must provide evidence to the ECO that the EMPr is being implemented and adhered to (either through inspections sheets, training register or audit reports).	ESO	During construction
Monitoring / Auditing and Reporting	1. Monitoring, auditing and reporting to EDTEA must be conducted as per the audit frequency indicated in the EA. This must be done by the independent ECO.	ECO/ESO	During construction, rehabilitation and closure
7.2.2. No-Go Areas			
Impact Management Outcome: Prevent access to No – Go areas minimising impacts to private properties not associated with the project/outside the project boundary.			
General	1. Unauthorised entry, stockpiling, dumping or storage of equipment, material or waste outside the project boundaries must be strictly prohibited.	Contractor	Ongoing
	2. The Contractor must ensure that all identified highly sensitive areas (non perennial drainage line, and 15m buffer zone) surrounding the development site are protected during construction by demarcating “no-go areas” through fencing or other means. All “no go” areas must be clearly marked on a site lay-out plan (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	3. Activities in the surrounding agricultural areas is prohibited.	Contractor	Ongoing

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.2.3. Camp Site, Equipment, Vehicle Maintenance Yard and Secured Areas			
Impact Management Outcome: • ***Minimise impact on the environment when establishing site camp.*** • ***To ensure that equipment and materials are appropriately stored and handled.*** • ***Appropriate management of stockpile areas.***			
Construction Camp Site	1. On-site accommodation must not be allowed. No persons, other than a night-watchman / security guard, is allowed to stay overnight at the construction site camp.	Contractor	During construction
	2. To minimise standing water and soil erosion, the contractor must monitor and manage stormwater within the camp site area.	Contractor / ESO	During construction
	3. Eating areas must be serviced and cleaned daily to ensure the highest possible standards of hygiene and cleanliness.	Contractor	During construction
	4. The Contractor must ensure that the camp and working areas are always kept clean and tidy, in line with good housekeeping practices.	Contractor / ESO	During construction
	5. No open fires must be allowed on site. The Contractor must take all reasonable steps to prevent the accidental occurrence or spread of fire.	Contractor	During construction
Waste Management	1. The Contractor must ensure that all litter is collected from the work and camp areas daily.	Contractor	During construction
	2. Bins and/or skips must be emptied weekly and waste must be disposed of at a registered landfill site. Waybills for all such disposals are to be kept by the Contractor for review by the ECO.	Contractor / ECO	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Any effluent containing oil, grease, or other industrial substances must be collected in a container with a leak-proof lid and removed from the site, either for resale or for disposal at a hazardous waste facility.	Contractor	During construction
	4. During all phases of the construction, all waste must be removed to a licensed waste facility and under no circumstance must waste materials or contaminants be discharged into the environment or buried.	Contractor	During construction
	5. Washing and cleaning of equipment must also be done within berms or bunds, in order to trap any cement/sediment and prevent excessive soil erosion. These sites must be re-vegetated after construction has been completed.	Contractor	During construction
Equipment, vehicles & storage, refuelling and maintenance	1. Storage of material, chemicals, fuels etc. must not pose a risk to the surrounding environment and this includes surface and groundwater. Temporary bunds must also be constructed around chemical or fuel storage areas to contain possible spillages.	Contractor	During construction
	2. No construction or storing of materials must be located outside of the defined layout area. These areas must be demarcated prior to any activities commencing and personnel instructed of the rules to stay out of these areas.	Contractor	Ongoing
	3. Equipment must be maintained to prevent spillage of oil, diesel, fuel or hydraulic fluid. The Contractor must repair or withdraw equipment or machinery from use if they consider these to be polluting and irreparable.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	4. Suitably covered receptacles must always be available and frequently placed for the disposal of waste oils and greases. All used oils, grease or hydraulic fluids must be placed therein, and these receptacles must be removed on a consistent basis for recycling.	Contractor	During construction
	5. No smoking must be allowed in the vicinity of storage or dispensing areas. There must be designated smoking areas within the site camp.	Contractor	During construction
	6. The Contractor must ensure that its employees are aware of the procedure to be followed for during refuelling if required.	Contractor	During Construction
	7. Washing and cleaning of equipment must also be done within berms or bunds, in order to trap any cement/sediment and prevent excessive soil erosion. These sites must be re-vegetated after construction has been completed (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
Handling of Hazardous Materials	1. All concrete mixing must take place at designated areas with an impermeable surface e.g., concrete, tarpaulin.	Contractor	During construction
	2. Hazardous storage areas must be 110% bunded with an impermeable liner to protect groundwater quality.	Contractor	During construction
	3. Excess concrete, bituminous product, etc. must not be dumped on the project area, vacant areas or within sensitive environments. These must be disposed to a licensed waste disposal site or re-used where feasible.	Contractor	During construction
	4. The Contractor must prepare a Method Statement for the containment, handling, storage and disposal of hazardous substances.	Contractor	During construction
	2. All hazardous substances required for vehicle maintenance and repair must be stored in sealed containers for disposal to a registered waste disposal site.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Fire-fighting equipment must be supplied and installed by the Contractor at the hazardous substance storage areas.	Contractor	During construction
	4. In the event of a pollution incident on site the ESO and ECO must: • Ensure the immediate implementation of reasonable measures to contain and minimise the impacts of the incident; (E.g., By using a spill kit to contain and collect the material together with any contaminated soil and be disposed as hazardous waste). • Notify all persons as per legal requirements (NEMA, NEMWA & NWA) if applicable and approved communication / incident procedure; • Undertake clean up procedures immediately; • Record the incident in the Environmental Incident Register; and • Implement measures to prevent similar incidents from occurring in the future.	Contractor	During construction
	5. In the case of a spill of hydrocarbons, chemicals or bituminous material the spill must be contained and the material together with any contaminated soil collected and disposed of as hazardous waste.	Contractor	During construction
	6. The Contractor must be responsible for any clean-up resulting from the failure by his employees or suppliers to properly secure transported materials.	Contractor	During construction
Stockpile Management	1. Soil stockpiling areas must be sufficiently situated away from the drainage areas towards the non-perennial drainage line (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	2. Soil removed from the site is to be properly stored for later use in back filling. Sub-soil and topsoil (the top +/- 30-50 cm of the soil) must be stored separately (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	3. Stockpiles must not exceed 2 metres in height (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	4. All temporary stockpile areas including litter and dumped material and rubble must be removed on completion of construction. All alien invasive plant must be removed from the recent soil stockpiles site to prevent further invasion (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	5. Stockpiles exposed to windy conditions must be wetted to prevent windblown particles or in the case of heavy rain, must be covered/provided with containment to prevent contaminated run-off. Rocks can be stacked as walls to prevent the loss of top and subsoil on cut or fill banks.	Contractor	During construction
	6. Unprotected stockpiles are very prone to erosion and therefore must be protected. Small stockpiles can be covered with a tarp to prevent erosion. Large stockpiles must be stabilised by erosion blankets, seeding, and/or mulching.	Contractor	During construction
7.2.4. Access to Construction Site			
Impact Management Outcome: Minimise impact to the environment through the planned and restricted movement of vehicles on site.			
Maintenance of Site Access and Impacts from Haulage	1. The liberation of dust into the surrounding environment must be effectively controlled using water sprays, fabric containment or curtains, where required.	Contractor	During construction
	2. The use of existing access routes to and within the site area must be prioritised. In the case that practical new access routes are required, these must be signed-off by the Engineer and ECO and must be demarcated accordingly.	Contractor	During construction
	3. If required, staff must be employed to clean spilt material onto the access roads.	Contractor	During construction

