ENVIRONMENTAL MANAGEMENT PROGRAMME

EZEE TILE ADHESIVE MANUFACTURES PROPRIETARY LIMITED – VULCANIA EXTENSION 2 TOWNSHIP

GAUT 002/20-21/E2758

Prepared for: Ezee Tile Adhesive Manufacturers (Pty) Ltd

4 Campbell Road, Driehoek, Germiston, 1401

Prepared by: KMFE Environmental Consultants

38 Dartford Road, Parklands, 7708

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1. INTRODUCTION

KMFE Environmental was approached by Ezee Tile Adhesive Manufacturers (Pty) Ltd to apply for an environmental authorisation from the Gauteng Department of Agriculture and Rural Development (GDARD) for a proposed Ezee Tile Adhesive Facility to be constructed on both Erf 178 and 179 in Vulcania Extension 2 Township, Brakpan, Ekurhuleni Metropolitan Municipality as required by South Africa's environmental legislation.

The proposed development site is zoned as industrial. The surrounding land uses include commercial/industrial undertakings (e.g. industrial factories). Previous use of the land was for the manufacturing of precast concrete units. Currently, portions of the development site are being used as a plastic recycling facility.

This Environmental Management Programme (EMPr) has been prepared as part of the basic assessment process to provide specific environmental guidance for the planning, construction, operation and decommissioning phase of the proposed Ezee Tile Adhesive Facility.

The competent authorities, being the Gauteng Department of Agriculture and Rural Development (GDARD) require that an EMPr be submitted in accordance with Section 24N of the National Environmental Management Act (NEMA), 1998 (No. 107 of 1998), as amended in 2010.

Figure 1: Locality map of the proposed Ezee Tile Adhesive Facility in Vulcania (Source: Google Earth).

1.1 Objectives of the EMPr

This EMPr informs all relevant parties [the Project Coordinator, the Contractor, the Environmental Control Officer (ECO) and all other staff employed by at the site of the proposed Ezee Tile Adhesive Facility to ensure that impacts on the environment associated with the construction phase are prevented and, where they cannot be prevented, are kept to a minimum and rehabilitated.

The project team should be aware that the requirements imposed by the EMPr are legally binding in terms of the environmental authorisation granted by GDARD.

The objectives of the EMPr are to:

- Ensure compliance with GDARD stipulations and guidelines which may be local, provincial, national and/or international.
- Ensure that there is sufficient allocation of resources on the project budget so that the scale of EMPr-related activities is consistent with the significance of project impacts.
- Verify environmental performance through information on impacts as they occur;
- Respond to unforeseen events.
- Provide feedback for continual improvement in environmental performance.
- Identify a range of mitigation measures that could reduce and mitigate the potential impacts to minimal or insignificant levels.
- Provide specific actions that are necessary to assist in mitigating the environmental impact of the project.
- Identify measures that could optimise beneficial impacts.
- Create management structures that address the concerns and complaints of I&APs with regards to the development.
- Establish a method of monitoring and auditing environmental management practices during all phases of the activity.
- Ensure that safety recommendations are complied with.
- Specify periods within which the measures contemplated in the final environmental management programme must be implemented, where appropriate.

1.2 Contents of the EMPr

The structure of the report is based on Appendix 4 of GN R 326, the EIA Regulations (2017) which stipulates the contents of EMPr.

(1) An EMPr must comply with section 24N of the Act and include-
(a) details of–

(i) the EAP who prepared the EMPr; and
(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;
(b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;
(c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;
(d) a description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-
(i) planning and design;
(ii) pre-construction activities;
(iii) construction activities;
(iv) rehabilitation of the environment after construction and where applicable post closure; and
(v) where relevant, operation activities;
(e) a description and identification of impact outcomes required for the aspects contemplated in (d).
(f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to —
(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
(ii) comply with any prescribed environmental management standards or practices;
(iii) comply with any applicable provisions of the Act regarding the closure, where applicable; and
(iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;
(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
(h) the frequency of monitoring the implementation of the impact management actions

contemplated in paragraph (f);
(i) an indication of the persons who will be responsible for the implementation of the impact management actions;
(j) the time periods within which the impact management actions contemplated in paragraph (f) must be implemented;
(k) the mechanism for monitoring compliance with the impact management actions contemplated in paragraph (f);
(l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;
(m) an environmental awareness plan describing the manner in which—
(i) the applicant intends to inform his or her employees of any environmental risk which may result from their work; and
(ii) risks must be dealt with in order to avoid pollution or the degradation of the environment; and
(n) any specific information that may be required by t the competent authority.
(2) Where a government notice by the Minister provides for a generic EMPr, such generic EMPr as indicated in such notice will apply.

1.3 Legislative requirements

Table 1: Key legislation that applies to the proposed Ezee Tile Adhesive Facility.

