



ENVIRONMENTAL MANAGEMENT PLAN

**THE PROPOSED TOWNSHIP ESTABLISHMENT ON THE REMAINDER OF
PORTION 3 OF THE FARM DOORNPAN 193 IP, NORTH WEST PROVINCE**

SEPTEMBER 2022

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ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED TOWNSHIP ESTABLISHMENT ON THE REMAINDER OF PORTION 3 OF THE FARM DOORNPAN 193 IP, JB MARKS LOCAL MUNICIPALITY, NORTH WEST PROVINCE

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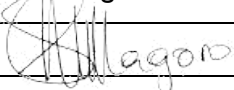
Report Title	Environmental management plan report for the proposed township establishment on the Remainder of Portion 3 of the Farm Doornpan 193 IP, JB Marks Local Municipality, North West Province
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TABLE OF CONTENTS

ENVIRONMENTAL ASSESSMENT PRACTITIONER DECLARATION	iii
APPENDICES	iv
ABBREVIATIONS	v
DEFINITIONS	vi
1. INTRODUCTION	1
1.1. Purpose of the Environmental Management Plan	1
1.2. Project Background	1
1.3. Location of the Proposed Activity	1
1.4. THE PROPOSED PROJECT ENTAILS 842 SITES FOR:	2
1.5. STATUS OF THE DOCUMENT	3
2. STATUTORY AND OTHER LEGAL REQUIREMENTS	3
2.1. Environmental Impact Assessment Regulations (2017)	3
3. IMPLEMENTATION OF THE EMPr	5
3.1. The Applicant	5
3.2. Environmental Control Officer	5
4. GENERAL REQUIREMENTS OF THE ENVIRONMENTAL MANAGEMENT PLAN	6
4.1. ADMINISTRATIVE REQUIREMENTS OF THIS EMP	6
4.2. ROLES AND RESPONSIBILITIES	6
5. ENFORCING THE EMPr	8
6. REPORTING AND ENVIRONMENTAL SITE AUDITING	8
6.1. Record of Activities	8
6.2. Routine Site Inspections	8
6.3. Incident Reporting	8
7. PHASES OF THE PROJECT	10
7.1. PLANNING/ DESIGNING PHASE	10
7.2. CONSTRUCTION PHASE	10
7.3. OPERATIONAL PHASE	17
7.4. DECOMMISSIONING PHASE	21
8. NONE-COMPLIANCE	21
8.1. Procedures	21
8.2. Offences and Penalties	22
8. CONCLUSION	23

ENVIRONMENTAL ASSESSMENT PRACTITIONER DECLARATION

I **Mankaleme M. Magoro** in my capacity as an Environmental Assessment Practitioner, hereby declare that I-

- Act as an independent consultant
- Do not have any financial interest in the undertaking of the activity, other than remuneration for the work performed in terms of the National Environmental Management Act (No. 107 of 1998)
- As a registered member of the South African Council for Natural Scientific Professions and Environmental Assessment Practitioners Association of South Africa, will undertake our profession in accordance with the Code of Conduct of the Councils
- Based on information provided to us by the project proponent, and in addition to information obtained during this assessment, have presented the results and conclusion within the associated document to the best of our professional judgement

APPENDICES

- Appendix A Environmental Code of Conduct
- Appendix B Environmental Complaints Registers
- Appendix C Environmental Incidents Registers
- Appendix D Environmental Training Register

ABBREVIATIONS

NWDEDECT	North West Department of Economic Development, Environment, Conservation and Tourism
EMPr	Environmental Management Programme/ Plan Report
EMP	Environmental Management Plan
EA	Environmental Authorisation
RoD	Record of Decision
IEA	Independent Environmental Auditor
ECO	Environmental Control Officer
EO	Environmental Officer
EC	Environmental Consultant
EAP	Environmental Assessment Practitioner
I&APs	Interested and Affected Parties
CA	Competent Authority
EIA	Environmental Impact Assessment
S & EIR	Scoping and Environmental Impact Reporting
NEMA	National Environmental Management Act
Ha	Hectares
CBD	Central Business District

DEFINITIONS

Construction: means the building, erection or establishment of a facility, structure or infrastructure that is necessary for the undertaking of a listed or specified activity but excludes any modification, alteration or expansion of such a facility, structure or infrastructure and excluding the reconstruction of the same facility in the same location, with the same capacity and footprint.

Disturbance: any event or series of events that disrupts ecosystem, community, or population structure and changes resources, substrate availability, or the physical environment.

Earth works: this involves construction machinery, dampening and general preparation of the site for construction purposes.

Environmental incident: any action undertaken (or omitted) by the proponent or his duly appointed representatives (e.g. contractors) that results in overly / unnecessary disturbance or damage to the environment, any action undertaken (or omitted) by the proponent or his duly appointed representatives (e.g. contractors) that could lead to (has potential for) overly/unnecessary disturbance or damage to the environment or non-adherence to environmental legal requirements/laws (including the stipulations of authorisations issued in respect of a proposed activity e.g. those contained in a Record of Decision.

