

CULTIVATION OF VIRGIN LAND

1st DRAFT

ENVIROMENTAL MANAGMENET PLAN

Version 1.1

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1. Background

An Environmental Management Programme (EMP) describes mitigation measures in detail, and is prescriptive, identifying specific individuals or organisations responsible for undertaking specific tasks to ensure that impacts on the environment are minimised during the development and operational activities.

This Farming Development Environmental Management Program (EMP) is intended to guide and manage the operation of the proposed cultivation of virgin land on 15ha of Farm Hunters Rest, Sub 1 of Farm Kromme Draai, Erf 1033 and on 12 ha of Farm Patience, Sub 20 of Farm Kromme Draai Erf 1033, in Bergville under Okhahlamba Local Municipality within Uthukela District (Dc23). This clearing of indigenous vegetation for crop irrigation to increase agricultural production will be facilitated by Hunters Rest Farm Trust, the land owners.

This EMP is aimed to providing guidance/advice that ensures implementation of appropriate environmental management measures and adherence with environmental legislation/regulations issued by Department of Economic Development, Tourism and Environmental Affairs. Therefore it will ensure that all activities undertaken are properly managed in respect to environmental aspects, minimize the impacts on vegetation and faunal habitats and reduce risk of soil erosion.

2. LIST OF ACRONYMS USED

CARA	: Conservation of Agricultural Resource Act
DEDTEA	: Department of Economic Development, Tourism and Environmental Affairs - KwaZulu-Natal Province.
DWA	: Department of Water Affairs – National (Pretoria)
ECA	: Environmental Conservation Act
ECO	: Environmental Control Officer
EMP	: Environmental Management Plan
EMPR	: Environmental Management Programme
GN	: Government Notice
IAAPs	: Interested and Affected Parties
MSDS	: Material Safety Data Sheets
NEMA	: National Environmental Management Act
NWA	: National Water Act
NEM	: WA: National Environmental Management: Waste Act
OHS	: Occupational Health and Safety Act

3. LIST OF TERMS USED

- **Contractor:** Persons/organisations contracted by the Developer to carry out parts of the work for the planned development.
- **Construction/Development Phase:** The Construction/Development Phase is the period of commencement of physical disturbance to the land,
- **Environment:** The surroundings within which humans live and that consist of:
 - a. the land, water and atmosphere of the earth;
 - b. micro-organisms, plant and animal life
 - c. any part or combination of (a) and (b) and the interrelationships among and between them; and the physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.
- **Environmental Audit:** A systematic, documented verification process of objectively obtaining and evaluating evidence to determine whether specified environmental activities, events, conditions, management systems, or information about these matters conform with audit criteria, and communicating the results of this process to the client.
- **Environmental Control Officer:** A person appointed and paid for by the Developer to ensure compliance with Environmental Authorisation and conditions, Duty of Care, and all other requirements as deemed fit by the Authorities charged with implementing environmental legislation, and the EMP.

- **Hazardous substance:** A substance which can have a deleterious effect on the environment, as defined in the Regulations for Hazardous Biological Agents, 2001.
- **Inspector:** An official appointed and empowered to act in terms of section 31 of the National Environmental Management Act
- **Interested and Affected Parties (IAAP's):** Those individuals or organisations that have an interest in the proposed development or will be directly affected by the activities of the development, as identified in the environmental impact assessment process.
- **Incident:** An environmental incident as defined in section 30 of NEMA
- **Method Statement:** A method statement is a written submission by the Contractor to the Engineer in response to the specification or a request by the Engineer, setting out the plant, materials, labour and method the Contractor proposes using to carry out an activity, identified by the relevant specification or the Engineer when requesting a Method Statement. It contains sufficient detail to enable the Engineer to assess whether the Contractor's proposal is in accordance with the Specifications and/or will produce results in accordance with the Specifications.
- **Pollutant and Pollution:** a contaminant at a concentration high enough to endanger the environment or the human health.
- **Project:** Proposed Cultivation of 15ha of Virgin Land on Farm Hunters Rest, located on Sub 1 of farm Kromme Draai Erf 1033, with a total area of 387 ha in Berville, Okhahlamba Local Municipality, Uthukela District (DC 23).
- **Risk:** Ability and/or potential to harm or cause damage in relation to known occurrence

4. OBJECTIVES OF THE EMP

Objectives of the EMP can be summarised in a list below:

- To outlines activities to be performed and their environmental impacts and determines migratory measures.
- Outlines frequencies, aspects and detail of reporting mechanism to be installed.
- Management of complaints and resolution mechanism
- Define relevant roles and responsibilities of partners
- Defines what and which documents must be available on site
- Defines what and by who must be measured and reported
- Provides yardstick to measure and ensure compliance
- Gives effect to Sustainable Development principles

5. LEGAL COMPLIANCE OF THE PROJECT

5.1 The Constitution (section 24 Bill of Rights)

Guarantees every person's right to an environment that is not detrimental to health. Further it enables measures such as legislation to be implemented.