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	4. Pedestrian and vehicle access must be restricted during construction so as to control access to otherwise potentially dangerous excavations and materials.	Contractor	During construction
	5. Careful attention must be made to heavy construction vehicles, soil compaction, demarcated and turning areas.	Contractor	During construction
7.2.5. Earthworks, including Demolition and Construction			
Impact Management Outcome: Ensure earthworks are undertaken in a manner which has minimal impact on the environment.			
Earthworks (Geotechnical and Hydrogeological Report, Geosure, 2023)	1. All earthworks must be carried out in accordance with the current SANS 1200 guidelines.	Contractor	During construction
	2. The placement of select/ general fill material devoid of clay and boulder size inclusions must be undertaken in layers not exceeding 200mm thick when loose, and compacted using compaction plant.	Project Developer / Engineer/ Contractor	During construction
	3. Any inclusions larger than two thirds of the layer thickness when loose must be removed from the fill material.	Contractor	During construction
	4. Density control testing of placed fill material must be undertaken at regular intervals during fill construction.	Contractor	During construction
	5. Workers must not enter any excavations deeper than 1.5m that are not shored or battered back. All excavations are to be inspected on a daily basis by a competent person to confirm stability.	Contractor	During construction
	6. Cut slopes within satisfactorily drained insitu soils and fill slopes must be formed to batters not steeper than 1 vertical to 2 horizontal (≤ 26°) and to a height not greater than approximately 1.5m where retaining walls are not provided.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	7. Cut slopes comprising competent weathered rock without planes of weakness and / or day-lighting bedding / or fracture surfaces as confirmed on site by the geotechnical professional during construction, must be formed to a batter of up to 1 vertical to 0.75 horizontal (≤ 53°) and to a height not greater than approximately 2m where retaining walls are not provided.	Contractor	During construction
	8. Construction areas must be cordoned off and demarcated to prevent incidental public access.	Contractor	During construction
7.2.6. Suitability of Insitu Materials for Use in Construction and Material Excavatability			
Impact Management Outcome: Ensure suitable materials are used for construction.			
Insitu Materials (Geotechnical and Hydrogeological Report, Geosure, 2023)	1. The classification of materials from site for consideration for use during construction must be verified by laboratory testing to be undertaken during construction.	Contractor	During construction
Material Excavatability (Geotechnical and Hydrogeological Report, Geosure, 2023)	2. Shoring or battering of excavations deeper than approximately 0.5m is advisable where a shallow groundwater condition is anticipated, or deeper than 1.5m in relatively “dry” excavations. The contractor/engineer on site must ensure excavations are safe and shored in line with requirements as set down in the current “Occupational Health and Safety (OHS)” Act regulations.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.2.7. Foundations			
Impact Management Outcome: Ensure stable foundation for development.			
Foundation options (Geotechnical and Hydrogeological Report, Geosure, 2023)	1. Two foundation options to engineer's detail are listed below for consideration in the construction of the new building and underground tank, as follows: • Option 1: Reinforced Concrete (RC) Strip Footings on rock • Option 2: Stiffened Raft	Contractor	During construction
7.2.8. Conservation of Resource and Natural Environment			
Impact Management Outcome: Appropriate management of topsoil.			
Topsoil	1. The topsoil obtained from site clearing must be stored in stockpiles no higher than 2m and used during rehabilitation.	Contractor	During construction
	2. The stripping of topsoil must be undertaken in a manner that minimises erosion by wind or runoff.	Contractor	During construction
	3. Subsoil and topsoil must not be mixed with other soils during stripping, excavation, reinstatement and rehabilitation.	Contractor	During construction
	4. Any topsoil removed during construction must be stockpiled for re-use (i.e., for gardens)	Contractor	During construction
7.2.9. Underground Storage Tanks and Equipment			