1.	Constitution Act (108 of 1996)
2.	National Environmental Management Act, 1998 (Act No. 107 of 1998 as amended).
3.	National Environmental Management Act (Act 107 of 1998): 2014 Environmental Impact Assessment Regulations (Listing Notices 1, 2 and 3), as amended.
4.	National Environmental Management: Biodiversity Act (10 of 2004)
5.	National Environmental Management: Waste Act (59 of 2008)
6.	National Water Act (No. 36 of 1998)
7.	Gauteng Provincial Environmental Framework
8.	City of Ekurhuleni Integrated Development Plan (2018/19 to 2020/21)
9.	City of Ekurhuleni Metropolitan Spatial Development Framework (2015)

10.	Ekurhuleni Bioregional Plan (2014)
11.	Ekurhuleni Environmental Framework (2007)
12.	Ekurhuleni Biodiversity and Open Space Strategy (2009)

2. DETAILS AND EXPERTISE OF THE EAP

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:
(a) details of–
(i) the EAP who prepared the EMPr; and
(ii) the expertise of that EAP to prepare an EMPr, including a curriculum vitae;

KMFE Environmental was founded in South Africa in 2016. Our company strives to provide focused and elite environmental services – ranging from small to large scale projects. We are determined to provide our clients with supreme advice on environmental best practice, as well as guiding them through environmental authorisations and licensing processes.

The project team includes:

Daisy Kotsedi (Pri.Sci.Nat, 400692/15) is a Director at KFME Environmental. Daisy has a BSc. Honours and MSc degree in Botany both from Nelson Mandela University. Daisy's research interests include a vast range of environmental conservation and management, estuarine and marine ecology. Daisy has work experience from the private and public sectors. Daisy has previously worked at Coastal & Environmental Services as an environmental consultant dealing with a variety of environmental impact assessment projects, specialist studies and environmental monitoring. Daisy has also worked for the Department of Environmental Affairs under the estuaries management and marine protected areas units. Daisy has broad experience in research, project management, stakeholder management, policy analysis, marine protected areas and estuarine management.

Siyabulela Mngxekeza (Cert.Sci.Nat, 119862) is a Director at KFME Environmental. He has a BSc. Honours in Environmental Management (UNISA) and M.Phil. Law degree in Environmental- and Human Rights Theory (UWC). Siyabulela has ten years working experience in the environmental sector, which includes data analysis, environmental impact assessment, environmental policy analysis, stakeholder management and report writing. Siyabulela has worked in Nairobi, Kenya for the IOC-Africa's secretariat to conducting audits for the Africa Sub-commission. He has also worked for the Department of Environmental Affairs as an Environmental Production Officer where he provided analytic support to binding international conventions, to project managers, conduct primary and secondary research and produce reports to aid the Department of the Environmental Affairs to reach its goals. Siyabulela has extensive experience in project management, environmental impact assessment, interpretation of environmental legislation, research, policy analysis.

Company details:
KMFE Environmental
38 Dartford Drive
Tel: (073) 851 3898
e-mail: info@kmfe.co.za
www.kmfe.co.za

3. DESCRIPTION OF THE PROPOSED ACTIVITY

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:
(b) a detailed description of the aspects of the activity that are covered by the EMPr as identified by the project description;
(c) a map at an appropriate scale which superimposes the proposed activity, its associated structures, and infrastructure on the environmental sensitivities of the preferred site, indicating any areas that should be avoided, including buffers;

Ezee Tile Adhesive Manufacturers proposes to construct a facility that is 19 047.5 m^2 in size for the blending of cement, sand, paint, grout, tiles, adhesives and construction chemicals on Erf 178 and Erf 179 in Vulcania, Extension 2 Township (Brakpan).

The proposed development will possibly comprise of the following elements:

- Adhesive (2880 m^2)
- Raw material store (2639.4 m^2)
- Grout (1920 m^2)
- Wet plant production (1412 m^2)
- Construction chemicals (1080 m^2)
- Warehouse (3360 m^2)
- Circulation (973.8 m^2)
- Operational office (77.3 m^2)
- Guard House (65 m2)
- Offices and Training (520 m^2)
- PLC Office (43 m^2)
- War room (69.2 m^2)
- Toilets (98.7 m^2)
- Laboratory 1 (128 m^2)
- Maintenance (172 m^2)
- Laboratory 2 (120 m^2)

- Sales/dispatch office (120.3 m^2)
- Dispatch future warehouse (2520 m^2)
- Compressor 1 (49 m^2)
- Canteen and change room (288 m^2)
- Security platform (24.2 m^2)
- Manager's office (27.7 m^2)
- Compressor 2 (47.5 m^2)
- Pallet store (250 m^2)
- Pump room (34.9 m^2)
- Returns (94.4 m^2).

The following activities will also take place prior to and during construction on the disturbed site:

- Decommissioning of the fuel tank onsite.
- The disturbed areas (i.e. oil spills, solid waste, used recycling material) will be rehabilitated.
- Current paving will be crushed and reused.
- Existing structures will be removed (except for the substation).
- Trees will be planted along the boundaries facing the schools.
- Entrance to the site will be refurbished.

NB: Ezee Tile Adhesive Manufacturers has acquired a sand resource at another site and therefore, sand will not be dried at this proposed site.

The proposed development will trigger the following listed activities that require environmental authorisation before they could be undertaken:

- Listing Notice 1: Activity 31.