5.2 National Environmental Management Act, 107 of 1998 (as amended)

Defines and specifies environmental management practices that contribute and implements section 24 of the Constitution. Section 28 (1) of NEMA places an obligation to the person/s to exercise Duty of Care when dealing with activities detrimental to the Environment and to take reasonable measures to avoid degradation. Failure to do so is a criminal offense.

5.3 KwaZulu-Natal Planning and Development Act No 5 of 1998

This act Deals with planning and related issues and is implemented by Local Municipalities. This act defines planning so as to achieve coherent and compatibility in land uses in the Municipal area concerned.

5.4 Conservation of Agricultural Resources Act, No 43 of 1983

This legislation deals with utilisation and conservation of agricultural land and activities that impact on agricultural resources. It regulates the unsustainable utilisation of Agricultural Natural Resources and changes in Agricultural lands which may lead to unsuitable land uses and/or loss of viability of Agricultural lands and resources.

5.5 National Heritage Resources Act, No. 25 of 1999

Regulates the management of National heritage as identified or found on site during construction of the project. It specifies relevant authorities and measures to be taken when such occurrences are unearthed on site.

5.6 National Water Act, No 36 of 1998

The National Water Act regulates the management of water resources by specifying measures to be taken to protecting and conserving them.

5.7 Occupational Health and Safety Act (OHSA), No 85 of 1993

The OHSA and its regulations regulate the workplace and machinery used in the construction industry. The act specifies legal appointments of e.g. Safety Officers and assigns responsibility to Health and Safety to relevant persons in the organisations.

5.8 Mines and Works Act, No. 27 of 1956

This act regulates working in confirmed areas and in hazardous areas. A construction site for this project is covered by this act.

6. ACTIVITIES RELEVANT FOR THE PROPOSED DEVELOPMENT

The proposed development will required the clearing of indigenous vegetation for irrigation of rye grass on permanent pasture.

The **development or “construction” phase** will consist of:

- The clearing of natural vegetation.
- Physical preparation (ripping/ploughing) of the soil for cultivation.
- The planting of crops.

The **operational phase** will consist of:

- Standard commercial farming practices, application of agro chemicals and fertilisers and harvesting.
- No storage or processing activities will take place on the property.
- All farm produce will be transported to Hunters Rest processing place which is adjacent to the site, along the P30 on its eastern boundary.

The **decommissioning phase** will consist of:

- It is highly unlikely that the proposed development would ever be decommissioned.
- Should the decommissioning occur:- Implementation of an Alien Vegetation Control Programme should apply on site, allow the farm to rehabilitate naturally, ensure effective erosion control structures are installed and managed long-term, and an adequate cover crop must be planted to stabilize the soil in order to prevent erosion.

7. DETAILED SCOPE OF EMP

7.1 Conditions of Contract / Roles and Responsibilities

The Developer and Contractor shall be responsible for ensuring compliance with the provisions contained in the EMP, and shall be held accountable in terms of the EMP.

7.2 Duties and powers of the Developer

The Developer has overall responsibility for compliance with the EMP as it is a fundamental component of the authorisation requirements for the project. This means that the Developer must:

- Ensure that the professional team and the Contractors are appropriately briefed and that their appointment includes environmental requirements as relevant.
- Ensure that he is kept fully informed of the performance of the project against the requirements of the EMP.

- Ensure that appropriate action is taken where consistent incidents of non-compliance are taking place.
- Ensure that any corrective action required by the authorities is implemented.

7.3 Duties and Powers of the Site Manager

The Site Manager is ultimately responsible for ensuring compliance with the Environmental Management Plan. The Site Manager:

- Maintains a register of complaints and queries by members of the public at the site office. This register is forwarded to the Environmental Control Officer on a bi-monthly basis.
- Enforces the EMP on site and Monitors compliance with the requirements of the EMP.
- Assesses the Contractor's environmental performance in consultation with the Environmental Control Officer.

