

FINAL ENVIRONMENTAL MANAGEMENT PROGRAMME

USED-OIL RECYCLING FACILITY ON ERF 26736 IN WILSONIA, EAST LONDON

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Prepared for:



Your OIL Recycling and Boiler Fuel Specialists

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1 INTRODUCTION

Objectives of an EMPr

The EMPr has been compiled to provide recommendations and guidelines according to which compliance monitoring can be done during the construction and operation of the proposed Used-Oil Recycling Facility (Figure 1.1). The objective of the EMPr is to also ensure that all relevant factors are considered to ensure environmentally responsible construction activities. The purpose of the EMPr is to provide specifications for the application of "good environmental practice" during all the phases of development.



Figure 1.1: Locality of the proposed Used-Oil Recycling Facility.

This EMPr informs all relevant parties (the Project Coordinator, the Contractor(s) and all other staff employed at the site) as to their duties in the fulfilment of the legal requirements for the construction and operation of the proposed used-oil recycling facility with particular reference to the prevention and mitigation of anticipated potential environmental impacts.

The objectives of an EMPr are to:

- Ensure compliance with regulatory authority 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 which could reduce and mitigate the potential impacts to minimal or insignificant levels;

- Detail specific actions deemed necessary to assist in mitigating the environmental impact of the development;
- Identify measures that could optimize 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; and
- Specify time periods within which the measures contemplated in the final environmental management programme must be implemented, where appropriate.

Structure and Function of an EMPr

An EMPr is focused on sound environmental management practices, which will be undertaken to minimise adverse impacts on the environment through the lifetime of a development. In addition, an EMPr identifies what measures will be in place or will be actioned to manage any incidents and emergencies that may occur during operation of the facility.

As such the EMPr provides specifications that must be adhered to, in order to minimise adverse environmental impacts associated with all phases of development. The content of the EMPr is consistent with the requirements as set out in Appendix 4 of the EIA regulations 2014 (as amended) stated below, for the planning and design, construction and operation phases.

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (a) Details of –
 - (i) The EAP who prepared the environmental management programme; and
 - (ii) The expertise of the EAP to prepare an environmental management programme, including a curriculum vitae;
- (b) A detailed description of the aspects of the activity that are covered by the draft environmental management programme 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;
- (f) a description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraphs (d) will be achieved, and must, where applicable include actions to –
 - a. Avoid, modify, remedy, control or stop any action, activity or process which causes pollution or environmental degradation;
 - b. Comply with any prescribed environmental management standards or practices;
 - c. Comply with any applicable provisions of the Act regarding closure, where applicable;
 - d. Comply with any provisions of the Act regarding financial provisions 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 (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 requirement as prescribed by the regulations;
- (m) An environmental awareness plan describing the manner in which –
 - a. The applicant intends to inform his or her employees of any environmental risk which may result from their work; and
 - b. 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 the competent authority.

Legal requirements

The Contractor must identify and comply with all South African national and provincial environmental legislation, including associated regulations and all local by-laws relevant to the project. Key legislation currently applicable to the construction and implementation phases of the project must be complied with. The list of applicable legislation provided below is intended to serve as a guideline only and is not exhaustive:-

- The Constitution of the Republic of South Africa Act (No. 108 of 1996);
- National Environmental Management Act (No. 107 of 1998);
- National Environmental Management: Protected Areas Act (No. 57 of 2003);
- National Environmental Management: Biodiversity Act (No. 10 of 2004);
- National Water Act (No. 36 of 1998);
- Hazardous Substances Act (No. 15 of 1973);
- National Heritage Resources Act (No. 25 of 1999);
- National Environmental Management: Waste Management Act (No. 59 of 2008);
- Occupational Health and Safety Act (No. 85 of 1993);
- National Environmental Management: Air Quality Act (No. 39 of 2004); and
- All relevant provincial legislation, municipal by-laws and ordinances.