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
Impact Management Outcome: Ensures appropriate design of underground storage tanks and equipment.			
Underground Storage Tanks and Equipment	1. The design must comprise of: • Tight coupling for loading of petrol and diesel into tanks to minimise environmental incidents such as fires, spillages and the loss of material; and • An overfill protector fitted on the storage tanks;	Project Developer / Contractor /Project Engineer	Prior to and During construction
	2. An emergency shut-off valve must be supplied between the supply pipeline and the dispenser inlet.	Project Developer / Contractor /Project Engineer	Prior to and During construction
	3. Pressure tests must be conducted on tanks and pipelines to ensure integrity prior to operation and the inspection authority must issue pressure test certificates.	Project Developer / Contractor /Project Engineer	Prior to and During construction
	4. Forecourt Contaminant Slab must be implemented: – this will be a concrete slab surrounding the fuel pumps, and any spillage that occurs will be restricted to a certain area and channelled into a “Fuel Separator Tank” (Geotechnical and Hydrogeological Report, Geosure, 2023).	Project Developer / Contractor /Project Engineer	Prior to and During construction
	5. Delivery Containment Slab must be implemented: – similar to the Forecourt Containment Slab, which is constructed within the receiving area for fuel tankers (Geotechnical and Hydrogeological Report, Geosure, 2023).	Project Developer / Contractor /Project Engineer	Prior to and During construction
	6. Impermeable membranes/liners must be installed at the base of the fuel storage tanks to reduce the risk of contaminants entering the groundwater system as best as possible (Geotechnical and Hydrogeological Report, Geosure, 2023).	Project Developer / Contractor /Project Engineer	Prior to and During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	7. Monitoring systems: • Leak detections systems must be installed on tanks for early detection for any leakage. • Groundwater boreholes/wells must be installed for continuous monitoring of groundwater quality to identify any possible contamination issues. • It is recommended that monitoring of groundwater be carried out on a monthly basis during construction. • Monitoring of groundwater must be conducted on a bi-annual basis during the operation of the filling station. (Geotechnical and Hydrogeological Report, Geosure, 2023)	Contractor	During construction and operation
	8. The leak detector system must automatically assess the integrity of the pipework on the pressure side of the pump. The system must also ensure that the supply pipelines do not retain product after use and no joints are made underground.	Project Developer / Contractor /Project Engineer	Prior to and During construction
7.2.10. Pollution Control Measures			
Impact Management Outcome: Ensure impacts to soil, surface and ground conditions are minimised.			
Pollution control measures	1. If hazardous substances such as fuel and /or chemicals are to be stored onsite, Material Safety Data Sheets (MSDS) for on-site chemicals, hydrocarbon materials and / or waste and hazardous substances must be readily available onsite.	Contractor	During construction
	2. Fuels, chemicals and other hazardous substances must be stored in the correct, marked containers with closed lids (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. The Contractor must prepare an emergency procedure and a procedure for the management e.g., storage, decanting and disposal of hazardous substances.	Contractor	Prior to and during construction
	4. Hazardous substances kept on site must be stored within a suitably covered and bunded structure. This bund must be able to hold at least 110% of the volume of the hazardous substances. Hazardous substances must only be handled within a bunded structure	Contractor	During construction
	5. Equipment whether in use or not must be underlain by drip trays to ensure any leakages are suitably contained. The Site Manager and ECO must also monitor the plant for potential leakages during day-to-day operations.	Site Manager/ECO	During construction
	6. Spill kits must be made available onsite.	Contractor	During construction
	7. All spillages or contaminations must be immediately reported to the Site Manager and Environmental Officer so that clean up measures will be undertaken (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	8. Any spills onsite must be remediated immediately using a spill kit and the material together with any contaminated soil collected and disposed of as hazardous waste. Workers must receive basic environmental training regarding spill remediation (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	9. In the event of a pollution incident on site, the Site Environmental Officer and ECO must: • Notify all persons as per legal requirements (NEMA, NEM: WA and NWA) if applicable and approved communication/ incident procedure; • Record the incident in the Environmental Incident Register; and implement measures to prevent similar incidents	Contractor/ESO/ECO	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	10. Any concrete or cement mixing required during the construction phase must be undertaken on an impervious surface.	Contractor	During construction
7.2.11. Solid Waste Management			
Impact Management Outcome: Ensure waste is appropriately stored, handled and safely disposed of at a recognised waste facility.			
General Waste	1. Waste must be dealt with in accordance with the National Waste Management Strategy namely reduce, re-use and recycling, with disposal to landfill being a last resort.	Contractor	During construction
	2. Due to the slopes around the site footprint, pollution can easily be transferred downslope to the drainage ststem and this must therefore be prevented (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	3. No dumping of any materials or storage of any equipment must be allowed within the sensitive areas (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	4. Solid waste generated onsite must be placed within bins or skips and must be removed from site for disposal at a nearby registered landfill as and when required.	Contractor	During construction
	5. Different waste bins, for different waste streams, must be provided to ensure correct waste separation (I.e., General, Hazardous and Recyclables).	Contractor	During construction
	6. The mixing of general and hazardous waste must be prohibited.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	7. All waste must be removed to a waste facility and under no circumstance must waste materials or contaminants be discharged into the environment or buried (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	8. All non-recyclable solid waste must be disposed of at a permitted landfill site, and proof must be available and presented to the ECO during site visits.	Contractor	During construction
	9. Littering is prohibited and dumping of any waste is not allowed in undeveloped open areas or neighbouring properties.	Contractor	During construction
	10. No waste material is to be burned, buried or disposed of in any area that is not a licensed landfill site.	Contractor	During construction
	11. Waste storage facilities must be inspected and replaced when full.	Project Developer / Project Engineer	During design and prior to, construction
	12. Waste bins must be cleaned out when full or at least on a weekly basis to prevent windblown waste and/or visual or odour disturbance.	Contractor	During construction
	13. Bins must be provided to all areas that generate waste e.g., worker eating and resting areas and the camp site. General refuse and construction material refuse must not be mixed.	Contractor	During construction
	14. Signage must be provided for all solid, liquid and hazardous waste types.	Contractor	During construction
Hazardous Waste	1. Hazardous waste is to be disposed of at a Permitted Hazardous Waste Landfill Site. The contractor must provide proof of disposal.	Contractors / ECO	During construction
	2. Hazardous waste bins must be clearly marked, stored in a contained area (or have a drip tray) and covered (either stored under a roof or the container must be covered with a lid).	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Used oil, lubricants and cleaning materials from the maintenance of vehicles and machinery must be collected in holding tanks prior to disposal.	Contractor	During construction
	4. No hydrocarbon and hazardous waste must be burnt or buried on site.	Contractor	During construction
	5. If soil contamination occurs (such as due to a spill) the soil must be removed from the site and disposed of correctly.	Contractor	During construction
	6. An effective response plan must be in place and personnel must be ready to mobilise in the event of a spillage to reduce the environmental effects of an oil or chemical spill.	Contractor	During construction
	7. Spill control devices such as absorbent snakes and mats must be placed around chemical storage areas, and they can be used in an emergency to contain a spill.	Contractor	During construction
	8. The contractor must comply with the Emergency Spill Response Plan in place for the fuel station.	Contractor	During construction
	9. Transportation of hazardous materials must be in accordance with the National Road Traffic Act and relevant SANS Codes of Practice. Requirements including transporting the hazardous materials in sealed containers or bags, as well as using cover to prevent the materials from spilling over the side of the vehicle during transit.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.2.12. Erosion, Sedimentation Management, Excavations			
Impact Management Outcome: Ensure that erosion is controlled, monitored and prevented.			
Erosion and Sediment Management	1. Erosion control measures must be implemented in areas sensitive to erosion, i.e., stormwater discharge points, exposed areas and embankments. These measures could include: • The use of sandbags or soil saver; • Cut-off drains for slope protection • The prompt rehabilitation of exposed embankment areas (e.g., with indigenous vegetation); • The removal of vegetation, only as it becomes required for work to proceed; • Taking precautions in terms of design, construction and earthworks.	Contractor	Prior to and during construction
	2. Schedule construction activities in the dry season to prevent increased surface runoff, erosion and sedimentation (Ecological Survey, C.L. Cook, 2020) (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	Prior to and during construction
	3. Soil stockpiles must be secured with sand bags / silt fences around the base of the stockpile should an erosion risk be observed.	Contractor	During construction
	4. Sandbags must be utilized as a temporary diverting barrier downslope of excavation areas ensuring the sensitive areas situated downslope does not incur any impacts as a result of sedimentation and erosion (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. Sandbags used to temporarily divert water must always be in good condition and inspected to ensure structural integrity is maintained (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	6. Soil excavated during construction must be piled within a stipulated area away from any sensitive environment (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	7. Soil stockpiles must be protected from erosion, surrounded by earthen buns and covered by erosion control blanket to prevent the transfer of sediment into sensitive areas (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	8. Site engineers must inspect the erosion control measures to confirm their integrity (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021). Maintenance checks must be prioritised after high rainfall events and observed damage must be immediately repaired.	Contractor	During construction
	9. No works must be undertaken where high rainfall conditions are expected. The contractor must be cognisant of weather forecasts for the area.	Contractor	During construction
	10. Silt fences or other silt and sediment trapping devices must be installed around all areas used for the storage of excavated and fill materials.	Contractor	During construction
	11. Where possible, soil stockpiles must be located in sheltered areas where they are not exposed to the erosive effects of the wind and water (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	12. All exposed surfaces must be re-vegetated or stabilized (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	13. Erosion and sediment controls must be monitored and maintained in order to ensure functionality throughout the construction phase. Maintenance checks must be prioritised after high rainfall events and observed damage must be immediately repaired.	Contractor	During construction
Excavations	1. All areas being excavated must be cordoned off and demarcated so as to allow no public access.	Contractor	During construction
	2. In the event of the seepage into excavations, measures must be implemented to ensure that tanks do not experience a net upward force under empty conditions in the operational phase.	Contractor	During construction