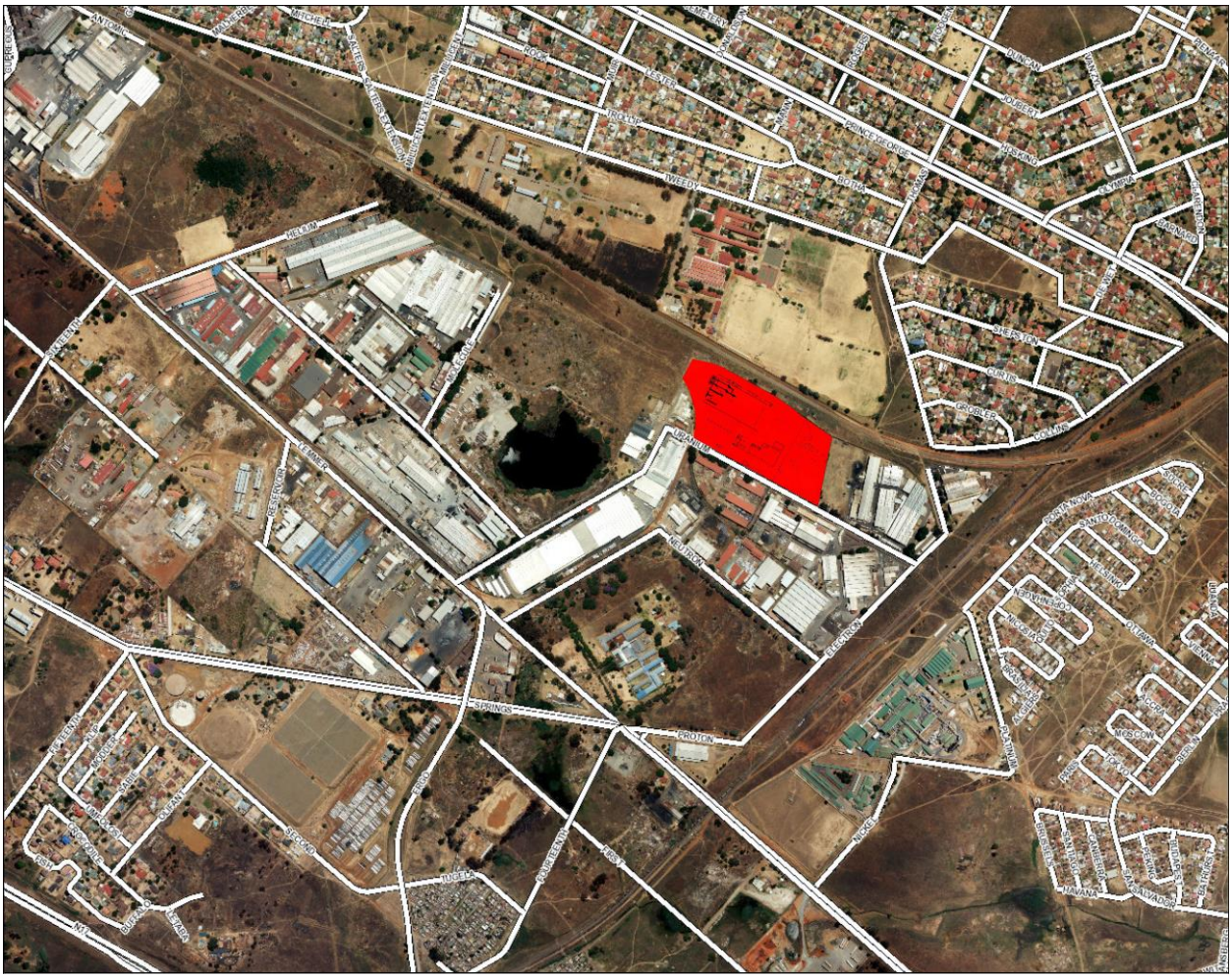


Figure 2: Proposed layout of the proposed EzeeTile Adhesive Facility on Erf 178 and Erf 179 in Vulcania.

IMPACT IDENTIFICATION AND MITIGATION MEASURES

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:

(d) a description of the impact management outcomes, including management statements, identifying the impacts and risks that need to be avoided, managed and mitigated as identified through the environmental impact assessment process for all phases of the development including-

(i) planning and design;
(ii) pre-construction activities;
(iii) construction activities;
(iv) rehabilitation of the environment after construction and where applicable post closure; and
(v) where relevant, operation activities;

(e) a description and identification of impact outcomes required for the aspects contemplated in (d).

(f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraph (d) will be achieved, and must, where applicable, include actions to —

(i) avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
(ii) comply with any prescribed environmental management standards or practices;
(iii) comply with any applicable provisions of the Act regarding closure, where applicable; and
(iv) comply with any provisions of the Act regarding financial provision for rehabilitation, where applicable;

3.1 Planning and Design Phase

This section of the EMPr defines management requirements, environmental actions, procedures and responsibilities as required from Ezee Tile Adhesive Manufacturers for the planning and design phase of the proposed project. The contract will include these provisions; therefore, it is required of the Contractor to adhere to these provisions to the

acceptable standards as outlined by the Project Coordinator and Environmental Control Officer (ECO).