2 DETAILS OF THE ENVIRONMENTAL ASSESSMENT TEAM

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

(a) Details of –

- (i) The EAP who prepared the environmental management programme; and
- (ii) The expertise of the EAP to prepare an environmental management programme, including a curriculum vitae;

Environmental Assessment Practitioner (EAP):

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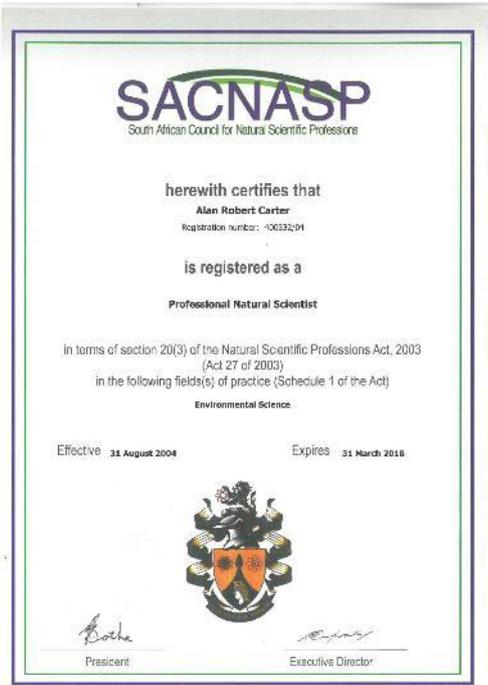
Project Team:

- Dr Alan Carter
- Ms Jaclyn Smith

EOH Coastal & Environmental Services (EOH CES) was established in 1990 as a specialist environmental consulting company and has considerable experience in terrestrial, marine and freshwater ecology, the Social Impact Assessment (SIA) process, State of Environment Reporting (SOER), Integrated Waste Management Plans (IWMP), Environmental Management Plans (EMPs), Spatial Development Frameworks (SDF), public participation, as well as the management and co-ordination of all aspects of the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) processes.

Dr Alan Carter

Alan is the executive of the EOH CES East London Office. He holds a PhD in Marine Biology and is a Certified Public Accountant, with extensive training and experience in both financial accounting and environmental science disciplines with international accounting firms in South Africa and the USA. He has 25 years' experience in environmental management and has specialist skills in sanitation, coastal environments and industrial waste. Dr Carter is registered as a Professional Natural Scientist under the South African Council for Natural Scientific Professions (SACNASP). He is also registered as an EAP with the Environmental Assessment Practitioners of South Africa (EAPSA) interim EAP certification body.



Ms Jaclyn Smith

Ms Smith is an Environmental Consultant holding a BSc degree with majors in Geology and Environmental Science from Rhodes University and a BSc Honours degree in Geology from Nelson Mandela Metropolitan University. Jaclyn's honours thesis focused on the sediment disturbance depth over two beaches in Port Elizabeth. Jaclyn has over four years' experience as an environmental consultant and has undertaken various environmental impact studies and Environmental Management Plans with both a NEMA and NEMWA requirement.

3 PROPOSED ACTIVITY

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (b) A detailed description of the aspects of the activity that are covered by the draft environmental management programme 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;

Description of proposed activity

The proposed project entails the construction of a used-oil recycling facility on Erf 26736 (corner of Mdantsane Access Road, Dick King Road and Osmond Street) in Wilsonia, East London. The used-oil recycling facility will involve the storage of more than 500 cubic metres of used oil and 10 000 to 15 000 kg's of used oil will be treated per day.

Treatment technology alternative 1 (preferred alternative)

Construction of used-oil recycling facility using boiler and centrifuges (**preferred treatment technology alternative 1**) will involve the construction of the following:

- Workshop;
- Warehouse and offices;
- Used-oil storage areas;
- Additional entrance to the facility;
- Centrifuge;
- Boiler; and
- Waste disposal area.

The process involves the following:

The used oil will be collected by various service providers and delivered to the processing facility for processing. The used oil will be placed in storage tanks at the property. The used oil will then be transferred to the heating tank which is heated by a boiler on site. It will be heated to evaporate the water from it. The water is then distilled back to liquid and disposed via the effluent system.

The used oil is transferred to the centrifuges where the sludge is removed from the oil. The sludge is stored on site for collection by Enviroserv. The treated oil is stored in storage tanks on site ready to be sold as furnace oil and to be used for the boiler on site.

All general waste/refuse produced by staff and all gloves, filters and rags etc. generated from the processing works will be disposed of at the designated waste disposal area in drums/bins/waste skips for collection by the municipality and Enviroserv respectively. The waste disposal area will only temporarily store such waste until such time as it is collected. This activity does not trigger a waste management activity.