Environmental management plan: a guideline document/directive outlining the Plan (EMP) for mitigation, monitoring and institutional measures to be taken during project implementation and operation to avoid or control adverse environmental impacts, as well as the actions needed to implement these measures (World Bank, 1999:1).

Environmental officer: person/party appointed to monitor compliance with the Environmental Management Plan.

Interested & affected party: a person, group of people, an organisation (public or private), a business, or other party that has an interest or is affected in terms of their health, property rights, or economy by a proposed activity.

Impact: a description of the potential effect or consequence of an aspect of the development on a specified component of the biophysical, social or economic environment within a defined time and space.

Mitigation measures: measures encompassing all actions taken to eliminate, offset or reduce potentially adverse environmental impacts to acceptable levels (World Bank, 1999:1)

I. INTRODUCTION

I.1 Purpose of the Environmental Management Plan

The purpose of the EMPr is to proactively address potential environmental impacts before they occur. This will ensure that unnecessary damage to the environment during the construction and operational phases are avoided. Moreover, mitigation measures will be implemented to minimise environmental degradation.

The purpose of the EMP is to ensure that impact prevention and mitigation measures identified in the Environmental Assessment reports for the establishment of a township are translated into practical impact management and monitoring actions during construction and operational phases. The conditions of authorisation will be used to refine this EMP and ensure that environmental management requirements are taken into account during various phases of the development (i.e. planning, construction and operation).

This Environmental Management Programme was prepared for the proposed development of township to be located on the Remainder of Portion 3 of the Farm 193 IP, North West Province. This document considers the impacts that are likely to arise from the implementation of the project and the mechanisms that are recommended to minimise the severity of these impacts. The EMPr covers principles, responsibilities and requirements applicable in order to implement effective environmental management, during the construction and operational phases of the township.

Best practice principles require that every reasonable effort be made to reduce and preferably to prevent negative impacts, while enhancing positive impacts/ benefits. Specialists have also identified measures whereby impacts can be avoided or mitigated.

It is necessary to highlight that the EMPr is a living document that must be periodically reviewed and updated. This EMPr will also be publicly disclosed during the public participation process, and an opportunity will be offered to participating stakeholders to comment on it.

I.2 Project Background

Leago Environmental Solutions was appointed by Nkanivo Development Consultants on behalf of the JB Marks Local Municipality as independent environmental assessment practitioners to undertake an environmental impact assessment (scoping and environmental impact reporting) for the proposed township establishment to be situated on the Remainder of Portion 3 of the Farm Doornpan 193 IP, under the jurisdiction of the JB Marks Local Municipality in the North West Province.

I.3 Location of the Proposed Activity

The proposed development is located on the Remainder of Portion 3 of the Farm Doornpan 193 IP in the JB Marks Local Municipality, in North West Province. The site is located approximately 4km away from the Ventersdorp CBD. The proposed development site is located roughly at the following coordinates:

Longitude 26°47' 25.04" E; Latitude 26°18'11.23"S. Figure 1 below indicates the locality map of the project area.