7.4 Duties and Powers of the Environmental Control Officer

The Environmental Control Officer (ECO):

- Must be appointed by the Developer to visit the site from time to time once the first activities start on site.
- Undertake induction training and briefs the Site Manager and the Contractor about the requirements of the Environmental Management Plan.
- Advises the Site Manager about the interpretation, implementation and enforcement of the Environmental Specification and other related environmental matters.
- Advises and Attends site meetings, as necessary.
- Monitors the Contractor's compliance with the EMP by undertaking an environmental audit at the start of the construction phase, then monthly thereafter until all works on site have been completed, and then a close-out audit is to be undertaken.
- Reports on the performance of the project in terms of environmental compliance with the EMP to be submitted to the Site Manager, Local Municipality, DWAF and DEDTEA.
- Provides technical advice relating to environmental issues to the Site Manager.
- Acts as liaison with DEDTEA, and other environmental organisations or stakeholders as necessary.

7.5 Extent of the Contractor's Obligations

The Contractor is required to:

- Supply method statements and management plans for all activities requiring special attention as specified and/or requested by the Site Manager or Environmental Control Officer during the duration of the Contract.
- Be conversant with the requirements of the Environmental Management Plan.
- Brief staff about the requirements of the Environmental Management Plan.
- Comply with directives/instructions of the Environmental Control Officer in terms of this EMP.

- Ensure any sub-contractors/ suppliers who are utilised within the context of the contract comply with the environmental requirements of the EMP.
- Take full responsibility and be held responsible for non-compliance on their behalf.
- Bear the costs of any damages/ compensation resulting from non-adherence to the EMP or written site instructions.
- Ensure that the Site Manager is timeously informed of any foreseeable activities that will require input from the Environmental Control Officer.
- The Contractor will conduct all activities in a manner that minimises disturbance to directly affected residents and the public in general, and foreseeable impacts on the environment.

8. PRE-CONSTRUCTION PHASE

Pre-Construction EMP activities are those relating to the preparation of the site prior to the start of the Construction Phase.

8.1 Access to the Site

This site must have strict access control to reduce the risks associated with vehicular transportation and pedestrian access on the site. The Contractor shall be made aware of this requirement by the Developer prior to construction commencing on site.

8.2 Preparation of Method Statements and/or Management Plans

Method Statements and/or Management Plans shall be submitted by the Contractor and shall be adhered to by the Contractor and Site Manager. These relate to water and storm water management requirements, traffic requirements, solid waste management requirements, fuel storage and filling and dispensing of fuel (diesel and petrol), hydrocarbon spills, contaminated water treatment, the storage of hazardous materials, standard emergency procedures, and biohazard control. The Environmental Control Officer shall monitor the implementation of the Statements and Management Plans. All copies of the statements and plans shall be submitted to the appointed Environmental Control Officer.

8.3 Permits required

The necessary permits shall be obtained by the Developer prior to the commencement of construction and sufficient time shall be allowed to obtain such permits, for activities such as:

- a. The management of storm water on site.
- b. Abstraction of water (ground or from a river), and for stream flow reduction activities, from the Department of Water Affairs.
- c. The relocation, removal or pruning of protected trees from the Department of Water Affairs.

8.4 Provision of Bulk Services

The Site Manager shall confirm that the existing services on site are sufficient for demands of operating plant, such as water and electricity. Agreement will be required with Okhahlamba local Municipality or Eskom for these services.

8.5 Storm Water Management

- a. On-site storm water controls shall be implemented prior to the start of the development. The increase in storm water run-off resulting from construction activities must be estimated and the drainage system assessed accordingly to prevent storm water damage.
- b. It is important that the attenuation and/or retention ponds be aligned with future artificial wetlands that have been proposed for collecting runoff from the site prior to it entering the water course.

8.6 Soil Management

- a. The Contractor should ensure that wind screening and storm water management controls should be undertaken to prevent soil loss during site establishment.
- b. The time that stripped areas are exposed should be minimised wherever possible. Care should be taken to ensure that lead times are not excessive.
- c. Procedures that are in place to conserve topsoil during the development phase are to be applied during the site establishment phase, i.e. topsoil is to be conserved while providing access to the site and setting up the camp.

8.7 Conservation of Natural Resources

The conservation of natural resources is applicable to areas outside the perimeter of the property and governs the behaviour of contractors and employees.

- a. No natural vegetation may be cleared during the site establishment without the prior permission of the Department of Economic Development, Tourism and Environmental Affairs after a motivation from the ECO.
- b. Care must be taken to avoid the introduction of alien plant species to the site and surrounding areas.