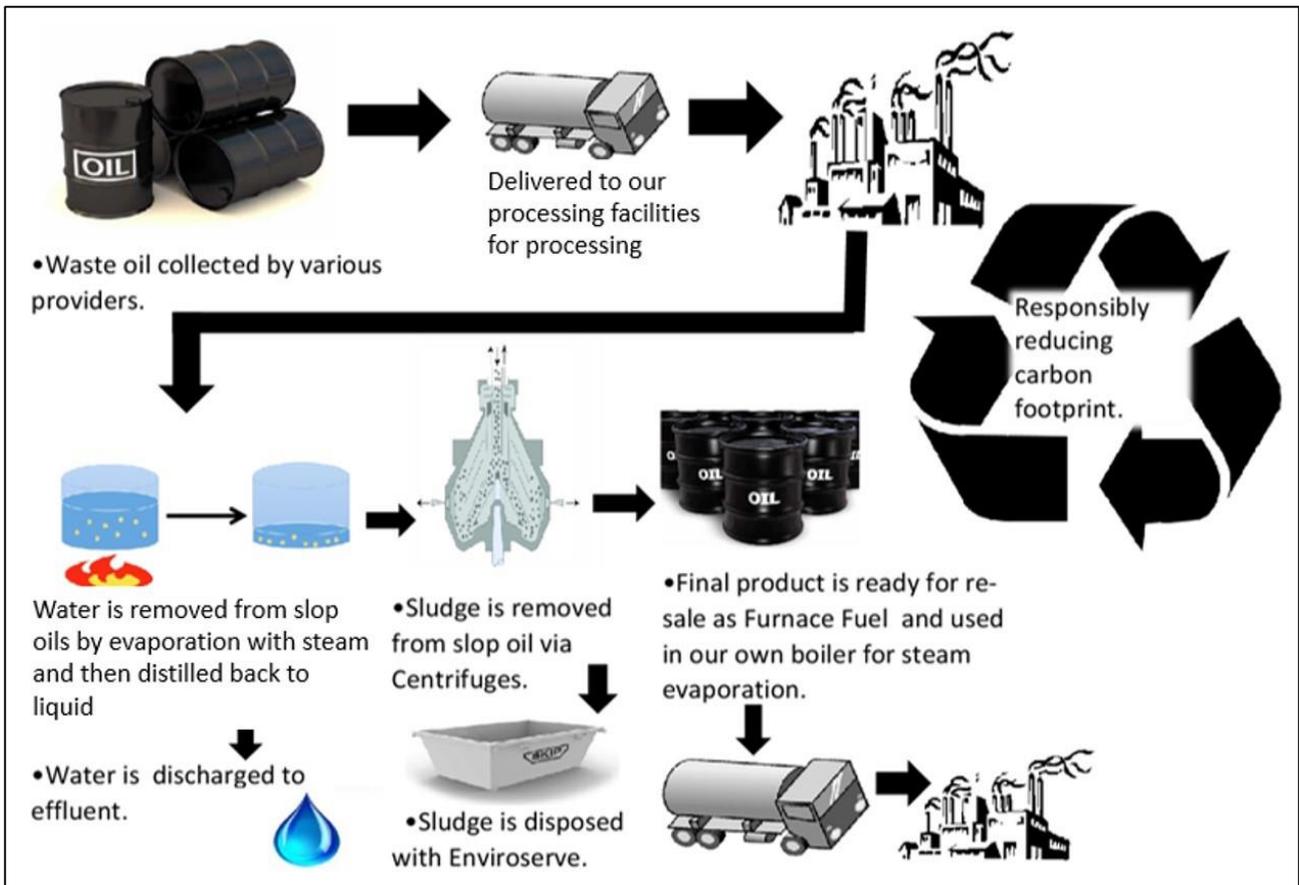


Figure 3.1 Flow diagram of the used-oil recycling process used by Rec-Oil.

Treatment technology alternative 2

The treatment of the used oil can also be undertaken using settling tanks, evaporation ponds and biodegradation (**treatment technology alternative 2**). This method would involve the development of settling tanks which would be used as a pre-treatment of the used-oil to separate the water from the oil. The separated water (wastewater) would then be transferred to the evaporation ponds where it will be further treated and broken down through evaporation and bio-augmentation. This treatment option will also produce sludge which will need to be disposed of at the appropriate landfill site.

4 SCOPE OF THE EMPr

In order to ensure a holistic approach to the management of environmental impacts during the planning and design, construction and operation of the development this EMPr sets out the methods by which proper environmental controls are to be implemented by the Applicant's Project Manager and/or the Contractor as well as all other parties involved.

The EMPr is a dynamic document subject to changes as a result of variations to the project specifications.

