

**DRAFT ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr) FOR THE PROPOSED CONSTRUCTION OF PCI PROPERTIES GROUP SA TRUST (SPRINGFIELD WAREHOUSE) ON PORTION 16 (OF 9) OF ERF 301 AT SPRINGFIELD, DURBAN, WITHIN ETHEKWINI MUNICIPALITY, KWAZULU – NATAL**

**ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr)**

Report prepared for

**PICRONAMIX INVESTMENTS CC**

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**A. ENVIRONMENTAL ASSESSMENT PRACTITIONER (EAP) WHO PREPARED THE ENVIRONMENTAL MANAGEMENT PROGRAMME (EMPr):**

**1. (1) An EMPr must comply with section 24N of the Act and include -**

**(a) Details of -**

**(i) the EAP who prepared the report:**

Business name of EAP:	<b>Mondli Consulting Services</b>		
Physical address:	<b>6 Joseph Avenue, New Era House, Suite 9, Durban North</b>		
Postal address:	<b>P O Box 22536, Glenashley</b>		
Postal code:	<b>4022</b>	Cell:	<b>0824187708</b>
Telephone:	<b>0826799841</b>	Fax:	<b>(031) 5725647</b>
E-mail:	<b>mondlib@webmail.co.za</b>		

**(ii) The expertise of the EAP (including curriculum vitae)**

Name of representative of the EAP	Education qualifications	Professional affiliations	Experience at environmental assessments (years)
<b>B.M. Mthembu</b>	<b>Diploma in Nature Conservation</b> <b>Masters Degree (Environmental Management Dissertation)</b> <b>Bachelor of Laws (LLB)</b>	<b>Society of South African Geographers (Membership No. 28/09), has already submitted his application to the newly created EAPASA body for accreditation (ref. 2018/168) in terms of</b>	<b>Has been involved in environmental and conservation field for over 20 yrs.</b> <b>Conducted EIAs for over 15 years including Strategic Environmental Assessment.</b> <b>Has been</b>

		<b>section 24H of NEMA.</b>	<b>involved in the review and commenting on development projects impacting on the environment.</b>
<b>SI Thwala</b>	National Diploma in Analytical Chemistry & Bachelor of Science degree majoring in Geography and Computer Science. He has done many courses in environmental management.	<b>None.</b>	<b>One-year experience in environmental monitoring, and inspection of environmental projects. Assisting in environmental assessment. Training in environmental management.</b>

**(B) A DETAILED DESCRIPTION OF THE ASPECTS OF THE ACTIVITY THAT ARE COVERED BY THE EMPr AS IDENTIFIED BY THE PROJECT DESCRIPTION;**

The environmental management programme covers mainly aspects that directly relates to the construction of Springfield Warehouse on portion 16 (of 9) of erf 301 at Springfield, Durban.

The proposed Facility will encompass the general warehousing, steel manufacturing (roof), pre-packed cement and logistics yard. The manufacturing of steel will entail the cutting of steel into required shape and thickness using what they call roll forming machine. All this is done at room temperature. The goods that will be stored are 2600 ton finished pre-packed cement on pallets, shrink wrapped. 800-ton steel coils and roofing sheets. The product will be kept on site prior to despatching. The sizes are as follows: general warehousing area that will store pre-packed cement on pallets, shrink wrapped (5 000m<sup>2</sup>), steel manufacturing area (5000m<sup>2</sup>), tiling area (2 000m<sup>2</sup>), doors and general hardware material (2 000m<sup>2</sup>) and the balance area will be logistics yard. The whole site is 20 000m<sup>2</sup> in extent.

There will be no storage and handling of dangerous goods on site. Furthermore, there will be no processing that need energy and steam,

The EMPr covers activity aspects like environmental awareness, soil erosion and contamination, air / dust pollution, stockpiling, location of the construction camp, alien

vegetation, heritage, stormwater management, solid waste management, health and safety, traffic, chemicals and spillages, noise and visual impact. These aspects are described and covered in detail throughout the EMPr.

**(C) A MAP AT AN APPROPRIATE SCALE WHICH SUPERIMPOSES THE PROPOSED ACTIVITY, ITS ASSOCIATED STRUCTURES, AND INFRASTRUCTRE ON THE ENVIRONMENTAL SENSITIVITIES OF THE PREFERED SITE, INDICATING ANY AREAS THAT SHOULD BE AVOIDED, INCLUDING BUFFERES;**

See Figure 1 of the attached Background Information Document (BID).