PLANNING AND DESIGN PHASE	
IMPACT	**MITIGATION MEASURES**
1.Disturbance and loss of vegetation 1.1 The proposed development may result in the loss or disturbance of vegetation.	• Exposed areas should be rehabilitated with indigenous plants to the project area as soon as construction is finished. • Detailed rehabilitation plans need to be compiled and make provision for a nursery where plants that can be transplanted such as geophytes (bulbs) and/ or seedlings be maintained or propagated depending on the nature of the species required.
2.Impacts on the surface water and underground water 2.1 Inadequate control of stormwater drainage could result in uncontrolled stormwater runoff which can result in flooding, erosion and contamination of groundwater resources. 2.2 Failure to adequately store hazardous substances used onsite could lead to the contamination of surface and groundwater.	• Construction camp, storage, washing and maintenance of equipment, storage of construction materials or chemicals as well as any sanitation and waste management facilities must not be located within the distance of 100 m from any natural drainage line. • A stormwater management plan must be developed by a qualified engineer and implemented prior to the commencement of the construction phase. • All effluent water from the site shall be disposed of in a properly designed and constructed system, situated so as not to adversely affect watercourses (streams, rivers, pans dams etc.). Only domestic type wastewater shall be allowed to enter the designated system. • The design and location of sanitation facilities must circumvent leakage into the development site. • The project design must include the installation of rainwater harvesting systems to receive runoff from the roofs.
3.Water sustainability and usage 3.1 The development will contribute to the sustainable use of water (the use of rainwater for irrigation, water-saving taps will be installed along with duel flushing toilets and waterless urinals).	• The project design must consider the Installation of rainwater harvesting systems to receive runoff from the roofs. • Rainwater must be harvested and used for irrigation for the landscaping. • Water-saving taps must be installed in all basing. • All toilets must have duel flushing mechanisms. • Waterless urinals must be installed in toilets where volumes are high.
4. Waste management 4.1 Improper management of waste could result in the accumulation of solid waste and the contamination of surface and groundwater.	• Waste management for handling onsite waste must be developed and implemented. • A designated area for the storage of waste prior to disposal must be assigned. • A recycling mechanism must be in place.
5. Traffic and transport 5.1 The proposed development could potentially lead to increased traffic.	• The project plan should include a traffic control plan that will be implemented during the construction phase.
6. Energy consumption and climate change 6.1 The proposed development envisages minimising its climate change footprint by installing solar geysers and motion-activated lighting	• The project design must consider the installation of solar geysers and motion-activated lighting. • The project design must consider the installation of a renewable alternative source of energy.
7. Socio-economics 7.1 The proposed development will contribute to the local economy by creating job opportunities.	• No mitigation proposed.

8. Aesthetics 8.1 The design and placement of the development could alter the characteristics of the landscape (The development could be visually intrusive).	• Project layout design must minimise intrusion. • Colour and tone selection must be carefully considered to mitigate the visual impact of the proposed development.
8. Aesthetics 8.2 The developer intends to rehabilitate the degraded nature of the site (e.g. oil spills, solid waste and used recycling material).	• No mitigation proposed.

3.2 Construction Phase

This section of the EMPr defines management requirements, environmental actions, procedures and responsibilities as required from Ezee Tile Adhesive Manufacturers for the construction phase of the proposed project. The contract will include these provisions; therefore, it is required of the Contractor to adhere to these provisions to the acceptable standards as outlined by the Project Coordinator and (ECO).

CONSTRUCTION PHASE	
1. Disturbance and loss of ecology 1.1 During the establishment of the construction site, unrestrained excavation could result in the loss of vegetation and soil erosion.	• Construction activities and removal of vegetation must be restricted to the developmental footprint to avoid loss of vegetation and soil erosion. • Exposed surfaces should be rehabilitated with indigenous plants once construction is completed.

2. Generation, storage and disposal of hazardous waste 2.1 Unmonitored spillages and leakage of toxic substances can result in the contamination of surface- and groundwater. 2.2 Soil pollution caused by fuel or oil spillages from poorly maintained machinery. 2.3 Soil pollution caused by incorrect concrete/cement mixing techniques.	• Any accidental leak and spills of fuel, oil or other hazardous substances must be reported to the ECO immediately. • An oil spillage cleaning kit must always be available when maintenance work is done onsite and accidental oil spillages must be cleaned and the contaminated soil be disposed of at a registered hazardous waste site. • All hazardous substances (i.e., fuel, oil poisons, etc.) shall be confined to demarcated, adequately bunded areas within the construction camp and stored in suitable containers. • Runoff from any stockpile, fuel/oil or hazardous substances must be contained. • Drip trays shall be provided for stationary plant/equipment and for "parked" plant (e.g. mechanised equipment); • Construction vehicles shall only be refuelled in a demarcated refuelling/servicing area and the surface under the refuelling/servicing area shall be protected against pollution to avoid spillage. • Servicing of maintenance vehicles should not be done within a distance of 100 m from any natural drainage channel. • Maintenance and repair of equipment shall only be undertaken in a demarcated maintenance area. • Leaking equipment shall be repaired immediately or removed from the site. • Cement and concrete mixing directly on the ground shall not be allowed and shall take place on impermeable surfaces. • Washing of the excess concrete into the ground shall is prohibited. • Unused cement bags shall be stored out of the rain to avoid a runoff.
3. Waste management 3.1 Littering resulting from throwing away of waste generated onsite and construction rubble. 3.2 Unpleasant odours as a result of poor waste management. 3.3 Loss of aesthetics onsite.	• Develop and implement a waste management plan that incorporates recycling and waste minimisation. • Littering and construction rubble must be avoided, litter must be disposed of in clearly marked waste bins. • All waste must be removed regularly from the site and disposed of at a licensed landfill site in Brakpan.
4.Stormwater management 4.1 Runoff of stormwater containing contaminants and litter might pollute the surrounding environment.	• Recommendation of a stormwater management plan must be implemented to avoid soil erosion and siltation of drainage lines. • Hazardous substances must be stored away 100m from any natural drainage channel. • Temporary cut-off drains and berms may be required to capture stormwater and promote infiltration.
5. Noise pollution 5.1 Noise to be generated due to normal construction activities.	• Construction activities and movement of construction vehicle must be restricted to normal working hours (07:00 – 17:00). • Immediate neighbours shall be notified of any excessive noise-generating activities that might affect them.
6. Dust pollution 6.1 Generation of dust due to construction activities and transportation of material leading to air pollution.	• Generation of dust must be minimised and dust control measures must be implemented to minimise dust by dampening cleared surfaces. • Construction vehicles shall comply with speed limits (speed limit for light vehicles is 40 km/hr and for heavy vehicles 20 km/hr).