4.1 Layout of the EMPr

The EMPr is divided into three phases of development. Each phase has specific issues unique to that period of the planning and design, construction and operation of the development. The impacts are identified and given a brief description. The phases of the development are identified as below:

4.1.1 Planning and design phase

This section of the EMPr provides management principles for the planning and design phase of the project. Planning, procedures and responsibilities as required during the planning and design phase are specified.

4.1.2 Construction phase

This section of the EMPr provides management principles for the construction phase of the project. Environmental actions, procedures and responsibilities as required during the construction phase are specified. These specifications will form part of the contract documentation and therefore the Contractor will be required to comply with these specifications to the satisfaction of the Applicant's Project Manager and the Environmental Control Officer (ECO).

4.1.3 Operational and maintenance phase

This section of the EMPr provides management principles for the operation and maintenance phase of the project. Environmental actions, procedures and responsibilities as required during the operation and maintenance phase are specified.

5 MITIGATION AND/OR MANAGEMENT MEASURES

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (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;
- (f) A description of proposed impact management actions, identifying the manner in which the impact management outcomes contemplated in paragraphs (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;
 - (iv) Comply with any provisions of the Act regarding financial provisions for rehabilitation, where applicable;

A variety of potential impacts are associated with the planning and design phase, the construction phase and the operational phase of this project. This section focuses on the mitigation measures associated with each project phase in order to reduce negative environmental impacts.

Table 5.1: Issues and Mitigation Measures associated with the development.

| Issue | Alternative | Mitigation measure |
|--|-------------|--|
| Planning and Design Phase | | |
| Legislation and policy compliance | | |
| During the planning and design phase, failure to adhere to existing policies and legal obligations could lead to the project conflicting with local, provincial and national policies, legislation, etc. This could result in lack of institutional support for the project, overall project failure and undue disturbance to the natural environment. | All | <ul style="list-style-type: none"> • All relevant legislation and policy must be consulted and the proponent must ensure that the project is compliant with such legislation and policy. • These should include (but are not restricted to): MPRDA, NEMA, Local and District Spatial Development Frameworks, Eastern Cape Biodiversity Conservation Plan (ECBCP), Local Municipal bylaws. • All relevant permits and authorisations must be in place prior to commencement of construction. |
| Stormwater management | | |
| During the planning and design phase, inadequate planning for stormwater could result in erosion due to loss of vegetation and the slope and topography of the site. Contaminated stormwater | All | <ul style="list-style-type: none"> • An appropriate stormwater structures must be designed and implemented. • A stormwater management plan must be developed and all stormwater structures must be designed in line with DWS and BCMM requirements. • Stormwater must drain to the detention ponds in |

| Issue | Alternative | Mitigation measure |
|---|--------------------------------------|--|
| could result in contamination of the soil and surrounding watercourses if there is not appropriate stormwater management structures in place. | | the form of JoJo tanks as per the Stormwater Management Plan. <ul style="list-style-type: none"> • Impermeable bunded areas must be designed to store all oil tanks. These areas must be 110% the volume of the oil storage tanks within them and there must be an outlet valve with an oil trap for release of uncontaminated stormwater from the bunded areas. |
| Siting/location of structures and inappropriate infrastructure | | |
| During the planning and design phase, poor planning and placement of roads, structures and infrastructure in sensitive areas could lead to the damage and degradation of natural areas as well as to the structures themselves. | All | <ul style="list-style-type: none"> • The facility must be designed in such a way so as to minimise ground clearance and disturbance to only what is required for the facility. |
| Biodiversity and vegetation | | |
| During the planning and design phase, inappropriate site clearing could result in the loss of indigenous vegetation and the potential dispersal of alien invasive species. Inappropriate layout of buildings and infrastructure may result in unnecessary degradation of the surrounding environment. | All Preferred treatment technology + | <ul style="list-style-type: none"> • The development must impact on the minimum vegetation area required to complete construction. • If not possible, then the temporary and permanent footprint must be kept to a minimum. • An Alien Vegetation Management Plan must be developed for implementation during the construction and operation phases. • A Rehabilitation Plan must be developed for implementation during the construction and operation phases of the development. |
| | Alternative treatment technology 2 | <ul style="list-style-type: none"> • The development must impact on the minimum vegetation area required to complete construction. • If not possible, then the temporary and permanent footprint must be kept to a minimum. • An Alien Vegetation Management Plan must be developed for implementation during the construction and operation phases. • A Rehabilitation Plan must be developed for implementation during the construction and operation phases of the development. |
| General waste management | | |
| During the planning and design phase, failure to plan for the storage, handling and disposal of general waste may lead to littering and pollution of the surrounding environment, unsanitary conditions and health risks. | All | <ul style="list-style-type: none"> • During the planning and design phase, a proper waste management plan for handling onsite waste must be developed and implemented. • An appropriate area must be identified where waste can be stored before disposal. • The temporary storage facility/service yard must comply with the Norms and Standards for the Storage of Waste (2013). |
| Hazardous waste management | | |
| During the planning and design phase, failure to plan for the storage, handling, transport and disposal of hazardous | All | <ul style="list-style-type: none"> • Appropriate stormwater structures must be designed and implemented. • A stormwater management plan must be developed and all stormwater structures must be |