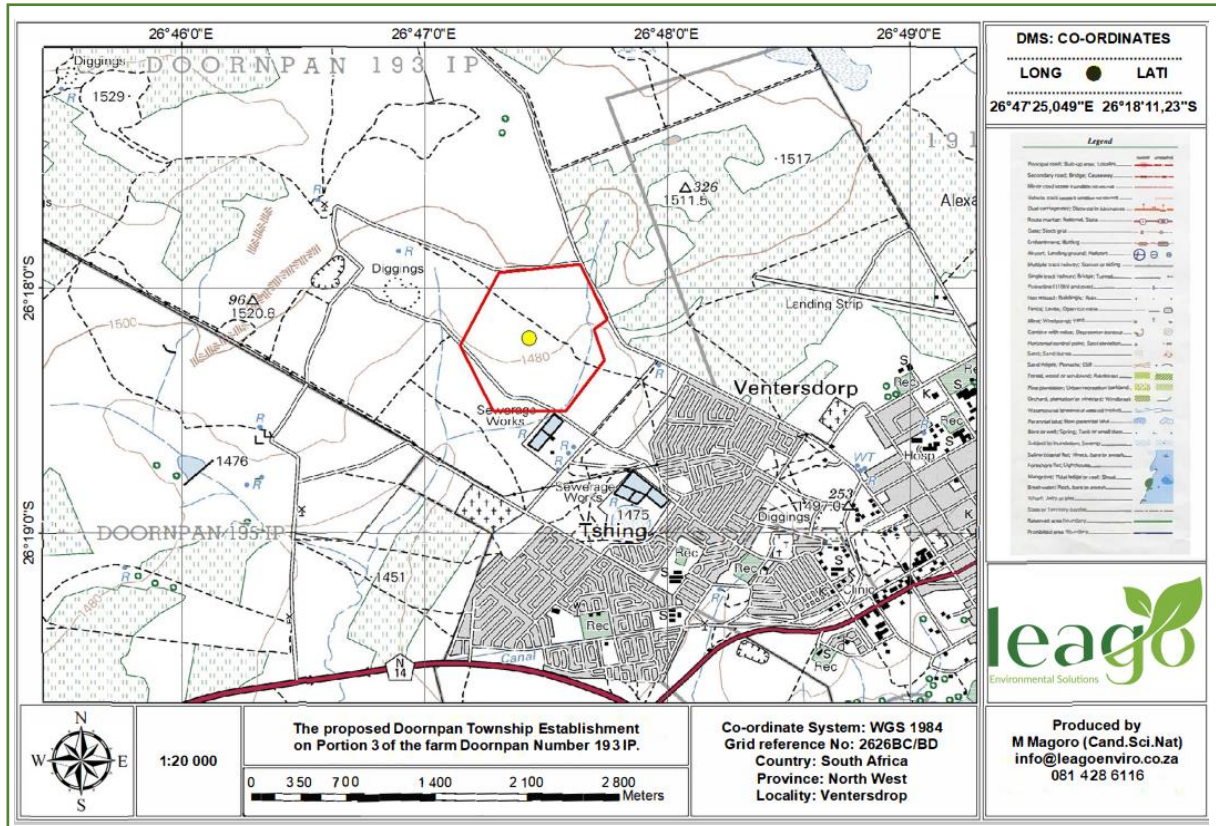


Figure 1: Topographic locality map of the proposed development site

1.4 THE PROPOSED PROJECT ENTAILS 842 SITES FOR:

The proposed development entails 842 stands for:

- 819 Residential (dwelling units)
- 2 Residential 2 (flat/ group units)
- 6 Business I (commercial use)
- 9 Institutional (school, crèche and public worship)
- 1 Recreational (sports centre)
- 1 Government (clinic)
- 2 Municipal
- 2 public open space

The proposed development will cover 88.46 Ha.

1.5 STATUS OF THE DOCUMENT

The provisions of this EMPr are binding on the Contractor (and his subcontractors, where applicable) during the construction period and defects liability period of the contract. This specification must therefore be read in conjunction with all the documents that comprise the contract documents for this contract. In the event that any conflict occurs between the terms of the EMPr and the project specification, the terms of the EMPr shall stand.

On appointment of the contractor, the acknowledgement form is to be signed by the project applicant, employer's representative and all contractors and subcontractors, including the contractors designated environmental officer. A copy of the signed form is to be kept by the applicant and forwarded to the independent environmental control officer.

2. STATUTORY AND OTHER LEGAL REQUIREMENTS

2.1 Environmental Impact Assessment Regulations (2017)

On review of the Environmental Impact Assessment Regulations, the proposed activity / development triggers the following listed activities:

- GNR 325: Activity 15
- GNR 324: Activity 12(h): ii & iv

Based on the above, the applicant has applied for an environmental authorisation from the Competent Authority, North West Department of Economic Development, Environment, Conservation and Tourism for the purpose of establishing the township.

The applicant, however, is reminded of Section 28 of the National Environmental Management Act (Act No. 107 of 1998) (NEMA), Duty of Care and Remediation of Environmental Damage, which states the following:

"(1) Every person who causes, has caused or may cause significant pollution or degradation of the environment must take reasonable measures to prevent such pollution or degradation from occurring, continuing or recurring, or, in so far as such harm to the environment is authorised by law or cannot be reasonably be avoided or stopped, to minimise and rectify such pollution or degradation of the environment. (2) the persons on whom subsection (1) imposes an obligation to take reasonable measures, including and owner or land, a person in control of land or premises, or a person who has a right to use the land or premises on which or in which – (a) any activity or process is or was performed or undertaken; or (b) any other situation exists, which causes or has caused or is likely to cause significant pollution or degradation of the environment. (3) The measures required in terms of subsection (1) may include measures to – (a)

investigate, assess and evaluate the impact on the environment; (b) inform and educate Employees about the environmental risks of their work and the manner in which their tasks must be performed in order to avoid causing significant pollution or degradation of the environment; (c) cease, modify or control any act, activity or process causing pollution or degradation; (d) contain or prevent the movement of pollutants or the causing of degradation; (e) eliminate the source of the pollution or degradation; or (f) remedy the effects of the pollution or degradation...”