There are no environmental sensitivities on this site, since it is already in use, and highly disturbed.

**(D) A DESCRIPTION OF THE IMPACT MANAGEMENT OUTCOMES, INCLCUDING MANAGEMENT STATEMENTS, IDENTIFYING THE IMPACTS AND RISKS THAT NEED TO BE AVOIDED, MANAGED AND MITIGATED AS IDENTIFIED THROUGH THE ENVIRONMENTAL IMPACT ASSESSMSNET PROCESS FOR ALL PHASES OF THE DEVELOPMENT INCLUDING -**

The main aim and objective of the monitoring exercise is to ensure the appraisal of environmental performance in line with the Environmental Management Programme (EMPr), EIA Regulations of 2014 as amended and National Environmental Management Act (NEMA) No. 107 of 1998 as amended. The Department of Economic Development, Tourism and Environmental Affairs is responsible for ensuring compliance to NEMA in the Province of KwaZulu - Natal. EMPr is also meant to provide objective feedback to Picronamix Investments CC during project construction and beyond, by making appropriate recommendations for remedial interventions where appropriate.

The monitoring deals with conformance and non-conformance measured against the EMPr. Any non-compliance observed during the construction period will be followed by an immediate remedial intervention. The environmental audit and monitoring will primarily focus on evaluating the measure of compliance with statutory requirements within the project site.

The identified impacts and risks will be managed and mitigated throughout the following phases of development:

***(i) planning and design;***

*Impact*

Congestion and overcrowding by project technicians.

***(ii) Pre-construction activities;***

**Environmental awareness and partnerships**

*Impact*

Ignorance of the EMPr prescripts resulting in environmental degradation.

*Impact*

Ignorance about environmental issues resulting in degradation of the receiving environment.

**(iii) construction activities;****(a) The storage facility***Impact*

Environmental pollution that may result in soil contamination and environmental pollution in case of leakages and spills.

**(b) Solid waste and littering***Impact*

The possible pollution of the environment.

**(c) Concrete mixing***Impact*

Soil contamination.

**(c) Chemical materials***Impact*

Environmental pollution relating to soil and water.

**(e) Management of water, sediments and stormwater***Impact*

Soil erosion and pollution of Umhlangane and Umngeni Rivers.

**(f) Air pollution***Impact*

Air pollution, mainly in the form of dust.

**(g) Noise control**

*Impact*

Noise pollution to employees, neighbouring properties and passersby.

**(h) Earthworks and Soil**

*Impact*

Soil erosion.

**(i) Vegetation / Groundcover**

*Impact*

Soil erosion and opportunistic invader plant species growing after earthworks.

**(j) Health and safety**

*Impact*

Unhealthy and unsafe environment.

**(k) Construction camp**

*Impact*

The unsuitable location can result in environmental degradation.

**(l) Traffic Management**

*Impact*

Traffic congestion, safety and increase in the vicinity of the project site during construction.

**(m) Heritage impact**

*Impact*

Impact on heritage resources.

**(n) Visual impact**

*Impact*

Nuisance to the neighbouring properties and the public.



***(iv) rehabilitation of the environment after construction and where applicable post closure; and***

**(a) Clearing construction site**

*Impact*

Environmental and site pollution.

**(b) Signing off**

*Impact*

Environmental pollution and degradation left on site after construction.

**(c) Landscaping**

*Impact*

Soil erosion.

*Impact*

Possibility of soil contamination.

***(v) where relevant, operation activities;***

See operational phase under (O) below.

**(F) A DESCRIPTION OF PROPOSED IMPACT MANAGEMENT ACTIONS, IDENTIFYING THE MANNER IN WHICH THE IMPACT MANAGEMENT OUTCOMES CONTEMPLATED IN PARAGRAPH (D) WILL BE ACHIEVED, AND MUST, WHERE APPLICABLE, INCLUDE ACTIONS TO -**

(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;

***(i) planning and design;***

*How impact management outcomes will be achieved*

This will be done by educating the stakeholders about the environment, and the crash course for the contractor and their sub-contractors. The project must ensure sustainable development in balancing social, economic and environmental aspects.

The project planners are expected to be considerate and ensure that their activities are not detrimental to both social and physical environment. The environmentalist is involved in planning and design stages to ensure all designs reflect environmental principles.

The technicians working on site must be sensitized about possible environmental impacts, in order to be considerate at all times when working on site.