8.8 Cultural Heritage Environment

- a. The archaeological component and any other applicable heritage components. Amafa KZN Heritage therefore requires the appointment of an Amafa accredited Heritage practitioner to assist in the provision of recommendations and mitigation procedures.
- b. Any archaeological or historical assets found prior and during constructing must be protected and Amafa AkwaZulu-Natal be notified of such findings. No construction shall continue at such area.
- c. All contractors and sub-contractors and their employees must made aware of a) so as to act in compliance.

8.9 Noise Impacts

- a. All Construction vehicles must be in good working condition. Any unfit or badly maintained vehicles must be removed from site for repairs.
- b. Construction vehicles must whenever possible be fitted with silencers to minimise noise levels during construction.

8.10 Designated Working Hours

- a. In line with Department of Labour's requirements, operational hours shall be as follows.

Day	Start Time	Finish Time	Hours per Day
Weekdays (Monday to Friday)	07h00	17h00	10
Saturdays	08h00	16h00	8
Sundays and Public Holidays	08h00	14h00	6

- b. Any deviations from the above must be approved in writing by the Department of Agriculture and Environmental Affairs or Okhahlamba Local Municipality.

9. CONSTRUCTION/DEVELOPMENT PHASE

The construction phase covers all activities during construction. There may be overlaps between pre-construction and construction phases. The overlaps may not be used as an excuse for non-compliance with either portion of the EMP.

9.1 Access to the Site

- a. All access to the property must be properly controlled 24 hours a day.
- b. No unauthorised access must be granted to vehicles or persons.
- c. A register of persons and vehicles accessing the site must be maintained and produced on request.
- d. Access roads must be maintained in good conditions.
- e. Vehicle (Agricultural tractors) movements must be controlled to avoid congestion, dust generation and road hazards.

9.2 Waste Management

- a. Waste generated on the site shall be handled appropriately using appropriate receptacles, bin liners, and skips.
- b. Regular trips to the Bergville Disposal Site must be made for general waste.
- c. All hazardous waste must be sent to a Hazardous Disposal Site. Hazardous wastes include but not limited to fluorescent tubes, oil contaminated material, paints, etc.
- d. Records of waste generated must be kept and be produced on request.
- e. Recycling of waste must be encouraged on site.
- f. Littering is prohibited on-site and off-site.
- g. Burning and burying of waste is prohibited.
- h. No servicing of vehicles is permitted on site.

9.3 Water Quality Management

- a. The proximity of, and the distances to all surface water bodies in the vicinity shall be established.
- b. A borehole and spring census shall be carried out within a one kilometre radius of the site.
- c. The yield of each borehole, their logs and water quality must be supplied.
- d. The geohydrology of the proposed site must be assessed by surface mapping, accessing existing information and Geohydrological maps of the area, together with appropriate subsurface investigative measures.
- e. Where appropriate geophysics must be carried out across the site to assist in the identification of faults or to establish if any other geological anomalies exists beneath the proposed site.
- f. The latter boreholes shall be utilised for ground water monitoring.
- g. No polluted water or grey water shall be disposed-off to the natural environment.
- h. The contractor shall ensure that no water contamination occur and that strict measures are instituted when such pollution occur.
- i. Polluted water must not come into contact with clean water.
- j. The Environmental Control Officer will be responsible for reporting the storage/use of any other potentially harmful materials to the relevant authority.

9.4 Air Pollution – Dust Prevention

- a. All reasonable measures must be taken to ensure that dust generation is minimised.
- b. Dust suppression by regular water spraying shall be done.
- c. A 20km/hr. speed limit must be enforced to all vehicles entering the site.
- d. Shade cloths properly fastened shall be used to prevent dust escaping the property.
- e. No fires are to be permitted on site except for the burning of firebreaks.

9.5 Noise Pollution

- a. All agricultural vehicles must be in good working conditions.
- b. Noise reducing instruments such as silencers and side flaps must be installed on vehicles and machinery.
- c. Noisy activities such as blasting must occur during the day.

9.6 Hazardous Chemical Storage and/or Handling

- a. Hazardous substances are those that are potentially poisonous, flammable, carcinogenic, or toxic. Some examples are: diesel, petroleum, oil, bitumen, cement, solvent based paints, lubricants, explosives, drilling fluids, pesticides, herbicides, LPG.
- b. Storage of fuel, oils, or hazardous chemicals or substances is prohibited, unless in small daily used up quantities. Such storage is limited to fuels and oils used by heavy machinery or mobile tools which cannot readily move in and out of the site.
- c. Storage of limited hazardous substances must be clearly demarcated, bundled and installed with safety considerations, and installations approved by the Town Engineer or Fire Department.