2.2. Other Applicable Legislations

Legislations/Act	Purpose/ Application of the Act/ Legislation
South African Constitution (No. 108 of 1996)	<p>Chapter 2 of the Constitution comprises the Bill of Rights which makes provision for Environmental Rights. This notes that everyone has the right:</p> <ul style="list-style-type: none"> • To an environment that is not harmful to their health or well-being • To have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that: <ul style="list-style-type: none"> ✓ Prevent pollution and ecological degradation ✓ Promote conservation ✓ Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.
National Water Act (No. 36 of 1998)	<p>The primary purpose of this Act is to manage and control South Africa’s water resources by:</p> <ul style="list-style-type: none"> • Meeting the basic human needs of present and future generations • Promoting the efficient, sustainable and beneficial use of water in the public interest • Providing for growing demands for water use • Protecting aquatic and associated ecosystems and their biological diversity • Reducing and preventing pollution and degradation of water resources and meeting international obligations.
Occupational Health and Safety Act, (No. 85 of 1993)	<p>This Act makes provision in its Regulations for the general duties of employers to their employees. The Regulations make provisions for general duties of employers and self-employed</p>

	persons to persons other than their employees.
National Environmental Management: Waste Act (No. 59 of 2008)	This act reformed the laws regulating waste management in order to protect health and the environment by providing reasonable measures for the prevention of pollution and ecological degradation and for securing ecologically sustainable development; to provide for institutional arrangements and planning matters; by providing for national norms and standards for regulating the management of waste by all spheres of government; by providing for specific waste management measures; by providing for licensing and control of waste management activities; by providing for the remediation of contaminated land; by providing for the national waste information system; and by providing for compliance and enforcement and for matters connected therewith.

3. IMPLEMENTATION OF THE EMPR

3.1. The Applicant

JB Marks Local Municipality
35 Wolmarans Street
Potchefstroom
2531

Contact Person: Sandile Tyatya / Wynand Marx

Email: Wynandm@jbmarks.gov.za

- 3.1.1. The overall responsibility for ensuring compliance lies with JB Marks Local Municipality.
- 3.1.2. JB Marks Local Municipality shall ensure that the contract, all staff members, sub-contractors (if any) and suppliers understand and adhere to the EMPR.
- 3.1.3. JB Marks Local Municipality shall ensure that all sub-contractors (if any) and suppliers are contractually bound to adhere to the EMPR and Environmental Code of Conduct.

3.2. Environmental Control Officer

- 3.2.1. The applicant shall appoint an Environmental Control Officer to supervise the implementation of the EMPR.
- 3.2.2. The ECO shall be responsible for:
 - Day to day implementation of the EMPR and coordination of all environmental matters on the proposed development site.

- Ensuring that all staff members are adequately trained and comply to the conditions of the EMPR
- Liaison with the project manager, client and public.

4. GENERAL REQUIREMENTS OF THE ENVIRONMENTAL MANAGEMENT PLAN

4.1. ADMINISTRATIVE REQUIREMENTS OF THIS EMP

The following shall apply:

- Copies of the EMPr shall be made available to the competent authority, project manager, engineer, contractor and the ECO.
- Copies of the EMPr shall be kept at the site office/s during the construction phase and shall be distributed to the Environmental Officer and all other senior contract personnel.
- All senior personnel shall be required to familiarise themselves with the contents of this document.
- Any significant revisions to the EMPr document must be approved by ECO
- Records will be kept in the document indicating changes that have been made. The ECO shall be responsible for the implementation and distribution of any “approved” revisions to the EMP.
- The employer’s representative may order the contractor to suspend part or all of the works during the construction phase if the contractor fails to comply with the specifications set out in the EMPr and Method Statements. Such suspension shall be enforced until compliance is achieved.

4.2. ROLES AND RESPONSIBILITIES

i. NWDEDECT

NWDEDECT is the competent authority responsible for authorising this EMPr with regard to the proposed township establishment on the Remainder of Portion 3 of the Farm Doornpan 193 IP. NWDEDECT has the overall responsibility for ensuring that the JB Marks Local Municipality complies with the conditions of this EMPr.

JB Marks Local Municipality under the South African environmental legislation is accountable for the potential impacts of the activities that will be undertaken and is responsible for managing these impacts. The applicant has overall environmental responsibility to ensure that the implementation of this EMPr complies with the relevant legislation and the conditions of this EMPr and the conditions of the Environmental Authorisation. The applicant will appoint a contractor to undertake the construction of the proposed development but will still ultimately be responsible for any environmental impacts caused by the proposed development.

ii. Employer's Representative (ER)

The appointed civil and consulting engineers as the employer's representative, would act as the employer's on-site implementing agent, together with the appointed contractors during the construction and operational phases. The ER will have the responsibility to ensure that the employer's responsibilities are executed in compliance with the relevant legislation and this EMPr.

In addition to general project management, the ER, together and the applicant has the responsibility to appoint the Environmental Control Officer.

iii. Operations Manager

During the operational phase, the operations manager will have the responsibility to ensure that the authorisation holder's responsibilities are executed in compliance with the relevant legislation and this EMPr. Any on-site decisions regarding environmental management are ultimately the responsibility of the operations manager.

iv. Environmental Awareness Training

The operations manager shall ensure that adequate environmental awareness training of senior site personnel takes place and that all construction and operational phase workers receive an induction presentation on the importance and implications of the EMPr.