***(ii) Pre-construction activities;***

**Environmental awareness and partnerships**

*How Impact management outcomes will be achieved*

The EMPr contents will further be discussed with all stakeholders in terms of the project to ensure they are understood, and are adhered to. Compliance will be emphasized to the developer, and the Compliance section of EDTEA is also expected to do inspections, as they deem appropriate and necessary.

*How Impact management outcomes will be achieved*

- The EMPr will be signed by the main contractor, and popularized to stakeholders.
- The EMPr document must be available on site at all times to ensure effective monitoring by organs of state with jurisdiction on site.

*Impact*

Ignorance about environmental issues resulting in degradation of the receiving environment.

*How Impact management outcomes will be achieved*

- The main contractor and relevant stakeholders will have to be familiar with the contents of the Environmental Management Programme (EMPr) to be able to comply with the aforementioned document during all project phases.
- All stakeholders including employees of the contractors on site need to be familiar with the contents of the EMPr and the construction protocol.
- The building contractor and all personnel that will be involved in the construction phase of this project will be taken through a crash course on environmental awareness and EMPr.

***(iii) construction activities;***

**(a) The storage facility**

*Impact*

Environmental pollution likely to result in soil contamination and environmental pollution in case of leakages and spills.

*How Impact management outcomes will be achieved*

- This will be mitigated by constructing a storage facility that is roofed and properly paved to store all the contractor's tools and materials during construction phase.

- The storage facility must also prevent direct sun which may cause certain materials to explode, and rain from flushing materials that may later contaminate the soil and nearby rivers.
- By ensuring that the liquid materials are tightly closed and sealed to prevent spillage in case of accidental falling.

### **(b) Solid waste and littering**

#### *Impact*

The possible pollution of the environment and surface water due to litter and solid waste.

#### *How Impact management outcomes will be achieved*

- Solid waste must be disposed of at the nearest disposal site.
- Solid waste must be disposed of in an environmentally acceptable manner during construction to minimize pollution of the environment.
- Solid waste generated from this development must be disposed of in an appropriate manner.
- Rubbish drums and refuse plastic bags will have to be made available for litter during the day, to be cleared and disposed of at the municipal landfill site at appropriate intervals as advised by the Environmental Control Officer.
- All construction spoil must be disposed of at the appropriate municipal landfill site.
- Any hazardous material must be disposed of at a landfill classified as such.
- No burning of refuse must take place on site.
- Recycling will be encouraged by the project.

### **(c) Concrete mixing**

#### *Impact*

Soil contamination.

#### *How Impact management outcomes will be achieved*

- All concrete mixing that is “not ready mixed” must be carried out on wooden boards in a lined bunded area so that cement slurry does not escape out of the area.
- At the end of each day's construction operations cement spoil and rubble must be collected and placed in appropriate containers for later disposal.

### **(d) Chemical materials**

#### *Impact*

Environmental pollution including soil and surface water.

#### *How Impact management outcomes will be achieved*

- Chemical materials like paint, turpentine, solvents, cement and the like must be stored appropriately in line with the provisions of Hazardous Substances Act (Act 15 of 1973).
- Access to these areas must be controlled, and temporary bunds must be constructed around chemical or diesel storage areas to contain possible spillages.
- Any spill must be reported to the relevant authorities as soon as possible i.e. eThekweni Municipality, Department of Water and Sanitation and the Department of Economic Development, Tourism and Environmental Affairs.
- Oil leaks from heavy machinery and vehicles must not be allowed to contaminate soil and the environment. This must be done by properly servicing the machinery to prevent unnecessary oil leaks, as well as preventing any servicing of vehicles and machinery on site.
- In case of oil leak that contaminate the soil, such soil must be removed and disposed of appropriately as advised by the Environmental Control Officer (ECO).

### **(e) Management of water, sediments and stormwater**

#### *Impact*

Soil erosion.

#### *How impact management outcomes will be achieved*

- Stormwater must be in line with the design and adhere to the stipulations of the eThekweni Municipality.
- Implementation of the Stormwater Water Management Plan (SWMP) and designs must be according to the Engineer and Municipal specifications.
- Any soil stockpiles created are to be maintained as flat as possible, avoiding side slopes.
- After construction, the site must be graded or paved to ensure free flow of runoff and to prevent ponding of water.
- The establishment of grass and plants on site would cause the majority of run off water to be collected by the vegetation and percolate into the soil.
- Stormwater harvesting must be encouraged for all roofed areas as the harvested rainwater could be used for other things and landscaped areas.
- In the case of a severe storm construction should be temporary stopped to avoid spills and potential contamination of the rivers.