7. Construction activities and behaviour of construction workers 7.1 Health and safety risks associated with construction work (Injuries, COVID-19 protocols).	• The contractor should develop employee wellness and public health programs such as site safety procedures, appropriate emergency preparedness programs for addressing environmental incidents such as spills of fuel, oil or lubricants; fires etc. • The Contractor must ensure that a Health and Safety file is kept on site. • The Contractor will appoint a qualified Health, Safety and Environment (SHE) Officer. • First Aid kit/s must be on hand at all times. • All personnel and construction team members onsite will be mandated to wearing Personal Protective Equipment (PPE) such as approved safety helmet, safety boots, safety eyewear, safety reflective jackets and dust masks, earplugs, where appropriate. • Safety signs must be erected onsite in the areas where it is required and must be maintained. • No one must be allowed on site unless they are wearing approved safety equipment. • All visitors must be required to sign a register and undergo a site induction by the SHE Officer. • The contractor should ensure COVID-19 preparedness by taking into account workplace factors such as the feasibility of social distancing in the workplace, ability to stagger employee shifts, the degree to which employees interact with each other, symptoms screening, sanitisers and disinfectants onsite, the used of appropriate masks and adequate ventilation when employees have to gather.
8. Removal of hardscaping onsite 8.1 The removal of hardscaping could result in soil erosion. 8.2 Invasive plant species could accidentally be introduced to the site and escalate the growth of invasive plant species**.**	• Removal of hardscaping must take place in a phased manner to avoid having exposed soil cover for long periods. • Loose soil must be compacted as soon as possible after excavation, grading, or filling. • Develop and implement the erosion and sedimentation control plan and ensuring that construction personnel are familiar with and adhere to. • Runoff during construction must be managed.
9. Traffic and transport 9.1 During construction, an increased number of construction vehicle could result in congestion and traffic-related risks.	• Adequate measures to limit traffic congestion must be implemented during the construction phase. • Construction vehicles must under no circumstances restrict the access of public road to other road users.
10. Construction- related employment opportunities (Socio-economics) 10.1 Creation of employment opportunities for local people and SMMEs. 10.2 Skills transfer from the contractor to the members of the local community.	• No Mitigation required.

3.3 Operational Phase

This section of the EMPr defines management requirements, environmental actions, procedures and responsibilities as required from Ezee Tile Adhesive Manufacturers for the operational phase of the proposed project.

OPERATIONAL PHASE	
1. Waste management 1.1 Waste generated by the operations and maintenance of the facility.	• No Mitigation required.
2. Loss of sense of place 2.1 Loss of sense of place by neighbours (e.g. schools) due to the intrusion of the proposed development in the area.	• Buildings must blend in well with the surrounding environment. • Buildings have to be maintained as not to result in negative visual impacts. • All waste must be removed regularly from the site and disposed of at a licensed landfill site in Brakpan. • The effect of the operation (if any) on surrounding infrastructure must be regularly monitored; and • Landscaping of the developmental area.
3. Traffic and transport 3.1 Traffic congestion due to increased motor vehicles associated with the proposed development.	• Ensure that, at all times, that access to a public road is unhindered, congestion must not be a consequence of the new development.
4. Impact on the Local Economy 4.1 The positive effects on the local economy due to jobs created by the development.	• No Mitigation required.

3.4 Decommissioning Phase

This section of the EMPr defines management requirements, environmental actions, procedures and responsibilities as required from Ezee Tile Adhesive Manufacturers for the decommissioning phase of the proposed project. The contract will include these provisions; therefore, it is required of the Contractor to adhere to these provisions to the acceptable standards as outlined by the Project Coordinator and (ECO).

DECOMMISSIONING PHASE	
1. Soil contamination 1.1 Unmonitored spillages and leakage of toxic substances can result in the contamination of surface- and groundwater.	• The exposed surface around the fuel tank must be adequately bunded before removal to avoid soil contamination. • Any accidental leak and spills of fuel, oil or other hazardous substances must be reported to the ECO immediately. • All pipeline associated with the fuel tank must be drained and all residual fuel must be removed. • A specialist contractor must be hired to bottom out the fuel tank which entails. removing all quantity of fuel that remains below the pump suction pipeline using a flameproof pump. • The emptied fuel tank must be filled with water to ensure a liquid seal. • All pipelines must be disconnected except the vent pumps and more water must be added to the tank until clear water appears at the vent pipe opening. • Cap or blank off all openings to the fuel tank. • Flush through and cap the end of all pipelines connected to the tank. • All water used during the decommissioning of the tank must be disposed of by a hazardous waste disposal contractor. • The contractor responsible for the removal and disposal of the tank must make sure that the licensed recipient is informed of the tank's previous use and of the need to take the necessarily pre-causations to prevent fire hazards.
2. Health Hazards 2.1 Possible exposure of employees to hazardous substances (crude oil and diesel) due to inappropriate handling procedures.	• All employees must be trained to handle hazardous substances. • All employees must wear PPE at all times while onsite.
3. Fire Risk 3.1 Possible fires and explosions on site due to the removal of fuel tanks present onsite that might be in a hazardous condition.	• The contractor must have functioning fire-fighting equipment onsite all the time. • Employees must be trained in fire hazard control and fire-fighting techniques.