	3. During excavation soil must be excavated one layer at a time and stored in separate stockpiles (I.e., Top soil and sub-soil) so they can be returned in their natural order when the area is backfilled and used during soil reinstatement and/or rehabilitation of disturbed habitat, where required to improve soil function and the template for plant growth.	Contractor	During construction
	4. All soil excavated during works onsite must be stored in stockpiles not exceeding 2 metres in height.	Contractor	During construction
	5. Soil stockpiles must be routinely checked for weeds and invasive alien plants. These must be removed on discovery.	Contractor	During construction
	6. Soil stockpiles must be secured with sand bags / silt fences around the base of the stockpile should an erosion risk be observed.	Contractor	During construction
	7. Temporary soil stockpiles must only be placed within the predetermined construction servitude. Soil not utilised during active reinstatement of the trench must be stored in a designated soil stockpile area within the construction site camp.	Contractor	During construction
	8. Should there be any seepage during excavation, dewatering must take place to facilitate the installation of tanks.	Contractor	During construction
	9. Excavations must be undertaken carefully incorporating proper drainage and considering weather conditions. If heavy rains are expected excavations must be put on hold.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	10. When excavated areas are backfilled the surface must be level with the surrounding land surface, to minimise soil erosion from the areas when the excavation is complete.	Contractor	During construction
7.2.13. Water Management			
Impact Management Outcome: To ensure proper management of stormwater and to reduce its impacts to the environment.			
Stormwater and Surface Water	1. The conditions of the Stormwater Management Plan by Delca Systems (2019) must be complied with.	Project Developer / Contractor / ECO. / Project Engineer	During the design and prior to, construction
	2. Stormwater disposal systems must be maintained by: • Keeping inlets to catchpits clear of silt, leaves and rubbish • Periodically checking that the attenuation facility is kept clear of weeds and sediments • Checking and repairing structures and embankments if required after storms (Stormwater Management Plan, Delca Systems, 2019)	Project Developer / Contractor / ECO. / Project Engineer	During construction
	3. Surface water from all platforms and roofed areas must be piped off the stands into a formal stormwater reticulation system on site, where available, or into the nearest reticulation system off site (Geotechnical and Hydrogeological Report, Geosure, 2023).	Project Developer / Contractor / ECO. / Project Engineer	During design and construction
	4. All terraces and earthworks in general must be sloped to a gradient to prevent ponding and ingress of water into the subsurface soils (Geotechnical and Hydrogeological Report, Geosure, 2023).	Project Developer / Contractor / ECO. / Project Engineer	During design and construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. A grease trap must be provided to prevent petroleum or other chemical spillages which may take place on the forecourt to not enter the stormwater disposal system in the operational phase. It must be ensured that contaminated rainwater or spillages collecting in hazardous substance storage areas do not enter the environment.	Contractor	During construction
	6. It must be ensured that there are no concentrated discharges of stormwater onto battered slopes to prevent the formation of dongas and the deposition of mud on the down slope side.	Contractor	During construction
	7. Maintenance of the stormwater disposal system must be undertaken.	Contractor	During construction
	8. Grid inlets and manholes must be kept clear from potential blockages to prevent blockages during storms and the potential for overflow.	Contractor	During construction
	9. Temporary cut off drains and berms must be implemented where required to capture storm water and promote infiltration.	Contractor	During construction
	10. All temporary and permanent erosion and sediment control structures must be monitored for the duration of the construction phase and repaired immediately when damaged. Temporary erosion measures must only be removed once vegetation cover has successfully re-colonised.	Contractor	During construction
	11. The contractor must check and maintain temporary stormwater management systems to ensure efficient flow of water after rainfall events and to prevent surface water ponding.	Contractor	During construction
Water Quality	1. All construction materials including fuels and oil must be stored in demarcated areas that are contained within berms/bunds to prevent the spread of any contamination into sensitive areas (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	2. Proactive measures must be enforced to ensure that work vehicles are up to standard regarding maintenance and function. These measures must include routine leak checks (oil, diesel, grease or hydraulic fluid) prior to construction and decommissioning of vehicles and machinery not up to par. Dripping during the aforementioned leak checks and maintenance must be accommodated for by the provision of drip trays (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	3. Any larger spills must be reported to the Environmental Control Officer (ECO) and the relevant authorities (EDTEA and DWS) immediately, with specialists appointed to oversee the clean-up operations.	Contractor	During construction
	4. Handling of hazardous substances must be kept to a minimum within the construction site. Additionally, thorough training must be administered to site personnel regarding handling of the aforementioned substances (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	5. No waste of any nature, or any foreign material must be disposed into any watercourses.	Contractor	During construction
	6. Washing of clothes, equipment or machinery within any watercourse is prohibited.	Contractor	During construction
7.2.14. Dust Control			
Impact Management Outcome: Minimise the generation of dust.			
Dust Control	1. All exposed surfaces must be re-vegetated and/or stabilised.	Contractor	During and after construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	2. No burning of waste, such as plastic bags, cement bags and litter, is permitted.	Contractor	During construction
	3. Use of dust controls methods such as controlling vehicle speed, wetting or screening of stockpiles and the mixing of chemicals must be ensured to minimise excessive dust liberation.	Contractor	During construction
	4. Should excessive vehicle emissions be observed, the required maintenance must be done, or the equipment removed from site.	Contractor	During construction
	5. A complaints register must be provided to report any excessive dust incidents.	Contractor	During construction
7.2.15. Lighting and Noise			
Impact Management Outcome: Minimise light pollution and the generation of noise.			
Lighting	1. Artificial lighting must be restricted to areas under construction and not directed towards the non-perennial drainage line adjacent to the site and 15m buffer zone in order to minimize the potential negative effects of the lights on the natural nocturnal activities (Ecological Survey, C.L. Cook, 2020).	Project Developer / Contractor / ECO. / Project Engineer	During construction
Noise	2. Construction activities must be restricted to business hours in order to limit disturbance of surrounding land owners in terms of inter alia noise (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	3. Machinery and vehicles must be kept in good working order for the duration of the project to minimise noise nuisance.	Contractor	During construction
	4. Construction vehicles and equipment generating excessive noise must be fitted with noise abatement measures maintenance undertaken or replaced.	Contractor	During construction
	5. Construction workers must be provided with proper PPE i.e., ear plugs at activity areas where excessive noise is generated.	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	6. A complaints register must be provided to record any complaints regarding excessive noise.	Contractor	During construction
7.2.16. Sensitive Areas			
Impact Management Outcome: Ensure that sensitive areas in proximity to the development site are protected.			
Sensitive Areas	1. The Contractor must ensure that all sensitive areas in close proximity to the development site are protected during construction by demarcating "no-go areas" through fencing or other means. All "no go" areas must be clearly marked on a site lay-out plan (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
	2. Unauthorised entry, stockpiling, dumping or storage of equipment or materials must be strictly prohibited within the demarcated "no go" areas. Fines must be implemented for transgressions into "no-go" areas (Ecological Survey, C.L. Cook, 2020).	Contractor	During construction
7.2.17. Protection of Fauna and Flora			
Impact Management Outcome: Minimise disturbance and negative impacts to fauna and flora.			
	1. All NEMBA category 1a and 1b invasive alien plant species must be removed and disposed of prior to construction. The construction site must be inspected during construction phase to identify and remove emerging invasive alien plant species (Wetland Assessment, Parisara Consulting (Pty) Ltd T/a Aeon Nexus, 2021).	Contractor	During construction
	2. Indigenous vegetation outside the development footprint must be demarcated and protected by preventing access of construction vehicles and personnel into these areas, unless for rehabilitation and maintenance purposes.	Contractor	Prior to and during construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. Contract employees must be educated about the value of wild animals and the importance of their conservation (Ecological Survey, C.L. Cook, 2020).	Contractor	Prior to and during construction
	4. Severe contractual fines must be imposed and immediate dismissal on any contract employee who is found attempting to snare or otherwise harms remaining faunal/flora species if identified (Ecological Survey, C.L. Cook, 2020).	Contractor	Prior to and during construction
	5. The Contractor must ensure that no faunal/flora species are disturbed, trapped, hunted or killed during the construction phase. All animals captured must be released in a habitat away from the development, following communication with the appointed ECO (Ecological Survey, C.L. Cook, 2020).	Contractor	Prior to and during construction
7.2.18. Public and Workforce Safety			
Impact Management Outcome: Ensure public and staff safety.			
General	1. Construction activities must be undertaken according to working hours stipulated by KwaDukuza Local Municipality.	Contractor	During construction
	2. A safety officer must be appointed who will continuously monitor safety conditions during demolition and construction activities.	Contractor	During construction
	3. Care must be taken with electrical connections. All connections must be treated as live until confirmed.	Contractor	During construction
	4. Warning signs indicating the nature of the stored materials must be displayed at the storage facilities or containment structure.	Contractor	During construction
	5. Fire-fighting equipment, to the approval of the Principal Agent, must be supplied and installed at the hazardous substance storage areas	Contractor	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	6. The workforce must be provided with enough potable water and under no circumstances are they to use untreated water from local watercourses for drinking.	Contractor	During construction
7.2.19. Social Impacts			
Impact Management Outcome: Ensure community inclusion, participation and awareness.			
Disruption of Infrastructure and Services	1. Contractor's activities and movement of staff is to be restricted to designated construction areas.	Contractor	During construction
	2. Notification must be given to the public, if the construction causes any interruption, such as water service interruption or traffic congestion.	Contractor	Prior to and during construction
	3. Disruption of access for customers must be minimised.	Contractor	During construction
	4. Labourers approached by members of the public or other stakeholders must be kind and courteous, assisting any issues or queries brought up.	Contractor	Prior to and during construction
	5. Any complaints raised by the public must be entered into a register and addressed. Proof of this register must be available upon request.	Contractor	During construction
7.2.20. Monitoring, Reporting and Record Keeping			
Impact Management Outcome: Ensure compliance with authorisation and record keeping.			
Environmental Monitoring and Record Keeping	1. Environmental monitoring must be undertaken by the Site Environmental Officer daily and by the ECO as per the frequency to be indicated in the EA.	Site Environmental Officer / ECO	During construction