#### *Impact*

#### *How impact management outcomes will be achieved*

Pollution on water resources.

- Any spill of hazardous material during construction will need to be contained as soon as possible in line with the standards set by the Department of Water and Sanitation and eThekweni Municipality.

### **(f) Air pollution**

#### *Impact*

Air and dust pollution.

*How impact management outcomes will be achieved*

- It is important that the requirements of the atmospheric Pollution Prevention Act (APA) (Act No. 45 of 1965) and National Environmental Management: Air Quality Act, 2004 (Act No. 39 of 2004) be adhered to.
- Dust from construction work must be minimized by regularly spraying the site with water during construction.

### **(g) Noise control**

*Impact*

Noise pollution to the employees and neighbouring properties and passersby.

*How impact management outcomes will be achieved*

- Noise Control Regulations (Regulations 154, 10 January 1992) of the Environmental Conservation Act (Act No. 73 Of 1989) must be adhered to.
- Construction operations must be restricted to daylight period, Monday to Saturday, and must adhere to legally stipulated hours (7.00 – 18.00).
- The use of equipment that is less noisy must be encouraged.
- Workers using noisy equipment must be informed about the need to minimize noise and its impact on the general surrounding environment.
- The neighbouring properties must be informed about noise possibilities.
- Noise levels, including vibrations caused by any ground drilling must be kept to a minimum.

### **(h) Earthworks and Soil**

*Impact*

Soil erosion.

*How impact management outcomes will be achieved*

- Soil generated during digging of trenches must be backfilled immediately or at least within 48 hours.
- All soil left in heaps after construction must be removed.
- Any excessive soil that was unable to be used or backfilled will have to be taken to the municipal landfill site or disposed of in an environmentally acceptable manner as per the advice of an Environmental Control Officer.

### **(i) Vegetation / Groundcover**

*Impact*

Soil erosion.

*How impact management outcomes will be achieved*

- Proper landscaping will be appropriate after construction to maintain ground cover on site.
- Should any area be left bare during construction, it will have to be planted with suitable ground cover to prevent possible soil erosion.
- It is critical to keep and maintain the grass cover after all earthworks operations.
- Opportunistic invader alien plants must be eradicated on site.

### **(j) Health and safety**

*Impact*

Unhealthy and unsafe environment.

*How impact management outcomes will be achieved*

- All requirements of the Occupational Health and Safety Act (Act No. 85 of 1993) must be complied with.
- Compliance with all South African National Standards (SANS).
- Mobile toilets on site must be regularly monitored on daily basis; and sewerage sludge must be disposed of at a nearest registered Waste Water Treatment Works.
- Fire extinguishers must be kept at appropriate points, not only during construction phase, but even during operational phase for immediate action in case of fire.
- Assurance must be made that the staff on site are familiar with fire procedures, and the use of fire equipment.
- The site will have to be kept clean and free of litter by continuously disposing waste at the municipal landfill site.

### **(k) Construction camp**

*Impact*

The unsuitable location is likely to result in environmental degradation and surface water pollution.

*How impact management outcomes will be achieved*

- In this instance, it is unlikely that any workers will stay on site.
- As mentioned above adequate provision for sanitation must be made in the form of mobile toilets, to cater for human excrement for the workers during the day.

### **(l) Traffic Management**

*Impact*

Congestion, safety and traffic flow.

*How impact management outcomes will be achieved*

- Vehicles must adhere to the speed limit of 40 kms per hour during construction.
- Construction vehicles must be properly marked with “construction vehicle” signs, and drivers must be given clear work instructions.
- Vehicles must not block entrances to neighbouring properties.

**(m) Heritage impact**

*Impact*

Impact on heritage resources that may be identified during earthworks.

*How impact management outcomes will be achieved*

- Amafa must be contacted if any heritage objects, fossils are identified during earthmoving activities, and all development must cease until further notice.
- Amafa should be contacted if any heritage objects are identified during construction and the following procedure is to be followed:
  - Stop construction
  - Report finding to local police station
  - Report to Amafa to investigate
- Sources of all-natural materials (including topsoil, sands, natural gravels, crushed stone, asphalt etc) must be obtained in a sustainable manner and in compliance with the heritage legislation.

**(n) Visual impact**

*Impact*

Nuisance to the area.

*How impact management outcomes will be achieved*

- Stick to principles of sustainable development that avoids community emotional environmental outcry.
- The development footprint must be fenced and shielded during the construction phase.
- The project must avoid nuisance to the neighbouring properties and the public.