The presentation shall be conducted, as far as possible, in the employees' language of choice. As a minimum, training shall include:

- Explanation of the importance of complying with the EMPr
- Discussion of the potential environmental impacts of construction / operational activities
- Employees' roles and responsibilities, including emergency preparedness
- Explanation of the mitigation measures that must be implemented when carrying out their activities
- Explanation of the specifics of this EMPr and its implementation
- Explanation of the management structure of individuals responsible for matters pertaining to the EMPr.
- The operations manager shall keep records of all Environmental Training Sessions, including names, dates and the information presented. These records will be presented to the ECO on request during his / her audits.

5. ENFORCING THE EMPr

The applicant, or their designated representatives, has an overall responsibility to ensure that all those people involved / appointed to the project are aware of and familiar with its environmental requirements. The EMPr shall be part of the terms of reference for all contractors, sub-contractors and suppliers. All contractors, sub-contractors and suppliers have to give some assurance that they understand the EMPr and that they will undertake to comply with the conditions therein.

All senior and supervisory staff members shall familiarise themselves with the full contents of the EMPr. They shall know and understand the specifications of the EMPr and shall be able to assist other staff members in matters relating to the implementation of the EMPr.

All parties involved in the project must sign an acknowledgement that they are familiar with the requirements of the EMPr. These records must be kept on file by the applicant.

6. REPORTING AND ENVIRONMENTAL SITE AUDITING

6.1. Record of Activities

The RE, ECO and EO shall keep a record of activities on site, including but not limited to meetings attended, method statements received and approved, issues arising on site, cases of non-compliance, penalties/ fines issued and corrective action taken to solve problems. In addition, the contractor must keep a record of complaints from interested and affected parties. The ECO shall monitor all sensitive work environments, which may also include photographic monitoring.

6.2. Routine Site Inspections

The ECO shall visit and inspect the site to ensure that correct operational procedures are being implemented and that the developer is complying with the environmental specifications in the EMPr. The ECO shall address any queries to the RE. If the queries cannot be resolved at this level, they shall be referred to the Engineer and, if necessary, to the Competent Authority

6.3. Incident Reporting

- All incidents including actual or potential for injury, or damage to equipment, property or the environment will be reported to the Contractor's EO, the ECO and the project manager as soon as practicable after the occurrence.
- Regardless of how minor the incident appears; it must be reported. An "Incident Investigation Report" must be completed within 12 hours of the incident. Prompt reporting will allow an immediate investigation to take place and prevent similar situations from occurring.

- The reporting of hazards is the responsibility of all staff and if a hazard or a safety problem is identified, it must immediately be brought to the attention of the project manager who will investigate and rectify the situation as soon as practicable. An employee can report a hazard by completing an “Incident Report” form.
- The operations manager must notify the ECO of the actual or potential significant impacts on people or the biophysical environment, to as soon as possible after the occurrence of the incident.
- The ECO will maintain a Project Incident Register. The Register will include details of accidents, incidents and potential incidents with actual or potential significant off-site impacts on people or the biophysical environment.
- The Register must be made available for inspection at any time by the independent qualified person or team conducting the environmental audit and any competent authority.
- Incidents will be reported and managed in accordance with EMPr and any other legal requirements

7. PHASES OF THE PROJECT

The abbreviations below will be applicable in all phases of the project:

- ER/ IA Employer’s Representative / Implementing Agent
- DEO Designated Environmental Officer
- C Contractor
- OM Operations Manager

7.1. PLANNING/ DESIGNING PHASE

Planning/ Designing Phase	Responsibility	Monitoring	Timeframe
Signing of service agreements between the Applicant and the relevant service providers	Applicant	Applicant	Once off
Appointment of the contractors by the Applicant	Applicant	Applicant	Once off

7.2. CONSTRUCTION PHASE

Construction Phase	Responsibility	Monitoring	Timeframe
Layout			
<p>The Contractor is to adhere to the following with regards to the Materials Storage Area and Contractors Camp:</p> <ul style="list-style-type: none"> • All servitudes and existing services must be verified prior to construction • The camp site must be fenced before construction commences • Site establishment shall not take place on steep slopes, within wetland areas and sites declared as no-go areas. 	C	ER & DEO	Before construction

<ul style="list-style-type: none"> All access points, roads and turning areas must be agreed by the engineer and Environmental Control Officer prior to commencement of any construction activities. 			
Adequate parking must be provided for site staff. This must be demarcated so not as to encroach into the surrounding environment.	C	ER & DEO	Duration of Construction Phase
Temporary Fencing			
Fencing off the construction area and keeping all construction vehicles off the undeveloped portions of the buffer areas. Entry into these areas by any person, vehicle or equipment without the ER's written permission will result in a penalty.	C	ER & DEO	Duration of Construction Phase
the contractor shall erect temporary fencing along the perimeter of the contractor's site camp and designated no-go areas.	C	ER & DEO	Duration of Construction Phase
The Contractor shall maintain in good order all demarcation fencing and barriers for the duration of construction activities, or as otherwise instructed.	C	ER & DEO	Duration of Construction Phase
Topsoil Removal and Stock Piling			
The contractor shall remove topsoil from all areas where topsoil will be impacted on by construction activities, including temporary activities such as storage and stockpiling areas.	C	ER & DEO	Ongoing
Stripped topsoil shall be stockpiled in areas agreed with by the ER for later use in rehabilitation and shall be adequately protected. Topsoil is considered to be the natural soil covering, including all the vegetation and organic matter. The depth of the soil may vary and due to this reason the top 300mm of soil must be removed and preserved as topsoil.	C	ER & DEO	Ongoing