| Issue | Alternative | Mitigation measure |
|---|-------------|--|
| waste may lead to pollution of the surrounding environment and health risks. | | <p>designed in line with DWS requirements.</p> <ul style="list-style-type: none"> Impermeable bunded areas must be designed to store all oil tanks. These areas must amount to 110% the volume of the oil storage tanks located within the bunded areas, and there must be an outlet valve with an oil trap for release of uncontaminated stormwater from the bunded areas. |
| Handling and use of hazardous substances | | |
| During the planning and design phase, failure to plan for the handling, transport and use of hazardous substances may lead to pollution of the surrounding environment and may lead to health risks. | All | <ul style="list-style-type: none"> All storage areas for hazardous substances must be designed to reduce the risk of contamination. All oil storage tanks must be placed in impermeable bunded areas 110% the volume of the tanks within it. An emergency protocol must be designed and implemented (Refer to EMPr). All vehicles used for transporting used oil must obtain necessary approvals in terms of the Road Transportation Act 74 of 1977 (RTA). |
| Visual | | |
| During the planning and design phase, inappropriate architectural design may lead to visual and aesthetic impacts. | All | <ul style="list-style-type: none"> The architectural design should be as unobtrusive as possible in terms of colour and building material used. Vegetation should be considered in the design to mitigate visual impacts. |
| Traffic | | |
| During the planning and design phase, failure to plan for increased traffic and access to and from the site may result in traffic congestion during the operational phase. | All | <ul style="list-style-type: none"> Appropriate planning should take place for the increase traffic to the development during the construction and operation phase including traffic calming measures and relevant traffic safety measures (flagmen and temporary speed bumps during the construction phase). |
| Construction Phase | | |
| Legislation and policy compliance | | |
| During the construction phase, failure to adhere to existing policies, regulations, permits, authorisations and legal obligations could lead to the project conflicting with local, provincial and national policies, legislation, etc. This could result in lack of institutional support for the project, overall project failure and undue disturbance to the natural environment. | All | <ul style="list-style-type: none"> During the construction phase the developer must employ an independent Environmental Control Officer (ECO) for the duration of the construction phase to audit the contractor's compliance with the specifications in the EA, Waste Licence, EMPr and any other additional permits/authorisations. |
| Stormwater management | | |
| During the construction phase, failure to implement effective stormwater management measures may result in | All | <ul style="list-style-type: none"> The construction site must be managed in a manner that prevents pollution to downstream watercourses or groundwater, due to suspended solids, silt or chemical pollutants. |

| Issue | Alternative | Mitigation measure |
|---|-------------|---|
| increased surface soil erosion and contamination of stormwater and resulting surrounding watercourses. | | <ul style="list-style-type: none"> • During the construction phase, berms and swathes must be placed in areas that may be prone to erosion. • Temporary cut-off drains and berms may be required to capture storm water and promote infiltration. • The construction site must be managed in a manner that prevents pollution to downstream watercourses or groundwater, due to suspended solids, silt or chemical pollutants. • The project area must be monitored by an ECO on a regular basis during construction. |
| Siting/location of structures | | |
| During the construction phase, inappropriate siting of site camp, material stockpiling etc could lead to damage and degradation of natural areas | All | <ul style="list-style-type: none"> • Construction site camps and offices must be placed on previously disturbed as far as possible and must be more than 100m from nearby watercourses. |
| Biodiversity and vegetation | | |
| During the construction phase, uncontrolled clearing activities will result in unnecessary loss of natural vegetation which may result in increased erosion in the area and the spread of alien invasive vegetation species. | All | <ul style="list-style-type: none"> • Construction activities must be limited to the designated project footprint. • The construction footprint must be surveyed and demarcated prior to construction commencing. • The surveyed construction footprint must be approved by an ECO to ensure that natural vegetation is not unnecessarily damaged. • Where vegetation has been cleared, site rehabilitation in terms of soil stabilisation and re-vegetation must be undertaken. Separate topsoil from subsoil during stockpiling. • An Alien Vegetation Management Plan must be implemented to reduce the establishment of alien invasive plant species • All disturbed areas must be rehabilitated as per the Rehabilitation plan. |
| General waste management | | |
| During the construction phase, poor management of the handling, disposal and storage of general waste may lead to the pollution of the surrounding environment and littering may attract unwanted vermin and make the area aesthetically unappealing. | All | <ul style="list-style-type: none"> • During the construction phase, a proper waste management plan for handling onsite waste must be implemented. • All general waste must be disposed of in bins/waste skips labelled “general waste”. • There must be sufficient waste bins provided throughout the construction site for collecting waste. • All general waste collected on site must ultimately be disposed of at a licensed general waste disposal site. • No waste must be buried or burned on site. • The temporary storage facility/service yard must comply with the Norms and Standards for the Storage of Waste (2013). |
| Hazardous waste management | | |