***(iv) rehabilitation of the environment after construction and where applicable post closure; and***

**(a) Clearing construction site**

*Impact*

Environmental and site pollution.

*How impact management outcomes will be achieved*

- By proper housekeeping.
- Once the construction phase is completed all material on site associated with construction must be removed from the property, and everything referred to, as waste must be disposed of at the municipal landfill site.
- No on site burning or burial of waste material must be done on site.

**(b) Signing off**

*Impact*

Environmental pollution and degradation left after construction.

*How impact management outcomes will be achieved*

- EMPr has to be signed off by the contractor on site.

**(c) Landscaping**

*Impact*

Soil erosion.

*How impact management outcomes will be achieved*

- Landscaped area, planted with grass and ground cover.
- Eradication of opportunistic invader evasive species on site.
- All bare areas must be planted with grass cover to minimize soil erosion.

**(d) Closure**

*Impact*

See decommissioning phase (P) below.

*How impact management outcomes will be achieved*

- Not Applicable.

**(v) where relevant, operation activities;**

See operational phase (O) below.

.....where applicable include actions to:

*(ii) comply with any prescribed environmental management standards or practices;*



As highlighted throughout the report.

*(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and*

In an unlikely event of closure, the activity must be reported to the Department of Economic Development, Tourism and Environmental Affairs and eThekweni Municipality. Such closure needs monitoring by an environmentalist as outlined under (P) below.

*(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation; where applicable;*

Issues of rehabilitation on site will be done by Picronamic Investments.

### **(G) THE METHOD OF MONITORING THE IMPLEMENTATION OF THE IMPACT MANAGEMENT ACTIONS CONTEMPLATED IN PARAGRAPH (F);**

#### ***(i) planning and design;***

*Method of monitoring the implementation of impact management*

Compilation of monthly reports.

#### ***(ii) Pre-construction activities;***

#### **Environmental awareness and partnerships**

*Method of monitoring the implementation of impact management*

Monthly reporting to the project committee.

*Impact*

Ignorance about environmental issues resulting in degradation of the receiving environment.

*Method of monitoring the implementation of impact management*

- Monitoring environmental performance against the Environmental Management Programme (EMPr) posted on the notice board inside the construction office.

#### ***(iii) construction activities;***

#### **(a) The storage facility**

*Impact*

Environmental pollution likely to result in soil contamination and environmental pollution in case of leakages and spills.

*Method of monitoring the implementation of impact management*

- Monthly reporting and site photographs.

**(b) Solid waste and littering**

*Impact*

The possible pollution of the environment due to litter and waste.

*Method of monitoring the implementation of impact management*

- Monthly reporting and proof of disposal receipts from the landfill site.

**(c) Concrete mixing**

*Impact*

Soil contamination.

*Method of monitoring the implementation of impact management*

- Monthly reporting and inspections.

**(d) Chemical materials**

*Impact*

Environmental pollution including soil and water.

*Method of monitoring the implementation of impact management*

- Monthly reporting and Safety Officer reports.

**(e) Management of water, sediments and stormwater**

*Impact*

Soil erosion and water pollution.

*Method of monitoring the implementation of impact management*

- Monthly reporting.

**(f) Air pollution**

*Impact*

Air and dust pollution.

*Method of monitoring the implementation of impact management*

- Site inspection and monthly reporting.

**(g) Noise control**

*Impact*

Noise pollution to the area, neighbouring properties and passing local people.

*Method of monitoring the implementation of impact management*

- Monthly reporting and information from the local leaders and community.

**(h) Earthworks and Soil**

*Impact*

Soil erosion and sedimentation.

*Method of monitoring the implementation of impact management*

- Site inspection and monthly reporting.

**(i) Vegetation / Groundcover**

*Impact*

Soil erosion.

*Method of monitoring the implementation of impact management*

- Site inspection and photographs.

**(j) Health and safety**

*Impact*

Unhealthy and unsafe environment.

*Method of monitoring the implementation of impact management*

- Monthly reporting, inspection and safety officer reports.

**(k) Construction camp**

*Impact*

The unsuitable location of the construction camp result in environmental degradation, however, in this regard it will not be applicable as workers will stay in their homes.

*Method of monitoring the implementation of impact management*

- Site inspection where relevant.

**(l) Traffic Management**

*Impact*

Congestion and irregular traffic flow.

*Method of monitoring the implementation of impact management*

- Site inspection and monthly reporting

**(m) Heritage impact**

*Impact*

Impact on heritage resources that may be identified during earthworks.