CONSTRUCTION PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	2. This monitoring must be undertaken in order to ensure compliance with all aspects or requirements of the EMPr.	Site Environmental Officer /ECO	During construction
	3. Contractors must provide proof of disposal of building rubble, domestic waste, industrial waste and hazardous waste to licensed waste disposal or recycling facilities.	Contractor	During construction
Complaints register and environmental incident book	1. Complaints received from the community or other I&AP's must be registered and recorded by the Environmental Site Officer and brought to the attention of the ECO and contractors. All relevant parties must respond accordingly. The following information must be recorded in the case of any complaint/incident: • Time, date and nature of complaint; • Response and investigation undertaken; and • Corrective and preventative actions taken and by whom.	Site Environmental Officer / ECO / Contractor	During construction
	2. All complaints received must be investigated and a response given to the complainant within 14 days.	ECO / Contractor	During construction

POST CONSTRUCTION PHASE AND REHABILITATION ACTIVITIES

7.3. POST CONSTRUCTION PHASE AND REHABILITATIONS ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.3.1.Construction Camp and Construction Areas			
Impact Management Outcome: Ensure the site camp is removed appropriately and items remain, buried etc.			
Camp Deconstruction and Rehabilitation of Construction Areas and Accesses	1. All remaining construction infrastructure and material/ consumables must be removed.	Contractor	After construction
	2. All spillage areas must be cleaned and/or remediated.	Contractor	After construction
	3. All remaining waste and litter must be collected and recycled and /or disposed to reputable contractors / licensed facilities.	Contractor	After construction
	4. The Contractor must arrange for the cancellation of all temporary services, including but not limited to waste removal and disposal services.	Contractor	After construction
	5. The working areas must be rehabilitated / re-instated once all plant work has been completed	Contractor	After construction
	6. Temporary fences, barriers and demarcations associated with the construction phase must be removed from the site, unless stipulated otherwise by the Project Developer / Contractor / ECO. / Engineer.	Contractor	After construction
	7. It must be ensured that all drainage courses are free from building rubble, spoil materials, debris and waste materials.	Contractor	After construction
	8. The Contractor must repair any damage that the construction works has caused to neighbouring properties.	Contractor	After construction
	9. All disturbed areas associated with the construction activities must be reshaped, rehabilitated and re-vegetated immediately following the construction phase.	Contractor/ECO	After construction

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.3.2 Monitoring, Reporting and Record Keeping			
Impact Management Outcome: Ensure compliance with authorisation and record keeping.			
Environmental Monitoring and Reporting	1. Environmental monitoring must be undertaken by the Environmental Site Officer daily and by the ECO based on the conditions of the Environmental Authorisation.	ESO / ECO	After construction
	2. Monitoring must be undertaken in order to ensure compliance with all aspects or requirements of the EMPr and Environmental Authorisation.	Site Environmental Officer /ECO	After construction
7.3.3 Compliance and Close-out Audit of Construction and Post-Construction Activities			
Impact Management Outcome: Ensure compliance with authorisation and record keeping.			
Audit and Sign-off	A close-out audit must be conducted by the ECO following the post construction and rehabilitation activities.	ESO / ECO	After construction and prior to operation of the site