| Issue | Alternative | Mitigation measure |
|---|-------------|---|
| <p>During the construction phase, poor management of the handling, disposal and storage of hazardous waste may lead to soil contamination, pollution of surrounding sensitive environments including surface and ground water. Any spillages of hazardous waste may also pose a health and safety to risk to staff on site.</p> | <p>All</p> | <ul style="list-style-type: none"> • All hazardous waste generated on site must be disposed of in impermeable containers/bins that prevent any ingress of rainwater. These containers/bins must be labelled “hazardous waste”. • Spill kits must be available on site to deal with any spillages/leaks. • All construction workers must be equipped with the appropriate Personal Protective Equipment (PPE) when handling hazardous waste. • All hazardous waste must be disposed of at a licensed hazardous landfill site or collected by a licenced service provider. • Proof of receipt of hazardous waste by a licenced service provider must be maintained on the site. |
| <p>Handling, transport and use of hazardous substances</p> | | |
| <p>During the construction phase, spillages of hazardous substances from inappropriate handling, transport and use of the substances may result in pollution of the surface and/or groundwater and soil contamination. Spillages of hazardous substances pose a health and safety risk to the staff on site.</p> | <p>All</p> | <ul style="list-style-type: none"> • The storage of potentially hazardous material must be controlled to reduce the risk of environmental contamination. • Any storage tanks containing hazardous materials must be placed in bunded containment areas with sealed surfaces. • All vehicles and machinery must be regularly maintained and in good working order to reduce the risk of contamination of soil and ground water. • Cement and concrete must not be mixed directly on the ground, or during rainfall events when the potential for transport of pollutants to watercourses is the greatest. • Cement and concrete must only be mixed in the area demarcated for this purpose and on impermeable surfaces. • Mixed cement/concrete must not be allowed to flow into any watercourses. • Drip trays must be placed under stationary construction machinery overnight to avoid soil contamination from oil and fuel leaks. • The area must be monitored by an ECO on a regular basis. • The individual(s) that will be handling hazardous materials must be trained to do so. • All hazardous chemicals must be stored properly in a secure, bunded and contained area. • Contaminated soil must either be excavated or treated on-site, depending on the nature and extent of the spill. • The ECO must determine the precise method of treatment of polluted soil. This could involve the application of soil absorbent materials or oil-digestive powders to the contaminated soil. • If a spill occurs on an impermeable surface such as cement or concrete, the surface spill must be |