- d. The bund must at least have a concrete plinth with a containment capacity 110% to the container being bundled.
- e. Spillages from containers shall be reported to ECO who in turn must report using the s30 incident form of the Department of Agriculture and Environmental Affairs, and must immediately notify the said Department.
- f. Ensure that the mixing /decanting of all chemicals and hazardous materials should take place on tray or impermeable surface.
- g. All contaminated soils and materials must be removed and sent to the Hazardous Landfill site NOT Mandeni Landfill site. A Safe Disposal Certificate must be sort from the transporter of such contaminated material and/or the Disposal Facility concerned. Failure to do so is an offence in term of NEMA section 30.

9.7 Materials and Stockpile Management

- a. Stockpiles and materials shall be stored away from water resources, access roads and wind prone areas of the working area.
- b. Excessive exposure of stockpiles to rain or clean water must be avoided by cloth or other screening material, or berms where appropriate.
- c. Stockpiles must not exceed 2 meters in height unless approved by the Engineer.
- d. Soil stockpiles must be kept free of cement, growing plants and chemicals/oils.
- e. Topsoil's must be used within 6 months of being stripped to avoid dust pollution, water contamination and erosion.

9.8 Staff Conduct

- a. All contractors and sub-contractors must ensure that employees are well behaved on site, in compliance with EMP and other applicable laws.
- b. All employees must undergo Environmental Induction Training, which may be part of Safety Induction, but presented by the ECO.

9.9 Soil Erosion

- a. Soil clearing must be undertaken with great care to avoid unnecessary vegetation destruction on site.
- b. The contractor must avoid removal of vegetation groundcover on steep slopes and inclined.
- c. Remediation of exposed areas must be undertaken as soon as those areas are no longer required for use.

9.10 Storm water Control

- a. Contaminated water must be treated prior to disposal to the natural water system.
- b. Clean and dirty water must be separated and not allowed to mix.
- c. Material such as soils, stones, rubble etc. must not obstruct natural waterways.
- d. The site manager and ECO must ensure that water ways are not obstructed in anyway by regular inspections.
- e. Storm water attenuation must be practiced on site.
- f. Measures to ensure a net zero increase in run-off as a result of the Project, must be implemented.

9.11 Vehicular and Traffic Management

- a. All vehicles must be operated in compliance with the Road Traffic Act.
- b. Safety of passengers, pedestrians, and other road users must be a consideration by all road users in the property.
- c. A speed limit of 20km/hour shall be enforced by the Site Manager.
- d. Traffic management shall be done in consideration of physical site constraints, dust pollution, safety of road users and property, and general environmental and EMP provisions.
- e. Overloading of vehicles is prohibited.
- f. Unsafe loading of inappropriate material will not be allowed.

9.12 Social Impacts

The project is likely to have a minimum negative impact on the neighbouring communities.

- a. Any complaints and interactions shall be cordial and understanding.
- b. Concerned and complaints of neighbouring communities must be recorded and discussed at site meetings. EMP related complaints shall be dealt with by the ECO.
- c. Cognisance must be made of social and economic issues raised by the neighbouring and interested and Affected Parties.

9.13 A Complaint's Register

- a. A Complaints Register shall be kept at the site office.
- b. It shall have duplicate numbered pages.
- c. The IAAP's need to be made aware of the register and have access to it.
- d. The Contractor needs to appoint a staff member(s) to act as liaison officer for formal consultation with IAAP's.
- e. The ECO must check Complaint Register every day to ensure that EMP and Environmental specific complaints are addresses immediately.
- f. A set protocol must be implemented to deal with complaints and communication with stakeholders.
- g. Complaints must be resolved and records of complainant, issues and resolution filed.

9.14 Fire Control and Welding

- a. Fire Management Plan must be produced when required and be approved/ accepted by the Municipality's Fire Department.
- b. Burning of fire belts is the only allowed activity by an appointed person using appropriate methods, at appropriate time of the year, and with adequate equipment to prevent development of wild fires.
- c. Welding shall be done in compliance with OHS Regulations and applicable procedures as may be determined by the Fire Department.

10. OPERATIONAL PHASE

An operational EMPr must be used subsequent to the detailed Hunters Rest Farm's design and prior to the operation of the proposed cultivation of virgin land. This operational EMPr must be approved by the Competent Authority prior to the commencement of operations.