7.4. OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
5.4.1. Administrative and Legal Requirements			
Impact Management Outcome: • ***Minimise impact on the environment during the operational phase.*** • ***To ensure that equipment and materials are appropriately stored and handled.***			
Compliance	1. All Environmental legal requirements must be kept on site at all times such as authorisations / licenses / permits.	Project Developer /	Prior to and during operation
	2. Operational requirements must comply with all applicable laws and regulations, including but not limited to: • National Environmental Management Act; • The Mineral and Petroleum Resources Development Act: • National Environmental Management Act: Waste Act • Roads Traffic Act • Occupational Health and Safety Act.	Project Developer / Contractor/Operations Manager	During operation
7.4.1. Landscaping/Visual			
Impact Management Outcome: To ensure the harmful substances to the environment are not utilised along with ensuring environmental best practice.			
Landscaping	1. Locally indigenous species must be used for landscaping on site and along the boundaries.	Project Developer / Operations Manager /	During operation

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	2. Weeds and alien vegetation must be pulled out manually by hand. The use of herbicides must be prevented as much as possible. It must be ensured that all parts of the invasive plants are removed to prevent / minimise re-establishment of the species.	Project Developer / Operations Manager	During operation
	3. All buildings/structures and landscaping must receive on-going maintenance.	Project Developer / Operations Manager	During operation
7.4.2. Refuelling and equipment maintenance			
Impact Management Outcome: Ensure no soil and groundwater contamination during refuelling.			
Refuelling and equipment maintenance	1. Tankers undertaking offloading of fuel into the underground storage tanks for petrol and diesel must do so by means of gravity filling.	Project Developer / Operator Operations Manager	During operation
	2. Automatic cut off devices must be used to prevent overfill and spillages. Closed coupling must be used when fuel is being transferred from the bulk delivery vehicle to the Underground Storage Tanks.	Project Developer / Operations Manager	During operation
	3. Maintenance is recommended to be undertaken when there in the winter season where there is minimal precipitation.	Project Developer / Operations Manager	During operation
	4. It must be ensured that oil spill kits are kept on site at easily accessible locations at all times. Drip trays must be used in all refuelling points.	Project Developer / Operations Manager	During operation

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. Monitoring of groundwater must be conducted on a bi-annual basis during the operation of the filling station. (Geotechnical and Hydrogeological Report, Geosure, 2023)	Project Developer / Operations Manager	During operation
7.4.3. Traffic control			
Impact Management Outcome: Ensure disturbances to adjacent properties and surrounding neighbours are limited along with accidents.			
Traffic Control	1. Large fuel tankers must not obstruct traffic flow in and out of the fuel station during refuelling.	Operator/ Project Developer	During operation
	2. It is recommended that delivery times for petrol and diesel must follow scheduling plan to prevent clashes with other deliveries or peak filling and traffic times for motorists using the uMhlali Fuel Station.	Operator/ Project Developer	During operation
	3. Sufficient space for turning of delivery vehicles must be ensured.	Project Developer	Prior to planning, during construction and operation
7.4.4. Energy Efficiency			
Impact Management Outcome: Ensure there is no energy wastage.			
Energy Efficiency	1. The efficiency of the electrical equipment and machinery must be checked to manage and reduce energy consumption.	Project Developer	During operation

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	2. Lights and equipment that is not in use must be switched off. Wherever feasible, energy efficient lighting and other equipment must be installed.	Project Developer	During operation
7.4.5. Soil and Groundwater Contamination			
Impact Management Outcome: Ensure there is no soil and groundwater contamination.			
Soil and Groundwater Contamination	1. Accidental spills that take place outside of the bund area must be contained and prevented from entering the stormwater system. Fuel dispenser pumps must be placed on hardened surfaces to ensure spillages can be contained.	Project developer/Operations Manager	During operation
	2. In the event of significantly large spills, spill absorbent must be removed by a certified and accredited hazardous waste removal company. The contact details of the identified company must be displayed for use in emergencies.	Project developer/Operations Manager	During operation
	3. The Emergency Response Plan must be prepared and must be followed in the event of any soil and groundwater contamination.	Project developer/Operations Manager	During operation
	4. Underground Storage Tanks are recommended to be fitted with automatic leak detectors to enable management to be proactive in the event of a potential leak as opposed to being reactive.	Project developer/Operations Manager	During operation
	5. Bioremediation measures such as biological oil stain remover must be explored from service providers involved in the removal of spills on site.	Project developer/Operations Manager	During operation
	6. Inspection of all pipes, tanks and other associated infrastructure must be undertaken for leaks and to ensure structural integrity.	Project developer/Operations Manager	Daily during operation

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	7. The contractor must comply with the Emergency Spill Response Plan in place for the fuel station.	Contractor	During construction
	8. Spillages that may emanate from refuelling and/or forecourt areas must drain into a single/common drain where an oil and water separation system is used such as an oil and grease trap.	Project developer/Operations Manager	During operation
7.4.6. Waste Management			
Impact Management Outcome: To ensure waste is appropriately stored, handled, recycled and safely disposed of at a recognised waste facility.			
Waste Management	1. All waste generated on site must be disposed of correctly. Litter and waste must be effectively managed.	Project developer/Operations Manager	During construction and operation
	2. Waste must be dealt with in accordance with the National Waste Management Strategy namely reduce, re-use and recycling, with disposal to landfill being a last resort.	Project developer/Operations Manager	During operation
	3. Effective waste segregation must be implemented on site with the provision of different waste bins. Waste must be disposed of as and when required.	Project developer/Operations Manager	During operation
	4. Used oil must be disposed of in accordance with the correct procedures. Waybills must be recorded at the site with full details of the transport of the used oil, quantities etc.	Project developer/Operations Manager	During operation
7.4.7. Stormwater management			

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
Impact Management Outcome: • ***To ensure effective stormwater management*** • ***To prevent the cross contamination of wastewater with stormwater*** • ***To ensure provisions for environmental best practice being continuously observed and practiced.***			
Stormwater Management	1. Stormwater channels, drains and discharge points must be kept free from litter, rubble and vegetation to ensure the uninterrupted flowing of stormwater and discharge to the stormwater system.	Project developer/Operations Manager	During operation
	2. The conditions of the Stormwater Management Plan by Delca Systems (2019) must be complied with.	Project Developer / Contractor / ECO. / Project Engineer	During operation
	3. Stormwater disposal systems must be maintained by: • Keeping inlets to catchpits clear of silt, leaves and rubbish • Periodically checking that the attenuation facility is kept clear of weeds and sediments • Checking and repairing structures and embankments if required after storms (Stormwater Management Plan, Delca Systems, 2019)	Project Developer / Contractor / ECO. / Project Engineer	During operation
	4. Drainage must be controlled to ensure run off from the site does not result in off-site pollution or damage to properties downstream of any stormwater discharge.	Project developer/Operations Manager	During operation