*Method of monitoring the implementation of impact management*

- Site inspection, monthly reporting done in line with the recommendations of Amafa AkwaZulu-Natali.

**(n) Visual impact**

*Impact*

Nuisance to the neighbouring properties and the public.

*Method of monitoring the implementation of impact management*

- Site inspection and monthly reporting.

***(iv) rehabilitation of the environment after construction and where applicable post closure; and***

**(a) Clearing construction site**

*Impact*

Environmental and site pollution.

*Method of monitoring the implementation of impact management*

- Site inspection and monthly reporting.

**(b) Signing off***Impact*

Environmental pollution and degradation left behind after construction.

*Method of monitoring the implementation of impact management*

- Site inspection and reporting.

**(c) Landscaping***Impact*

Soil erosion.

*Method of monitoring the implementation of impact management*

- Site inspection and photographs.

*Impact*

Possibility of soil contamination.

*Method of monitoring the implementation of impact management*

- Site inspection, photographs and reporting.

**(v) where relevant, operation activities;**

See (O) below.

**Where applicable include actions to:**

*(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;*

*(ii) comply with any prescribed environmental management standards or practices;*

- As above.

*(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and*

- Reporting to the Department of Economic Development, Tourism and Environmental Affairs.

*(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation; where applicable;*

Removal of any alien plants in line with legal requirements. The applicant and the asset owner has an obligation to eradicate alien invader species that may infest the area after the earthworks on site. The Department of Economic Development, Tourism and Environmental Affairs is empowered to request this eradication programme as provided in the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004), as well as the Alien and Invasive Species Regulations dated 2014.

**(H) THE FREQUENCY OF MONITORING THE IMPLEMENTATION OF THE IMPACT MANAGEMENT ACTIONS CONTEMPLATED IN PARAGRAPH (F);**

The method of monitoring the implementation of the impact management actions contemplated under (F) above. The monitoring for all the impacts will be done on monthly basis through monthly reporting, and project meetings.

**(I) AN INDICATION OF PERSONS WHO WILL BE RESPONSIBLE FOR THE IMPLEMENTATION OF THE IMPACT MANAGEMENT ACTIONS;**

**Responsible persons:**

- ◆ Mondli Consulting Services (Environmental Control Officer) – overall responsibility of environmental reporting, training and awareness and the overseer of the implementation of the whole EMPr.
- ◆ Contractor / Site Engineer or Builder – responsible for all engineering or building related work on site, and project implementation.
- ◆ Picronamix Investments – ensure adherence to the EMPr.
- ◆ EDTEA (Compliance Section) – inspections.

**(J) THE TIME PERIODS WITH WHICH THE IMPACT MANAGEMENT ACTIONS CONTEMPLATED IN PARAGRAPH (F) MUST BE IMPLEMENTED;**

***(i) planning and design;***

*Time periods of implementation*

Planning and commencement phase of the project.

***(ii) Pre-construction activities;***

**Environmental awareness and partnerships**

*Time periods of implementation*

Immediately after the clearance of any issues that may have been raised by organs of state with jurisdiction on site during the circulation of EMPr.

*Impact*

Ignorance about environmental issues resulting in degradation of the receiving environment.

*Time periods of implementation*

- Immediately after the after the clearance of any issues that may have been raised by organs of state with jurisdiction on site during EMPr circulation.

**(iii) construction activities;**

**(a) The storage facility**

*Impact*

Environmental pollution that is likely to result in soil contamination and environmental pollution in case of leakages and spills.

*Time periods of implementation*

- For the duration of construction period.

**(b) Solid waste and littering**

*Impact*

The possible pollution of the environment.

*Time periods of implementation*

- For the duration of both construction and operational phases.

**(c) Concrete mixing**

*Impact*

Soil contamination.

*Time periods of implementation*

- During the concrete / construction phase of the project.

**(d) Chemical materials**

*Impact*

Environmental pollution including soil and water.

*Time periods of implementation*

- For the duration of the project phases.

**(e) Management of water, sediments and stormwater**

*Impact*

Soil erosion and water pollution.

*Time periods of implementation*

- For the duration of the project and beyond.

**(f) Air pollution**

*Impact*

Air pollution.

*Time periods of implementation*

- For the duration of the project.

**(g) Noise control**

*Impact*

Noise pollution to the area, neighbouring properties and passersby.

*Time periods of implementation*

- For the duration of the project construction and operational phases.