Topsoil stockpiles shall be convex in shape and no more than 2m high. Stockpiles shall be shaped so that no surface water ponding can take place.	C	ER & DEO	Ongoing
Excess spoil material from topsoil or bulk earthworks must be placed in areas or even removed entirely off site to minimise silt deposition, scouring and soil erosion	C	ER & DEO	Ongoing
The contractor shall be held responsible for the replacement, at his expense, of any unnecessary loss of topsoil due to his failure to work according to the requirements of this EMPr.	C	ER & DEO	Ongoing
Sewer Services			
The Ventersdorp Waste Water Treatment Works (WWTW) must be upgraded to handle the sewer for the proposed township establishment	C	ER & DEO	Duration of Construction Phase
Workshop, Equipment Maintenance and Storage			
All vehicles and equipment shall be kept in good working order to maximise efficiency and minimise pollution.	C	ER & DEO	Ongoing
Stockpiling			
The Contractor shall plan his activities so that materials can be transported directly to and placed at the point where it is to be used.	C	ER & DEO	Ongoing
Should temporary stockpiling become necessary, the areas for the stockpiling of excavated / imported material shall be indicated and demarcated on the site plan submitted in writing to the ER for his/her approval, together with the Contractor's proposed measures for prevention, containment and rehabilitation against environmental damage	C	ER & DEO	Ongoing
Stockpiles shall be positioned and sloped to create the least visual impact.	C	ER	Ongoing

Storm Water Control			
The implementation of temporary attenuation measures, such as earth berms and cut-off drains to retain surface run-off until the attenuation areas are complete and functional.	C	ER & DEO	Ongoing
Silt screens must be provided at all the grid inlets in order to collect debris and silt during times of heavy rain.	C	ER & DEO	Ongoing
The storm water attenuation ponds should be constructed off-channel before draining into the stream	C	ER & DEO	Ongoing
Topsoil must be conserved on site and prevented from entering the stormwater system	C	ER & DEO	Ongoing
Hazardous Substances			
Should any hazardous material/substances (e.g. petrochemicals, paints, etc.) need to be stored on the site, it shall be under controlled conditions. All hazardous materials/substances shall be stored in a secured, appointed area that is fenced and has restricted entry. All storage shall take place using suitable, sealable containers to the approval of the ER. These containers must be placed within a bunded area. The floor and wall of the bund area shall be impervious to prevent infiltration of any spilled / leaked material into the soil.	C	ER & DEO	Ongoing
Material Safety Data Sheets (MSDS's) must be readily available for all chemicals / hazardous substances to be used on site. Where possible and available, MSDS's should include additional information on ecological impacts and measures to minimise and mitigate against any negative environmental impacts in the result of an accidental spillages	C/ER	ER & DEO	Before commencement of construction
Noise Control			
It must be ensured that noise levels are kept to a minimum during the construction phase. All	C	ER & DEO	Ongoing

machinery and equipment to be utilized on the site should be fitted with mufflers and must be maintained in good working order to minimise noise levels. It is recommended further that the Contractor encourage construction workers to minimise shouting and hooting on the site.			
Construction work should be completed in as short a time frame as possible in order to limit the longevity of the construction impacts.	C	ER & DEO	Ongoing
The contractor shall restrict all operations that result in undue noise disturbance to local communities to daylight hours on workdays (Monday to Friday) or as otherwise agreed with the ER.	C	ER & DEO	Ongoing
The contractor shall warn any local communities and / or residents that could be disturbed by noise generating activities well in advance and shall keep such activities to a minimum.	C	ER & DEO	Ongoing
The contractor shall be responsible for compliance with the relevant legislation with the respect to noise.	C	ER & DEO	Ongoing
Waste Management			
All solid waste generated during the construction process (including plastic, rubble, cut plant material, waste metals etc.) must be placed in the waste collection area in the construction camp	C	ER	Ongoing
Burying of waste, rubble on site, or dumping in drainage lines/rivers is strictly prohibited	C	ER	Ongoing
The contractor shall ensure that all site personnel are instructed on the proper disposal of all waste material.	C	ER	Ongoing
Dust Control			
Construction vehicles shall comply with speed limits and haul distances shall be minimised.	C	ER & DEO	Ongoing
Material loads shall be suitably covered and secured during transportation.	C	ER & DEO	Ongoing