4. MONITORING AND AUDITING

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:
(g) the method of monitoring the implementation of the impact management actions contemplated in paragraph (f);
(h) the frequency of monitoring the implementation of the impact management actions contemplated in paragraph (f);

In accordance with the Environmental Authorisation, a monitoring programme must be developed and implemented for the duration of the construction of the proposed Ezee Tile Adhesive facility. The monitoring programme will:

- Determine a baseline of site conditions prior to construction and must be verified by photographic evidence.
- Develop Audit Reports that must comply with the EMPr.
- Provide an audit schedule for the site conditions pre-construction, during construction and post-construction to ensure compliance with the EMPr conditions, and where necessary the ECO must make recommendations for corrective action:
- Require the ECO to keep a record of any damage that occurs outside of the construction area and demarcated sites.
- Hold the Contractor liable for all the damage to the environment that could be avoided.
- Manage a register of all complaints from the surrounding community which must be rectified timeously by the responsible parties

5. ROLES OF RESPONSIBILITIES

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:
(i) an indication of the persons who will be responsible for the implementation of the impact management actions;

5.1 Applicant

The Applicant i.e. Ezee Tile Adhesive Manufacturers is responsible for the implementation of the EMPr and compliance with the Environmental Authorisation. Ezee Tile Adhesive Manufacturers must ensure that all parties acting on their complies with the conditions of the EMPr. Ezee Tile Adhesive Manufacturers is responsible for the appointment of Project Manager, Contractor and ECO.

5.2 Project Manager

The Project Manager shall oversee the planning, design and construction phases of the project in accordance with the requirements of Ezee Tile Adhesive Manufacturers and Environmental Authorisation, if issued by GDARD. The Project Manager shall address any environmental issues onsite at the request of the Contractor and ECO. The Project Manager is responsible for issuing penalties for contravention of the EMPr. The Project Manager shall provide input on the ECO's ongoing internal review of the EMPr.

5.3 Contractor

"The Contractor" refers to anyone directly appointed by Ezee Tile Adhesive Manufacturers for undertaking the implementation of the project. The Contractor is responsible for developing the required Method Statements. The Contractor must report any non-compliance with the EMPr tor the Project Manager and ECO. The Contractor will rehabilitate any sensitive environments damaged due to negligence and this shall be done in consultation with the Project Manager and ECO. Should the Contractor fail to

comply with the EMPr, this may result in fines and suspension or termination of the contract by the Project Manager.

5.4 Environmental Control Officer

The ECO will ensure compliance with the conditions of the Environmental Authorisation and the EMPr by the Contractor during the construction phase of the Ezee Tile Adhesive Manufacturers. The duties of the ECO will include:

- Determining a baseline of the pre-construction conditions by means of photographic evidence and site observation.
- Conduct site visits and submit environmental audit reports to the competent authority on a monthly basis for the duration of the project. A photographic record of the construction area will be maintained.
- Responding to any environmental issues observed during site inspections and advising the client and contractor accordingly.
- Reporting non-compliance matters to the client and the competent authority.
- Recommending remedial action for non-compliance.
- Providing feedback on any environmental issues at site meetings.
- Managing a register of complaints by the community and addressing to those complaints.

The ECO is not responsible for the monitoring the operational stage of the project and therefore Ezee Tile Adhesive Manufacturers will be responsible for monitoring the operational phase of the project.

5.5 Landscape Architect

The Landscape Architect is responsible for the technical and contractual implementation of the landscaping to be undertaken by the landscape contractor and this must be done in consultation with the Project Manager.

6. ENVIRONMENTAL AWARENESS

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:

(m) an environmental awareness plan describing the manner in which—

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

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

Prior to commencing with any work onsite, the site management staff shall attend an environmental awareness-training course to familiarise them with the environmental aspects of the EMPr. This course will be presented by the ECO and should be at least a one-hour in duration. The Contractor and the ECO are responsible for the planning of the meeting date and venue for the course.

The information presented at the course must be reinforced by the Project Manager and Contractor to the rest of the employees on the site throughout the duration of the development. In addition, any new employees and suppliers coming onto the site after the initial training course must attend the environmental awareness-training course. The presentation shall be conducted, as far as is possible, in the employees' language of choice, level of education and designation.

As a minimum, training shall include:

- The importance of complying with the EMPr and environmental policies.
- The potential environmental impacts of construction activities.
- The management structure for individuals responsible for matters pertaining to the EMPr.
- The employees' roles and responsibilities, including emergency preparedness and response requirements.
- The mitigation measures must be implemented when conducting their work activities.

- Explanation of the Environmental Dos and Don’ts.
- The importance of not littering.
- The importance of using ablution facilities.
- The importance of using water sparingly.
- The importance of adhering to the 3R’s (Reduce, Reuse and Recycle).
- Procedures to be followed should archaeological and/or historical sites should they be discovered during the construction.