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. The grease trap must prevent petroleum or other chemical spillages which may take place on the forecourt to not enter the stormwater disposal system. It must be ensured that contaminated rainwater or spillages collecting in hazardous substance storage areas do not enter the environment.	Project developer/Operations Manager	During operation
7.4.8. Fire Management and Emergency Response			
Impact Management Outcome: To ensure emergency procedures are in place in case of a fire.			
Fire management and emergency response	1. Fire officers must be identified who will be responsible for ensuring immediate action is provided in the event of a fire at the uMhlali Fuel Station.	Project developer	During design and operation
	2. A standard operating procedure must be made available and used in the event of a fire. All site personnel must be aware of the procedure to be followed in the event of a fire and trained in emergency response.	Project developer/Operations Manager	During operation
	3. The appointed fire officers must immediately notify the local Fire and Emergency Service if a fire occurs. The response time must be short as possible to minimise the chances of the fire being beyond control.	Project developer/Operations Manager	During operation
	4. It must be ensured that there is sufficient fire-fighting equipment at the fuel station site at all times (which must include, but not limited to, fire extinguishers and protective clothing equipment).	Project developer/Operations Manager	During operation
	5. The contact details of the local Fire and Emergency Service must be visible and accessible at the offices and forecourt areas.	Project developer/Operations Manager	During operation

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	6. It must be ensured that smoking is only permitted in designated smoking zones. Under no conditions must cigarettes be thrown to the ground. This must be monitored.	Project developer/Operations Manager	During operation
	7. Effective signage warning against danger/flammable liquids/no smoking zones must be displayed at the forecourt fuelling areas.	Project developer/Operations Manager	During operation
7.4.9. Noise and Air Quality Management			
Impact Management Outcome: To reduce noise and air pollution.			
Noise Management	1. A procedure must be established whereby noise complaints can be received, recorded and responded to. Corrective action must be undertaken for such events.	Project developer/Operations Manager	During operation
	2. Noise disturbances must be kept to a minimum, particularly at night.	Project developer/Operations Manager	During operation
	3. Equipment fitted with noise reduction must be used as per operating instructions and maintained.	Project developer/Operations Manager	During operation
Air Quality Management	1. All delivery vehicles must be maintained to reduce exhaust emissions being released into the natural environment.	Project developer/Operations Manager	During operation
	2. Vapour recovery equipment and techniques must be used to prevent air pollution and minimise fuel loss.	Project developer/Operations Manager	During operation

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	3. It must be ensured that underground tank seals are kept in good conditions where caps are correctly sealed.	Project developer/Operations Manager	During operation
7.4.10. Safe Handling and Storage Areas			
Impact Management Outcome: To ensure safe handling of dangerous substances.			
Safe Handling and Storage for LP Gas Cylinders	1. There must be limited LP gas cylinders stored at the uMhlali fuel station. The quantities must be within the limits of safe storage facilities, collected and disposed of as and when required.	Project developer/Operations Manager	During operation
	2. Cylinders must be secured to prevent movement or physical damage.	Project developer/Operations Manager	During operation
	3. Cylinders must be positioned in a manner in which the safety relief device will vent the vapour space. Venting must be in areas away from possible sources of ignition.	Project developer/Operations Manager	During operation
	4. Employers and occupiers of premises must ensure that LP gas cylinders are physically separated from other substances to ensure that: • Interaction with other dangerous goods cannot occur if a loss of containment occurs • The risks arising from ignition sources that may cause a serious incident are eliminated.	Project developer/Operations Manager	During operation
	5. Old/unused LP gas cylinders must not be placed, buried or disguised in waste collection bins.	Project developer/Operations Manager	During operation

7.5. DECOMMISISIONING PHASE

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
7.5.1 Decommissioning activities			
Impact Management Outcome: To prevent soil contamination and air pollution.			
Decommissioning	1. If decommissioning is undertaken in the foreseeable future, the relevant competent authority must be contacted to ensure that the underlying environmental process is followed with regards to decommissioning of the Fuel Station, preventing any non-compliances.	Project developer	During decommission
	2. The legislation applicable at the time of decommissioning must be complied with, and relevant environmental practices implemented.	Project developer	During decommission
	3. It is recommended that prior to decommissioning of the fuel station at some future date, a comprehensive decommissioning EMPr must be prepared that can reassess the potential environmental and socio-economic impacts at the time. Such impacts may include: • Noise • Site pollution and accumulation of refuse materials • Dust • Health and safety risks • Soil contamination • Generation of waste • Fire risks	Project developer	During decommission
	4. The site must be assessed prior to and after decommissioning of fuel tanks for any soil contamination. This can be done through sampling of the surrounding soil.	Project Engineer/HSE	Prior to, During and After decommission

OPERATIONAL PHASE ACTIVITIES

ENVIRONMENTAL ASPECT	ENVIRONMENTAL MEASURES AND ACTION PLANS	RESPONSIBILITY	TIMEFRAMES
	5. All tanks and pipework must be emptied or cleaned out prior to their removal. Any residual chemicals or hazardous substances must be disposed of accordingly at a permitted waste facility and/or placed in an impermeable and bunded area to prevent soil contamination till they are disposed of accordingly.	Project Engineer	During decommission
	6. The Contractor must take reasonable measures to prevent the spillage of hazardous material or substances from the decommissioning of the tanks.	Contractor	During decommission
	7. Measures must be implemented to ensure that no hazardous vapours are emitted during removal of the tanks as to reduce air pollution and soil contamination of the surrounding area.	Contractor	During decommission

8. CONCLUSION

This EMPr has been compiled using various inputs including the Environmental Assessment Practitioners (EAPs), specialists, relevant Authorities and IAPs. These inputs facilitated the identification of relevant and implementable mitigation measures, which must be used by SSS 123 Trading (Pty) Ltd project management, engineers and appointed construction teams. Penalties to be imposed for the transgression of environmental specifications are also noted along with the roles and responsibilities of all stakeholders. In order to ensure compliance, all parties undertaking the planning, design, construction, operation and decommissioning of the proposed expansion of the uMhlali Total Energies Fuel Station and the establishment of a fast-food outlet must be fully acquainted with the contents of the EMPr. This will ensure that potential negative impacts are identified, avoided or mitigated.

ENVIRONMENTAL CODE OF CONDUCT

One of the objectives of the EMPr is to ensure that all the workforce, contractors, sub-contractors and construction staff understand environmental issues and potential impacts on site activities. This environmental code of conduct provides the basic rules that should be strictly adhered to. It is the responsibility of the Environmental Site Officer and ECO to ensure that each contractor, sub-contractor and workforce understand and adhere to the Code of Conduct.