**(h) Earthworks and Soil**

*Impact*

Soil erosion.

*Time periods of implementation*

- During the earthworks and construction phases of the project.



**(i) Vegetation / Groundcover**

*Impact*

Soil erosion.

*Time periods of implementation*

- On project completion.

**(j) Health and safety**

*Impact*

Unhealthy and unsafe environment.

*Time periods of implementation*

- For the duration of the project and beyond.

**(k) Construction camp**

*Impact*

The unsuitable location is likely to result in environmental degradation.

*Time periods of implementation*

- During the project set up on site, although this will not be applicable as workers will not stay on site.

**(l) Traffic Management**

*Impact*

Congestion and traffic flow.

*Time periods of implementation*

- For the duration of the project

**(m) Heritage impact**

*Impact*

Impact on heritage objects that may be identified during earthworks.

*Time periods of implementation*

- For the duration of the project.

**(n) Visual impact**

*Impact*

Nuisance to the public.

*Time periods of implementation*

- For the duration of the project.

***(iv) rehabilitation of the environment after construction and where applicable post closure; and***

**(a) Clearing construction site**

*Impact*

Environmental and site pollution.

*Time periods of implementation*

- Six weeks after project completion.

**(b) Signing off**

*Impact*

Environmental pollution and degradation left behind after construction.

*Time periods of implementation*

- On project completion.

**(c) Landscaping**

*Impact*

Soil erosion.

*Time periods of implementation*

- On project completion.

*Impact*

Possibility of soil contamination.

*Time periods of implementation*

- For the duration of the project

***(v) where relevant, operation activities;***

See (O) below.

**.....where applicable include actions to:**

*(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;*

- As highlighted throughout the report above.

*(ii) comply with any prescribed environmental management standards or practices;*

- As highlighted throughout the report above.

*(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and*

- Reporting to the Department of Economic Development, Tourism and Environmental Affairs on project completion.

*(iv) comply with any provisions of the Act regarding financial provisions for rehabilitation; where applicable;*

- Monitoring after project completion.

**(K) THE MECHANISM FOR MONITORING COMPLIANCE WITH THE IMPACT MANAGEMENT ACTIONS CONTEMPLATED IN PARAGRAPH (F);**

**Monitoring and Auditing**

- The Environmental Control Officer (Mondli Consulting Services) will monitor project implementation and do environmental reporting.
- The main contractor / Site Engineer or Builder will ensure adherence to set technical specifications through project meetings.
- The Department of Economic Development, Tourism and Environmental Affairs (Compliance Section) will do inspections as deemed appropriate.

**(L) A PROGRAM FOR REPORTING ON COMPLIANCE, TAKING INTO ACCOUNT THE REQUIREMENTS AS PRESCRIBED BY THE REGULATIONS;**

- Monthly reporting and auditing.
- Project meetings.

**(M) AN ENVIRONMENT AWARENESS PLAN DESCRIBING THE MANNER IN WHICH -**

(i) the applicant intends to inform his or her employees of any environmental risk which is likely to result from their work; and

- This will be done through a short half a day environmental course.
- Employees will be taken through the EMPr.

(ii) risks must be dealt with in order to avoid pollution or degradation of the environment; and

- There must be full compliance with all relevant pieces of legislation.

#### **(N) ANY SPECIFIC INFORMATION THAT MAY BE REQUIRED BY THE COMPETENT AUTHORITY**

None, in terms of the above-mentioned phases.

#### **(O) OPERATIONAL PHASE**

At the commencement of operational phase, the Environmental Control Office (ECO) will audit the facility using this Environmental Management Programme (EMPr). It is recommended that the Facility be audited six weeks after construction completion, to ensure that the site is in an environmentally acceptable state.

<b>Environmental impact</b>	<b>Responsibility</b>	<b>Occurrence / Time periods of implementation</b>	<b>Method of monitoring</b>
<p><b>Waste management</b></p> <ul style="list-style-type: none"> <li>▪ The storage of waste before disposal to the landfill site must be done in a responsible manner.</li> <li>▪ The facility must provide at least 240 litre bins on site to be emptied and collected by eThekweni Municipality at least once a week or alternatively a private waste management service provider can be engaged for waste disposal</li> </ul>	Picronamix Investments	Ongoing	Compliance monitoring, Correct disposal methods.