Exposed soils and material stockpiles shall be protected against wind erosion. The location of stockpiles shall take into consideration the prevailing wind directions and locations of sensitive receptors.	C	ER & DEO	Ongoing
The Contractor shall implement dust suppression measures (e.g. water spray vehicles, covering material stockpiles, etc.) if and when required.	C	ER & DEO	Ongoing
Environmentally friendly soil stabilisers may be used as additional measures to control dust on gravel roads and construction areas if complaints are received regarding dust generation. This is especially pertinent as excessive dust could disturb moving vehicles on adjacent roads, creating a potential traffic hazard.	C	ER & DEO	Ongoing
The Contractor shall ensure that the generation of dust is minimised and shall implement a dust control programme, as necessary, to maintain a safe working environment and minimise nuisance for surrounding residential areas/dwellings.	C	ER & DEO	Ongoing
Protection of Fauna and Flora			
The Contractor shall ensure his employees do not undertake any hunting, trapping, shooting, poisoning or other disturbance of any fauna on-site or in the areas surrounding the site	C	ER & DEO	Ongoing
The use of pesticides is prohibited unless approved by the ER.	C	ER & DEO	Ongoing
Indigenous trees must not be cut; disturbed or removed without a permit from forestry as required by the National Forest Act.	C	ER & DEO	Ongoing
It is recommended that before any construction activities commences, the proposed development site must be investigated for the possible presence of slow moving and sub terrain fauna.	C	ER & DEO	Ongoing
Minimise cutting down of big indigenous trees where possible but also ensure that protected	C	ER & DEO	Ongoing

trees get conserved			
Fire Control			
The Contractor shall ensure that basic fire-fighting equipment is available at all construction activities on site.	C	ER & DEO	Ongoing
The Contractor shall appoint a Fire Officer who shall be responsible for ensuring immediate and appropriate action in the event of a fire.	C	ER & DEO	Ongoing
The Contractor shall ensure that all site personnel are aware of the procedure to be followed in the event of a fire.	C	ER & DEO	Ongoing
Protection of Heritage and Cultural Features			
If any archaeological or paleontological artefacts or remains / graves are uncovered during earthmoving activities, work in the vicinity of the find shall cease immediately. The Contractor shall immediately notify the ER, who shall contact the relevant Competent Authority (SAHRA) who will take appropriate steps.	C	ER & DEO	Ongoing
The Contractor will be required to abide by the specifications as set out by the Competent Authority or the Heritage Specialist appointed.	C	ER & DEO	Ongoing
Environmental Education & Awareness			
It is the Contractors' responsibility to provide the site foreman with no less than 1 hour's environmental training and to ensure that the foreman has enough understanding to pass this information onto the construction staff.	C	ER & DEO	Prior to moving on site
The Contractor / ECO must be on hand to explain any technical issues and to answer questions.	C/ECO	ER & DEO	Ongoing

7.3. OPERATIONAL PHASE

Operational Phase	Responsibility	Occurrence	Method
Water Quality Management			
The Local Municipality must be contacted with regard to any discharge to sewer	OM	Ongoing	Site inspection

Management of Contaminated Land			
Contaminated land investigations, including soils, groundwater and surface water monitoring and sampling to be implemented should impact is observed. This will take into account the source-pathway-receptor (S-P-R) linkages and should serve to determine the nature and extent of any impacts to the receiving environment as a result of site activities. These investigations are to be carried out with consideration of the relevant legal processes. Risk assessment to be undertaken if considered necessary.	OM to outsource as appropriate	Ongoing	Site investigation
Risk based corrective action (RBCA) to be implemented based on the findings of the site investigations. Remedial plans will be developed based on conceptual site model (CSM) and should consider S-P-R linkages. Remedial actions may include physical, chemical and/or microbiological intervention.	OM to outsource as appropriate	Ongoing	Site remediation
Post-remediation monitoring plan to be implemented to determine effectiveness of remedial actions and serve as an early-warning system for potential re-occurrence.	OM to outsource as appropriate	Ongoing	Ongoing monitoring

Control of Littering , Waste Storage and Removal

<p>Adequate waste disposal bins must be provided around the township. These are to be regularly emptied and the contents thereof collected by the Local Municipality or an approved Waste Service Provider.</p>	<p>OM</p>	<p>Ongoing</p>	<p>Site inspection</p>
<p>The recycling of waste is encouraged. As such, the provision of separate recycling bins for the disposal of paper, tins and plastic should be erected and displayed in a suitable and visual location on site. A reputable Recycling Waste Company must be appointed to collect recyclable waste (if applicable).</p>	<p>OM</p>	<p>Ongoing</p>	<p>Site inspection</p>
<p>A landfill situated nearest the site must be used to dispose the solid waste. The local municipality must be responsible for collecting and disposing the solid waste</p>	<p>OM</p>	<p>Ongoing</p>	<p>Site inspection</p>

Health and Safety			
Ensure that all staff is trained in what to do in the case of an emergency such as an on-site fire.	OM	Ongoing	Site inspection
Staff personnel are to be trained in first aid.	OM	Ongoing	Site inspection
Fire Control			
Emergency numbers must be displayed with the correct details of the nearest firefighting station at all times.	OM	Ongoing	Site inspection
Ensure that relevant signage e.g. no smoking, is displayed in potentially dangerous areas and is abided by.	OM	Ongoing	Site inspection
Storm Water Control			
Removal of silt from collection points and attenuation pond	OM	Ongoing	Site inspection

7.4. DECOMMISSIONING PHASE

At this stage decommissioning is not foreseen in the near future. At the time it might become applicable, an Environmental Impact Assessment must be undertaken in terms of Listed Activity No 31(i) of R326 of the National Environmental Management Act (No 107 of 1998), as amended; or else compliance with the environmental legislation requirements applicable at that time must take place.