10.1 Access to the Site

- a. All access to the property must be properly controlled 24 hours a day.
- b. No unauthorised access must be granted to vehicles or persons.
- c. Heavy duty vehicles must be directed to loading/offloading bays.
- d. Vehicles hauling waste, chemicals and other hazardous substances must be strictly controlled and only if prior arrangements have been made.

10.2 Visual Impacts

- a. Maintenance of screening vegetation must be a priority such that these perform purpose intended.
- b. All physical structures must, at least mirror colours of the natural environment as far as possible, and be maintained as such.
- c. Lights must shine away from the road, residential areas to avoid light pollution from the site.
- d. Reflective materials must be avoided whenever possible.

10.3 Waste Management

- a. Waste generated on the site shall be handled appropriately using appropriate receptacles, bin liners, and skips.
- b. Regular trips to the Bergville Disposal Site must be made for general waste.
- c. All hazardous waste must be sent to a Hazardous Disposal Site. Hazardous wastes include but not limited to fluorescent tubes, oil contaminated material, etc.
- d. Records of waste generated must be kept and be produced on request.
- e. Recycling of waste must be encouraged on site.
- f. Littering is prohibited on-site and off-site.
- g. Burning and burying of waste is prohibited.
- h. No servicing of vehicles is permitted on site.

10.4 Water Quality Management

- a. The proximity of, and the distances to all surface water bodies in the vicinity of the site shall be established.
- b. A borehole and spring census shall be carried out within a one kilometre radius of the site.
- c. The yield of each borehole, their logs and water quality must be supplied.
- d. The geohydrology of the proposed site must be assessed by surface mapping, accessing existing information and Geohydrological maps of the area, together with appropriate subsurface investigative measures.

- e. Where appropriate geophysics must be carried out across the site to assist in the identification of faults or to establish if any other geological anomalies exists beneath the proposed site.
- f. The latter boreholes shall be utilised for ground water monitoring.
- g. No polluted water or grey water shall be disposed-off to the natural environment.
- h. The contractor shall ensure that no water contamination occur and that strict measures are instituted when such pollution occur.
- i. Polluted water must not come into contact with clean water.
- j. The Environmental Control Officer will be responsible for reporting the storage/use of any other potentially harmful materials to the relevant authority.

10.5 Air Pollution – Dust Prevention

- a. All reasonable measures must be taken to ensure that dust generation is minimised.
- b. Dust suppression by regular water spraying shall be done.
- c. A 20km/hr. speed limit must be enforced to all vehicles entering the site.
- d. No fires are to be permitted on site except for the burning of firebreaks.

10.6 Noise Pollution

- a. No noise pollution is allowed during the operation of the development.
- b. All noises generated must be limited to the site only.
- c. Care must be taken not to disturb neighbours either at daylight or at night.

10.7 Hazardous Chemical Storage and/or Handling

- a. Storage of fuel, oils, or hazardous chemicals or substances is prohibited, unless in small daily used up quantities. Such storage is limited to fuels and oils used by heavy machinery or mobile tools which cannot readily move in and out of the site.
- b. Storage of limited hazardous substances must be clearly demarcated, bundled and installed with safety considerations, and installations approved by the Town Engineer or Fire Department.
- c. The bund must at least have a concrete plinth with a containment capacity 110% to the container being bundled.
- d. Spillages from containers shall be reported to the Centre Management who in turn must report using the s30 incident form of the Department of Agriculture and Environmental Affairs, and must immediately notify the said Department.
- e. Ensure that the mixing /decanting of all chemicals and hazardous materials should take place on tray or impermeable surface.
- f. All contaminated soils and materials must be removed and sent to the Hazardous Landfill site NOT Bergville Landfill site. A Safe Disposal Certificate must be sort from the transporter of such contaminated material and/or the Disposal Facility concerned. Failure to do so is an offence in term of NEMA section 30.

10.8 Staff Conduct

- a. All contractors and sub-contractors must ensure that employees are well behaved on site, in compliance with EMP and other applicable laws.

- b. All employees must undergo Environmental Induction Training, which may be part of Safety Induction.

10.9 Soil Erosion

- a. The Centre Management shall ensure that erosion causing activities are controlled in such a manner that prevents erosion setting off on site.
- b. Grounds shall be maintained such that no soil loss occurs, thereby causing erosion of this natural resource.