The Contractor shall keep records of all environmental training sessions, including names of attendees, dates of their attendance and the information presented to them. Records of environmental training sessions shall be submitted to the ECO.

7. COMPLIANCE WITH THE EMPr

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:

(m) an environmental awareness plan describing the manner in which—

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

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

Copies of the EMPr shall be made available to the Project Manager, the Contractor, the ECO and the Landscape Architect and they must familiarise themselves with the contents of this document. Copies of the EMPr must be kept at the site office/s during the construction phase.

Any significant revisions to the EMPr must be approved by GDARD before any revisions. Revisions must be indicated in the final EMPr to indicate the changes that have been made. The ECO shall ensure the implementation and distribution of any approved revisions to the EMPr.

The Project Manager 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 supplied by the Contractor and any Sub-contractors. Such suspension shall be enforced until compliance is achieved.

7.1 Non-compliance

The contractors shall act immediately when notice of non-compliance is received and mitigate the cause for the notice issued. Complaints received regarding activities on the construction site pertaining to the environment shall be recorded in a dedicated register and the response noted with the date and action taken. The ECO must be made aware of any complaints.

The Contractor is considered to be in contravention of the conditions of the EMPr if, *inter alia*:

- there is evidence of a contravention of the EMPr conditions within the boundaries of the construction site, site extensions and roads.
- there is a contravention of the EMPr conditions which relate to activities outside the boundaries of the construction site.
- there is environmental damage due to negligence.
- the Contractor fails to comply with corrective or other instructions issued by the Project Manager and ECO within a specific period.
- there is an unauthorised entry into No-Go areas.
- there is unauthorised damage to natural vegetation.
- there is an unauthorised establishment of the construction camp including stockpiling and storage.
- there are catching and killing of wild animals.

7.2 Fines

Where there is environmental damage as a result of negligence, pollution incident or failure to adhere to the EMPr, Ezee Tile Adhesive Manufacturers shall be liable. A system of fines shall be implements based on the provisions of NEMA, 1998 (No. 107 of 1998), National Water Act (No. 36 of 1998) and the National Environmental Management: Waste Act (No. 59 of 2008).

The system of fines will be implemented in this manner:

- Fines will be issued per incident at the discretion of the Project Manager.
- In addition to any remedial costs incurred, fines will be issued as a result of non-compliance with the EMPr.
- The Project Manager will inform the Contractor of the transgression and the amount of the fine.

Fines will be issued for the following transgressions, but not limited to:

- Spillages of hazardous chemical or oils.
- Illegal and unregulated dumping of waste.
- Damage to the environment that has been identified as being sensitive.
- Damage to a site of archaeological and historical importance.
- Uncontrolled erosion.
- Pollution of water sources

- Unauthorised blasting activities.

Should the Contractors violate the environmental aspects as indicated in the EMPr, the ECO must recommend their removal from the site. Similarly, the ECO can recommend the removal of any equipment that is causing continual environmental damage.

7.3 Emergency Response

During the construction phase, the Contractor is required to comply with the pre-requisites of emergency preparedness, incident and accident-reporting, in accordance with the Occupational Health and Safety Act, 1993 (No. 85 of 1993), NEMA, 1998 (No. 107 of 1998), National Water Act (No. 36 of 1998) and the National Veld and Forest Fire Act, 1998 (No. 101 of 1998) as amended and/or any other relevant legislation.
Throughout the construction period, the Contractor must develop environmental emergency procedures to mitigate unexpected or accidental activities to the environment.

These unexpected and accidental activities may include, but or not limited to the discharges to water and land, spillage of hazardous substances, exposure of employees to hazardous substances, fires, and toxic emissions into the air.

Developed emergency procedures must include the following:

- Internal and external communication plans, including prescribed reporting procedures where required by legislation.
- Key personnel to contact during the emergency and their responsibilities.
- Contact details of nearby emergency services available (e.g. the fire department, hospitals, police services, spillage clean-up services, etc.).
- Procedures to be instituted for different types of emergencies.
- Incident recording, progress reporting and remediation measures to be implemented.
- Information on hazardous materials, including the potential impact associated with each, and measures to be taken in the event of accidental exposure.
- Training plans and testing exercises

7.4 Incident Reporting and Remedies

The Contractor must ensure that employees are aware of the procedures to be followed for dealing with spills and leaks. Any accidental leak and spill of fuel, oil or other hazardous substances must be immediately reported to the Project Manager and ECO so that mitigation measures can be quickly implemented. In the event of a large spill, the Project Manager or ECO shall inform the following Departments within the city of Ekurhuleni, Disaster and Emergency Service Department and Environmental Resource and Waste Management Department. The Contractor shall be liable to arrange for professional service providers to clear the area affected by the spill if required.