<p>at the landfill site.</p> <ul style="list-style-type: none"> <li>▪ Since recycling will be encouraged by the project, this must be implemented in an environmentally friendly manner.</li> <li>▪ To ensure that the Waste Management plan is in place.</li> <li>▪ Solid waste generated from this facility should be disposed of in an appropriate manner at the municipal landfill site.</li> <li>▪ Contaminated materials must be disposed of at a permitted hazardous landfill site.</li> <li>▪ Chemical waste must be stored in appropriate containers, and disposed of appropriately at a permitted landfill site which is authorized to accept hazardous waste.</li> </ul>			
<p><b>Stormwater Management &amp; ground water</b></p> <ul style="list-style-type: none"> <li>▪ Continuous implementation of the</li> </ul>	<p>Picronamix Investments</p>	<p>Ongoing</p>	<p>Site inspection and Compliance monitoring.</p>

<p>stormwater plan.</p> <ul style="list-style-type: none"> <li>▪ After construction, the site must be graded or paved to ensure free flow of runoff and to prevent ponding of water.</li> </ul>			
<p><b>Soil erosion</b></p> <ul style="list-style-type: none"> <li>▪ All bare areas must be planted with ground cover to minimise soil erosion.</li> <li>▪ Stormwater plan must be implemented as recommended.</li> </ul>	Picronamix Investments	Ongoing	Site inspection.
<p><b>Vegetation (alien plants)</b></p> <ul style="list-style-type: none"> <li>▪ The eradication of alien plants programme must be implemented.</li> </ul>	Picronamix Investments / ECO	Ongoing	Site inspection
<p><b>Health and Safety</b></p> <ul style="list-style-type: none"> <li>▪ Visible warning signs must be erected on site.</li> <li>▪ Training of employees on safety and health issues</li> </ul>	Picronamix Investments / Safety Officer	Ongoing	<ul style="list-style-type: none"> <li>▪ Compliance monitoring / Sticking to OHS procedures.</li> <li>▪ Site inspections.</li> </ul>

<p>must be prioritised.</p> <ul style="list-style-type: none"> <li>▪ Assurance must be made that the staff on site are familiar with fire procedures, and use of fire equipment.</li> <li>▪ Fire extinguishers must be kept at appropriate points during this phase.</li> <li>▪ By ensuring Health and Safety plan is in place.</li> <li>▪ By ensuring proper housekeeping during operational phase.</li> </ul>			
<p><b>Dust</b></p> <ul style="list-style-type: none"> <li>▪ Dust particles from cement.</li> </ul>	Picronamix Investments / Safety Officer	Ongoing	Compliance monitoring
<p><b>Traffic</b></p> <ul style="list-style-type: none"> <li>▪ Vehicles must be restricted to demarcated areas.</li> </ul>	Picronamix Investments	Ongoing	Site inspection.
<p><b>Chemicals and spillages</b></p> <ul style="list-style-type: none"> <li>▪ The quantities stored on site must be appropriately handled.</li> <li>▪ Spillage must be prevented at all cost.</li> <li>▪ The accidental spillage must be cleaned up immediately.</li> </ul>	Picronamix Investments / Safety Officer	Ongoing	Compliance monitoring, site inspection, reporting and photographs.

<p><b>Storage facilities</b></p> <ul style="list-style-type: none"> <li>▪ These must be suitably located and kept tidy.</li> <li>▪ Equipment and chemicals must be marked and correctly stored on site.</li> </ul>	<p>Picronamix Investments / Safety Officer</p>	<p>Ongoing</p>	<p>Compliance monitoring / Site inspection.</p>
<p><b>Noise</b></p> <ul style="list-style-type: none"> <li>▪ All equipment must be properly maintained to minimise unnecessary noise.</li> </ul>	<p>Picronamix Investments</p>	<p>Ongoing</p>	<p>Compliance monitoring</p>

### **(P) DECOMMISSIONING PHASE**

If decommissioning becomes the best option the Department of Economic Development, Tourism and Environmental Affairs has to be informed of this option.

Decommissioning must be done such that it does not pose any danger to potential damage to human life, property and the environment. This must have no adverse impact on the environment. It must therefore be done in the presence of the ECO.

### **(Q) CONCLUSION**

According to the National Environmental Management Act, 1998 everyone must take reasonable measures to ensure that they do not pollute the environment. In this regard the reasonable measures will include informing and educating employees about environmental risks of their activities and instil a sense of environmental consciousness.

It is therefore, crucial that all recommendations are adopted and effected to the letter during all phases of this development as part of the mitigation measures. It must also be kept in mind that the Environmental Management Programme is a live document, that need adjustment as the need arise, as long as such changes are in the interest of the environment.