| Issue | Alternative | Mitigation measure |
|--|-------------|---|
| | | <p>contained using oil absorbent materials.</p> <ul style="list-style-type: none"> Contaminated remediation materials must be carefully removed from the area of the spill so as to prevent further release of petrochemicals to the environment, and stored in suitable containers until appropriate disposal. |
| Visual | | |
| During the construction phase, construction activities and movement of construction vehicles and plant to and from site could result in a visual disturbance of the surrounding landscape. | All | <ul style="list-style-type: none"> All construction activity should take place during daylight working hours (i.e. 7 – 5pm). All construction activity and equipment must be limited to the demarcated areas. Good housekeeping must be maintained throughout the construction work areas to limit the visual intrusion of the construction activities. |
| Noise | | |
| During the construction phase, construction activities could result in an increase in ambient noise levels on site and affect surrounding properties. | All | <ul style="list-style-type: none"> Activities which include the movement of construction vehicles and the operation of machinery should be restricted to normal working hours (07:00am – 17:00pm). There must be a complaints register on site for nearby residents to make complaints. These must be addressed and recorded. |
| Air quality and dust control | | |
| During the construction phase, dust generated by construction vehicles and construction activities could result in significant dust during windy conditions. Poor maintenance and servicing of construction plant and vehicles may result in an increase in vehicle emissions in the areas | All | <ul style="list-style-type: none"> During windy periods un-surfaced and un-vegetated areas should be dampened down. Vegetation should be retained where possible as this will reduce dust travel. Excavations and other clearing activities must only take place during agreed working times and permitting weather conditions to avoid drifting of sand and dust into neighbouring areas. Any complaints or claims emanating from dust issues must be attended to immediately and noted in the complaints register. Vehicles and construction plant must be serviced regularly so as to reduce excessive vehicle emissions. |
| Traffic | | |
| During the construction phase, there is likely to be an increase in traffic volumes in the area which may result in vehicle/pedestrian collisions and degrade the existing road conditions. | All | <ul style="list-style-type: none"> Local residents should be made aware of the presence of construction vehicles by making use of high-visibility signage. Road condition should be recorded prior to construction vehicles making use of the roads and any damage caused by construction vehicles should be repaired. All traffic safety (flagmen) and traffic calming measures should be in place within the site and where traffic enters the main road. |
| On-site fire risk | | |
| During the construction phase | All | In order to reduce the risk of fires: |

| Issue | Alternative | Mitigation measure |
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| inadequate attention to fire safety awareness and fire safety equipment could result in uncontrolled fires, posing a threat to animals, vegetation and the surrounding landowners. | | <ul style="list-style-type: none"> All flammable substances must be stored in dry areas which do not pose an ignition risk to the said substances. Smoking must not be permitted near flammable substances. All cooking must be done in demarcated areas that are safe in terms of runaway or uncontrolled fires. No open fires will be allowed on site. The construction personnel must be educated regarding fire and fire management. Fire extinguishers must be available onsite. |
| Socio-economic | | |
| During the construction phase, there is the potential for some temporary job opportunities to be created. | All | <ul style="list-style-type: none"> No mitigation is required. |
| During the construction phase, there will likely be an increase in the number of people and labourers within the area which could result in an increase in crime and potential security risks. | | <ul style="list-style-type: none"> During the construction phase access to the site must be controlled to ensure no unauthorised people enter the premises. The construction site must be secured in order to reduce the opportunity for criminal activity in the locality of the site. There must be a complaints register on site for nearby residents to make complaints. These must be addressed and recorded. |
| Operation Phase | | |
| Legislation and policy compliance | | |
| During the operation phase, failure to adhere to all permits, authorisations and regulations may lead to financial penalties and closure of the facility. | All | <ul style="list-style-type: none"> During the operational phase the proponent must ensure that operation of the used-oil recycling facility is compliant with the relevant legislation and policy. These should include (but are not restricted to): MPRDA, NEMA, Local and District Spatial Development Frameworks, Eastern Cape Biodiversity Conservation Plan (ECBCP), Local Municipal bylaws. |
| Stormwater management | | |
| During the operation phase, inappropriate stormwater drainage may lead to contaminated stormwater polluting the ground, stormwater system and nearby streams. | Preferred treatment technology 1 | <ul style="list-style-type: none"> During the operation phase water runoff must be controlled and the stormwater management plan implemented. All bunded areas must be monitored on a regular basis for cracks or leaks. Stormwater pipes/channels must be regularly inspected on site. This includes the regular inspection of all stormwater outlet pipes and open channels from buildings and carparks that are generating the run-off from the site ensuring they are directed to the detention pond and are not blocked allowing the stormwater to enter the detention pond freely without restrictions. The stormwater detention ponds must be regularly inspected. This includes the regular inspection of |