10.10 Storm water Control

- a. Contaminated water must be treated prior to disposal to the natural water system.
- b. Clean and dirty water must be separated and not allowed to mix.
- c. Material such as soils, stones, rubble etc. must not obstruct natural waterways.
- d. The Centre Manager must ensure that drains and water ways are not obstructed in anyway by regular inspections.
- e. Storm water attenuation must be practiced on site.
- f. Measures to ensure a net zero increase in run-off as a result of the Project on completions, must be implemented.

10.11 Vegetation

- a. Introduction of alien vegetation and animals is prohibited. Only indigenous plants and vegetation shall be used on the gardens.
- b. Screening trees along the roads and on the property boundaries shall be maintained for screening function.
- c. Only indigenous trees shall be used and these must mirror the natural vegetation of the surrounding environment.

10.12 Vehicular and Traffic Management

- a. All vehicles must be operated in compliance with the Road Traffic Act.
- b. Safety of passengers, pedestrians, and other road users must be a consideration by all road users in the property.
- c. A speed limit on internal (i.e. Centre) shall be enforced by the Centre Manager.
- d. Unsafe loading of inappropriate material will not be allowed.
- e. Traffic exiting or entering the site to and from P30 Road will be assisted to do so safely. This may require management of traffic and signalling inside the site.

10.13 Social Impacts

The project is likely to have a minimum negative impact on the neighbouring communities.

- a. Any complaints and interactions shall be cordial and understanding.
- b. Concerned and complaints of neighbouring communities must be recorded and discussed at Management meetings. EMP related complaints shall be dealt with by the Centre Management and communicated to the Department of Economic Development, Tourism and Environmental Affairs.

- c. Cognisance must be made of social and economic issues raised by the neighbouring and interested and Affected Parties.

10.14 A Complaint's Register

- a. A Complaints Register shall be kept at the Centre Manager's Office.
- b. It shall have duplicate numbered pages.
- c. The IAAP's need to be made aware of the register and have access to it.
- d. A set protocol must be implemented to deal with complaints and communication with stakeholders.
- e. Complaints must be resolved and records of complainant, issues and resolution filed.

11. OPERATIONAL REQUIREMENTS AND OPERATIONAL GOALS

The Environmental Impact Assessment identified various issues and concerns that were addressed through the process. Many of the issues need to be mitigated by management procedures and therefore goals need to be set to ensure implementation of these measures. Management activities are described to achieve the objectives together with monitoring and target criteria.

11.1 Components of Operational Management

The overall goal for the farming development is to undertake land clearing, soil preparation and plantation of rye grass in a way that:

- a. Ensures that activities are properly managed in respect of environmental aspects and impacts.
- b. Minimises the impacts on vegetation and faunal habitats.
- c. Reduce risk of soil erosion.

11.2 Objectives:

- a. Protection of fauna and flora.
- b. Protection of water resources.
- c. Reduce risk of soil erosion.
- d. Storm water management and drainage

11.3 Actions:

- a. The development must be restricted to the proposed footprint area. Spraying of herbicides, pesticides and application of fertilizers should be conducted according to standard procedures, but avoid spraying adjacent natural vegetation.
- b. Effective irrigation scheduling should be practised to enhance the drainage.
- c. An adequate cover crop must be used until soil of newly cultivated areas has stabilized or mulch applied to help stabilize the soil.

- d. Water runoff from higher lying areas must be taken with a storm water furrow, of adequate size, above the development areas towards a safe collection point where no erosion will take place.

12. COMPLIANCE AND MONITORING

- a. The monitoring of works on site is necessary to demonstrate compliance with the specifications of the EMP and to allow for problems or issues of non-conformance to be identified and appropriate
- b. Monitoring should include visual checks by the Site Manager on a daily basis, checks on particular requirements for site activities by the ECO, as well as a review of site documentation.
- c. The ECO shall complete the performance record at the end of each table above, as a record of transgressions or problems experienced on site, and how they were dealt with.
- d. Monitoring of activities on site by the ECO should be done on a weekly basis.

13. TRANSGRESSION AND PENALTIES

Transgressions relate to actions by the owner and operating team members whereby damage or harm is inflicted upon the environment or any feature thereof and where any of the conditions or specifications of the EMP are infringed upon.

In the instance of environmental damage, the damage where possible, is to be repaired and rehabilitated using appropriate measures, as specified and undertaken by appropriate specialists, for the account of the contractor or other guilty party.

Transgressions are most likely to occur with respect to litter on site, damage or the disturbance of sensitive areas, for example the indigenous vegetation, and erosion.