8. NONE-COMPLIANCE

8.1. Procedures

The Contractor shall comply with the environmental specifications and requirements on an on-going basis and any failure on his / her part to do so will entitle the ER to impose a penalty.

In the event of non-compliance, the following recommended process can be followed:

- The ER shall issue a notice of non-compliance to the contractor, stating the nature and magnitude of the contravention. A copy shall be provided to the ECO during his / her site audit
- The contractor shall act to correct the non-conformance within 24 hours of receipt of the notice, or within a period that may be specified within the notice
- The contractor shall provide the ER with a written statement describing the actions to be taken to discontinue the non-conformance, the actions taken to mitigate its effects and the expected results of the actions. A copy shall be provided to the ECO
- In the case of the contractor failing to remedy the situation within the predetermined timeframe, the ER shall impose a monetary penalty based on the conditions of contract
- In the case of non-compliance giving rise to physical environmental damage or destruction, the ER shall be entitled to undertake or to cause to be undertaken such remedial works as may be required to make good such damage and to recover from the contractor the full costs incurred
- In the event of a dispute or difference of opinion between any parties arising out of the interpretation of the conditions of the EMPr, or a disagreement regarding the implementation or method of implementation of conditions of the EMPr, any party shall be entitled to require that the issue be referred to specialists for arbitration.
- The ER shall at all times have the right to stop work and/or certain activities on site in the case of noncompliance or failure to implement remediation measures.

8.2. Offences and Penalties

Any avoidable non-compliance with the conditions of the EMPr shall be considered sufficient ground for the imposition of a penalty. Possible offences, which must result in the issuing of a contractual penalty, include, but are not limited to:

- Unauthorised entrance into no-go areas
- Unauthorised damage to natural vegetation
- Unauthorised camp establishment (including stockpiling, storage etc.)
- Hydrocarbons/ hazardous material: negligent spills/ leaks and insufficient storage
- Ablution facilities: non-use, insufficient facilities and insufficient maintenance
- Late method statements or failure to submit method statements
- Insufficient solid waste management (including clean-up of litter, unauthorised dumping and
- Erosion due to negligence/ non-performance
- Excessive cement / concrete spillage / contamination
- Unauthorised fires
- Preventable damage to water courses or pollution of water bodies
- Non-induction of staff.

8. CONCLUSION

In terms of NEMA, everyone is required to take reasonable measures to ensure that they do not pollute the environment. Reasonable measures include informing and educating employees about the environmental risks of their work and training them to operate in an environmentally responsible manner. Furthermore, in terms of NEMA, the cost to repair any environmental damage shall be borne by the person responsible for the damage.

If the above-mentioned management recommendations are adopted, it is anticipated that most of the negative environmental impacts associated with the development of the township establishment on the Remainder of Portion 3 of the Farm Doornpan 193 IP, in the North West province can be mitigated against. The appointed ECO will need to regularly monitor the site to ensure that the required environmental controls are in place and working effectively.

ANNEXURE A

Environmental Code of Conduct

The applicant is committed to ensuring that the development of the proposed township is done according to the highest environmental standards so that the ecological footprint of the development is minimised where possible.

The applicant requires that all personnel involved in the operation process accept their responsibilities towards the EMP and the environment. This includes all permanent, contract or temporary workers as well as any other person involved with the project or visiting the site. Ignorance, negligence, recklessness or a general lack of commitment will not be tolerated.

If you do not understand the rules you must seek assistance to ensure compliance. The following people can assist you in ensuring compliance with the EMP.

Your Supervisor:

Environmental Control Officer:.....

Project Manager:

ANNEXURE B

Environmental Complaints Register						
Date	Name of Complainant	Contact Details	Nature of Complaint	Responsible Person	Date Action Taken	Details of Action Taken

ANNEXURE C

Environmental Incidents Register						
Date	Incident	Action Required	Responsible Person	Action Implemented	Date Implemented	Action

ANNEXURE D

Environmental Training Register				
Date	Employee	Employee Signature	Supervisor	Supervisor Signature

**ENVIRONMENTAL MANAGEMENT PLAN FOR THE PROPOSED TOWNSHIP
ESTABLISHMENT ON THE REMAINDER OF PORTION 3 OF THE FARM
DOORNPAN 193 IP, NORTH WEST PROVINCE.**

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