ALL PERSONS ARE OBLIGED TO KEEP TO THE RULES OF THIS CODE OF CONDUCT

- Do not waste electricity, water or consumables;
- Only use authorised accesses;
- Do not litter;
- Dispose of solid waste to the correct waste containers provided;
- Prevent pollution;
- Use the toilet facilities provided;
- Do not dispose contaminated wastewater to the storm water or the environment;
- Immediately report any spillage from containers, plant or vehicles;
- Do not burn or bury any waste;
- Do not trespass onto private properties;
- Strictly leave all animals alone. Never tease, catch or set devices to trap or kill any animal;
- Never damage or remove any trees, shrubs or branches unless it forms part of working instructions;
- Do not deface, draw or cut lettering or any other markings on trees, rocks or buildings in the area;
- Know the firefighting procedure and locations of firefighting equipment; and
- Know the environmental incident procedures.

PROJECT START UP INSPECTION SHEET

PROJECT START UP INSPECTION SHEET

PROJECT: _____ **DATE:** _____
CONTRACT NO.: _____ **COMPLETED BY:** _____
CONTRACTOR: _____

ES	ENVIRONMENTAL ASPECT	YES NO N/A	COMMENTS	ACTION
PLANNING				
ESTABLISHMENT				
CLEARANCE				

ROUTINE SITE INSPECTION SHEET

ROUTINE SITE INSPECTION SHEET

PROJECT: _____ **DATE:** _____
CONTRACT NO.: _____ **COMPLETED BY:** _____
CONTRACTOR: _____

ES	ENVIRONMENTAL ASPECT	YES NO N/A	COMMENTS	ACTION
HOUSEKEEPING				
CONSTRUCTION ACTIVITIES				
REINSTATEMENT AND REHABILITATION				

SITE DECOMMISSIONING INSPECTION SHEET

SITE DECOMMISSIONING INSPECTION SHEET

PROJECT: _____ **DATE:** _____
CONTRACT NO.: _____ **COMPLETED BY:** _____
CONTRACTOR: _____

ES	ENVIRONMENTAL ASPECT	YES NO N/A	COMMENTS	ACTION
DECOMMISSIONING OF THE SITE				

SITE INSPECTION REPORT STRUCTURE

Purpose of the Site Inspection Report

The purpose of the Site Inspection Report is to describe the results of the site inspections undertaken by the Environmental Control Officer (ECO) or delegated responsible person so that the level of compliance with the Environmental Management Programme (EMPr) can be monitored throughout the contract.

It will be expected to summarise the following:

- The key results
- Trends observed
- Key issues observed
- Problems encountered
- Actions required and response taken or to be taken
- Recommendations.

The Site Inspection Report should conclude with a commentary on the overall performance of the Contractor in terms of meeting the requirements of individual/groups of Environmental Specifications and/or EMPr.

Preparation of the Site Inspection Reports

Site Inspection Reports are expected to be prepared regularly throughout a given construction contract, including (but not limited to) the following:

- Prior to the handover of the site to the Contractor
- At regular stages throughout the construction works, and particularly with the commencement of particularly significant activities
- At the decommissioning of the site and prior to the handover of the site to the Employer/Operator.

Recommended Structure for the Site Inspection Reports

The following report structure is suggested for the Site Inspection Report:

Introduction	By way of setting the context for the Site Inspection Report, this section should outline the following: ▪ The need for the Site Inspections, and reporting. ▪ Purpose of the Site Inspection Report. ▪ The scope of coverage of the Site Inspection
Environmental Management Requirements	This section should summarise the environmental requirements for the contract and for the construction works, and against which environmental performance is assessed.
Methodology	This should describe the activities undertaken during the site inspection, such as: ▪ A site walkabout with the Principal Agent (PM). ▪ A review of documents and records, such as complaints records and/or incidents reports maintained by the Contractor and/or ECO. ▪ Consultations with pertinent parties on site.
Findings of the Site Inspection	This should contain reference to the following:

	▪ A commentary on the level of compliance with key aspects of the Environmental Specifications, as listed in the checklist(s). ▪ Details of issues, infringements, problems and non-compliances encountered. ▪ Recommendations on actions to be undertaken to address any issues, infringements and/or non-compliances.
Conclusions	This should include an overall statement on the level of compliance observed during the site inspection.
Annexures	Annexures should be used to store supporting information to the main document, such as: ▪ Photographs. ▪ A quick reference, summary table of issues of concern and the necessary corrective measures required to address these issues.

ENVIRONMENTAL INCIDENTS PENALTIES

INCIDENTS INCURRING PENALTIES	VALUE
Failure to secure construction site from public access.	R5,000.00
Failure to stockpile topsoil correctly.	R1000.00
Failure to stockpile materials in designated areas.	R500.00
Pollution of water bodies – including increased suspended solid loads.	R2,000.00
Discharging effluent and/or storm water onto the ground or into surface water	R1,000.00
Failure to provide adequate sanitation, waste disposal facilities or services.	R1,000.00
Failure to demarcate construction area boundaries before commencing construction clearance and other activities	R1,000.00
Insufficient education of employees regarding environmental matters and site housekeeping practices	R500.00
Use of soil in an unspecified manner	R500.00
Inappropriate mixing of cement/concrete and poor management of slurry	R1,000.00
Unauthorised removal of indigenous trees, medicinal or other plants.	R1,000.00
Damaging/killing animals/birds.	R1,500.00
Failure to reinstate disturbed areas within the specified timeframe.	R1,000.00
Fire – costs of runaway fires will be borne by the Contractor, should he/she be proven responsible for such fires.	R5,000.00
Failure to provide equipment for emergency situations	R1,000.00
Defacing, painting or damaging natural or heritage features and private property	R1,000.00
Damaging cultural, historical and/or archaeological sites of importance	R5,000.00
Failure to maintain basic safety measures on site	R1,000.00
Failure to obey site protection measures specified by the Project Manager	R1,000.00
Failure to carry out required community liaison, damage to property etc., without prior negotiation and/or compensation and other social infringements	R500.00
Persistent and un-repaired oil leaks from machinery. The use of inappropriate methods of refuelling.	R500.00
Failure to provide drip trays and/or empty them frequently.	R500.00
Inappropriate use of bins and poor waste management on site.	R200.00
Inappropriate off-site disposal of waste from site.	R1,000.00
Deliberate lighting of illegal fires on site.	R500.00
Eating of meals on site outside the defined eating area. Individual not making use of the site ablution facilities.	R100.00
Dust or excess noise on or emanating from the site.	R500.00
Inappropriate use of watercourses and water bodies – such as for unapproved water abstraction, washing of vehicles, wastewater disposal and use by employees for washing.	R2,000.00
Failure to comply with specifications for working within a wetland and stream.	R 10,000.00
Any person, vehicle, item of plant, or anything related to the Contractor's operations causing a public nuisance.	R1,000.00
Improper use of plant or equipment.	R500.00
Construction vehicles not adhering to speed limits.	R250.00
Failure to maintain a register of incidents on site.	R1,000.00
Failure to remove all temporary features and leftovers from the construction site and works areas upon completion of the works.	R20,000.00
Repeated contravention of the specifications or failure to comply with instructions	R5,000.00