Issues of non-compliance noted by the ECO are to be communicated to the site operator, who holds the responsibility of ensuring that the relevant parties are made aware of the lack of compliance with EMP specifications, and that appropriate action is taken to rectify the situation. The ECO will advise on appropriate corrective actions when necessary. The Municipality is ultimately responsible for compliance of the EMP.

14. SITE RECORD

Minutes of meetings on site must reflect environmental queries, complaints, actions agreed upon, dates of eventual compliance and must form part of the official environmental site record. In additions to the summary report, the ECO shall keep a monthly photographic record of issues on site and an ad hoc record of incidents or events on site, especially in the case of transgressions from EMP specifications.

Such photographs are to be taken with an in- camera dating facility.

15. EMP VIOLATIONS

EMP violations are a violation of the Environmental Authorisation issued for the project, and are therefore a violation of NEMA provisions.

15.1 Contractor and/or Developer

The Contractor is deemed not to have complied with this generic EMP if:

- within the boundaries of the Project Area, during the Development Phase, adjacent areas and haul/ access roads there is evidence of contravention of EMP clauses, Environmental Authorisation conditions, or any legally issued directive or instruction;
- environmental damage ensues due to negligence;
- he fails to comply with corrective or other instructions issued by the Relevant Authority, Site Manager or Environmental Control Officer within a specified time,
- Failure to take any reasonable measure to protect the environment if there is a perceived or identified environmental risk associated with an activity that has not been defined in the EMP.
- Pollution of land surfaces and air pollution results from operation of the project and related activities.
- The Contractor fails to respond adequately to valid complaints from the public.

16. REPORTING ON EMP

16.1 Reporting Regime

The following reporting regime will be implemented.

	What	Details, Who, Outcomes	Frequency/ When
1	ECO appointment	The Developer/Contractor appoints ECO and informs DAEARD in writing of the name and contact details.	At least 30 days prior to construction activities
2	Safety File	ECO and Developer ensure EMP included in the Contractors' Safety File.	At least 10 days prior to construction
3	Baseline Audit	ECO conducts a baseline audit of all environmental assets, conditions, and landscapes. A Report is generated.	10 days prior to construction
4	Inform Authorities of Intention to Commence with Construction	The developer shall inform DAEARD in writing on date of starting of construction activities.	At least 5 days prior.
5	Complaints Register	ECO and Contractor develops Complaints Register for the site	At least 5 days prior to Commencement of Construction
6	Induction	ECO conducts Environmental Awareness and Induction of Management, employees, etc. An	On first day of construction

		attendance register is generated.	commencement
7	Monthly Audits	ECO conducts monthly audits for the first 3 months of commencement of construction. Monthly Audit Reports are produced	Every Month-end. Reports to Authorities in 14 days.
8	Quarterly Audits	ECO conducts quarterly audits every 3 months for the duration of the construction. Quarterly Audit Reports are produced	Every Quarter-end. Reports to Authorities in 21 days.
9	Annual Audit	ECO conducts annual audits every 12 months for the duration of the construction. Annual Audit Reports are produced.	Every 12 month-end. Reports to Authorities in 6 weeks.

16.2 Contents of the Audit Report

The audit report shall typically contain this information:

- Date of the audit;
- Aspects covered;
- Stage of the construction project;
- List of activities undertaken during the reporting period;
- Environmental impacts identified;
- Mitigation measures implemented;
- Corrective actions;
- Violations of the EMP;
- Level of compliance with Environmental Legislation and EMP;
- Suggestions on the EMP amendments;
- Incidents i.t.o. section 30 of NEMA and other incidents;
- Complaint register entries and resolution of complaints;
- Any other matter of interest to the authorities.

16.3 Environmental Audits

- a. A suitably qualified Environmental Auditor is to be appointed, at the expense of the Developer, to undertake audits of compliance with the EMP. This should happen every 6 months.
- b. Objectives should be to audit compliances with the key components of the EMP, to identify main areas requiring attention and recommend priority actions. The audit should cover across section of issues, including implementation of environmental controls, environmental management and environmental monitoring.
- c. Results of the audits should inform changes required to the specifications of the EMP or additional specifications to deal with any environmental issues which arise on site and have not been dealt with in the current document.

17. AMENDMENTS TO THE EMP

Any major issues not covered in the EMP as submitted shall be addressed as an addendum to the EMP, submitted for approval by the Department of Economic Development, Tourism and Environmental Affairs, prior to implementation.

18. CLOSURE

Decommissioning and/or closure of the farming development is not anticipated. However, should this be required for any reason, the Department of Water Affairs must be consulted for guidance. The following conditions are generally required by the Department of Water Affairs.