Should a hydrocarbon spill occur;

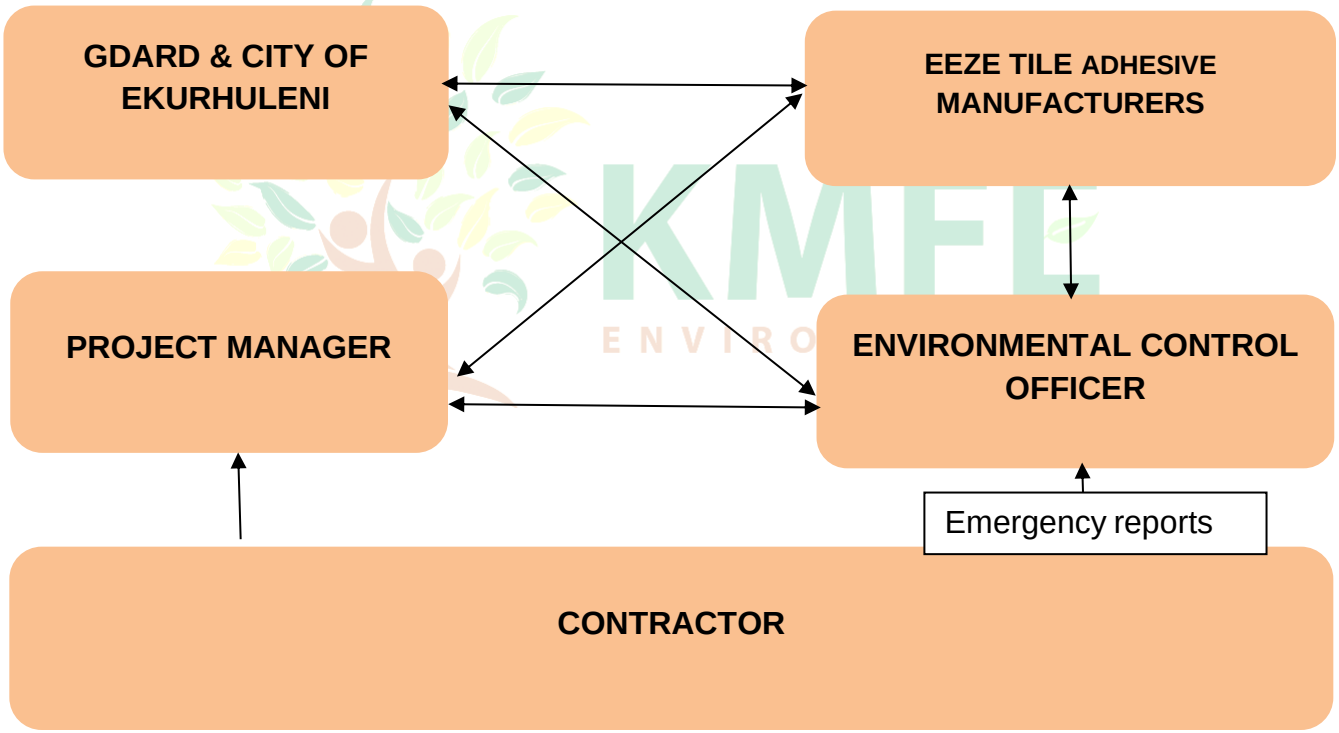
- the source of the spillage must be isolated and contained.
- the affected area must be cordoned off.
- absorbent material must always be readily available to absorb / breakdown spills.
- Hydrocarbon contaminated material or soil must be collected and stored in a bunded containment area until future disposal.

Written records on the remedial measures implemented and the progress achieved must be kept and used for monitoring purposes.

8. COMMUNICATION AND REPORTING LINES

In accordance with GN R 326, the EIA Regulations (2017) in Appendix 4, an EMPr must contain:
(l) a program for reporting on compliance, taking into account the requirements as prescribed by the Regulations;

An illustration of the EMPr communication reporting lines is depicted below. Communication may be in the form of meetings or written reports.



9. SITE CLOSURE

Upon the completion of construction activities, the Contractor must clear and clean the site from any excess construction materials and debris and a completion certificate will be issued to the satisfaction of the Project Manager, ECO and Ezee Tile Adhesive Manufacturers.

9.1 Rehabilitation

The Landscape Architect is responsible for ensuring the rehabilitation and re-vegetation of all impacted areas during and after construction to the satisfaction of the Project Manager and ECO.

9.2 Post-Construction Environmental Audit

Upon conclusion of the project, a post-construction environmental audit must be conducted by the ECO and submitted to GDARD at the cost of Ezee Tile Adhesive Manufacturers. This report must outline the implementation of the EMPr, identify areas of concern and recommend remedial actions. Should this post-construction environmental audit highlight issues not identified in the current EMPr, it should inform amendments to be implemented to the EMPr.

10. REVIEW OF THE EMPR

Based on the observations of site inspections and issues raised at site meetings, the Project Manager and the ECO can recommend the reviewal of the EMPr to improve its efficiency when necessary. All major amendments shall be submitted to GDARD for approval before they are incorporated into the EMPr. The amendments must be included as an annexure to the EMPr, and this annexure must be made available to all parties.

11. CONCLUSION

The recommendations and mitigation measures provided in this have been developed to minimise potential negative environmental impacts in the Planning and Design-, Construction-, Operational- and Decommissioning Phase. These recommendations will also enhance the positive benefits identified in the Basic Assessment Report. Adherence to the recommendations of the EMPr and the Environmental Authorisation by all parties will ensure the completion of the project with minimal unforeseen negative environmental impacts.

It should be noted that the EMPr is a living document and could change regularly to adapt to perceived environmental conditions.

The EMPr must be made available to all Contractors to inform them of the potential costs and timing needed to fulfil the implementation of the EMPr.

12. APPENDIX 1: REHABILITATION PLAN PRIOR TO CONSTRUCTION