| Issue | Alternative | Mitigation measure |
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| | | <p>the JoJo tanks ensuring that there is no build-up of debris inside the tanks. The outlet from these tanks must be regularly inspected ensuring they are clean and not blocked allowing the tanks to drain freely without restrictions.</p> <ul style="list-style-type: none"> • The outlet pipework downstream of the detention ponds be regularly inspected and maintained. This includes the regular inspection of the outlet pipework and downstream headwall ensuring that the outlet pipe is not blocked and unrestricted allowing the controlled outflow to drain the detention pond into the municipal bulk stormwater infrastructure. • The stormwater detention ponds/JoJo tanks outlet pipe must be fitted with a tap or valve to ensure that, in the event of a spill, contaminated stormwater that has collected in the detention ponds must not be disposed of or released into the stormwater system. It will need to be disposed of or collected by a hazardous waste service provider such as Enviroserv or be recovered and recycled by Rec-Oil. • Regular inspection and maintenance must be strictly enforced during period of higher rainfall from January to April and from September to December. |
| <p>During the operation phase, inappropriate stormwater design and drainage may lead to contaminated stormwater polluting the ground and surface water and surrounding environment especially during heavy rainfall periods.</p> | <p>Alternative treatment technology 2</p> | <ul style="list-style-type: none"> • The evaporation ponds would have to be designed in such a way so as to cope with heavy rainfall periods to ensure that wastewater does not overflow from the ponds and pollute the surrounding environment. |
| Biodiversity | | |
| <p>During the operation phase, unnecessary clearing may result in unnecessary loss of natural vegetation. Inadequate removal and monitoring of alien invasive vegetation could result in infestation and degradation of the area.</p> | <p>All</p> | <ul style="list-style-type: none"> • The Alien Vegetation Management Plan must be implemented to reduce the establishment and spread of alien vegetation during the operational phase. • Alien invasive plants must be removed through appropriate methods such as hand pulling, application of chemicals, cutting, etc. as in accordance to the NEMBA: Alien Invasive Species Regulations. • Removal must occur prior to plants developing seeds. • All cleared areas must be continuously rehabilitated with indigenous vegetation for 6 months into the Operational Phase of the project begins or after construction, or until such time that the ECO is satisfied the all affected areas have been rehabilitated. |

| Issue | Alternative | Mitigation measure |
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| General waste management | | |
| During the operation phase, inappropriate storage of general waste may result in pollution of the surrounding environment. | All | <ul style="list-style-type: none"> • During the operation phase, all waste skips/bins containing general waste must be labelled “general waste”. • All waste skips/bins must be enclosed to prevent ingress of rainwater. |
| During the operation phase, inadequate disposal of general waste may result in pollution of the surrounding environment. | | <ul style="list-style-type: none"> • All general waste collected on site must be disposed of at a registered landfill site, East London Regional Waste Disposal Site by Rec-Oil, if not collected by BCMM on a weekly basis. • A “clean site policy” must be adopted by all employees. |
| Hazardous waste management | | |
| During the operation phase, spillage/accidents during transport or handling of used oil/hazardous waste may result in pollution of the surrounding environment. | All | <ul style="list-style-type: none"> • All vehicles transporting used oil must be clearly labelled with the name and description of its contents. • The emergency preparedness and response plan must be made known to all drivers in the event that any vehicle accidents occur or spillages during the transport of used oil. • Any transport accidents that may result in leaks or spill of used-oil from the vehicles will require: <ol style="list-style-type: none"> 1. Emergency action to contain the spill material; and 2. Immediate steps must be taken to clear the road of any materials causing traffic congestion and delays*.¹ • All vehicles transporting used-oil must be equipped with a spill kit to contain and remediate any spillages which may occur. • Concretised/impermeable base and bunding must be constructed for all used-oil receiving and distribution areas. • All vehicles transporting waste oil must obtain necessary permissions in terms of the SA Road Transportation Act 74 of 1977 (RTA). |
| During the operation phase, inappropriate storage of the waste (used-oil) and/or sludge could result in spillages/leaks leading to surface, groundwater or soil contamination | All | <ul style="list-style-type: none"> • All used-oil and sludge must be stored in a waste storage area that must have firm, impermeable, chemical resistant floors and a roof. If there is no roofed area then all used-oil storage containers must be impermeable to prevent rain water from getting in contact with the waste. • The used-oil storage area must have a combined volume that amounts to 110% of the volume of the storage tanks within the storage area. • The used-oil storage area must have an impermeable interception trench or sump to collect all potential spills. This must be equipped with a screener/grids and an oil trap. |

¹ These actions must be undertaken as per the process detailed in the DWAF Minimum Requirements for the Handling, Classification and Disposal of Hazardous Waste.

| Issue | Alternative | Mitigation measure |
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| | | <ul style="list-style-type: none"> • All skips/bins containing hazardous waste must be labelled “hazardous waste”. • All storage areas must be equipped with a spill kit. |
| <p>During the operation phase there may be accidental spillages during the treatment of hazardous waste (used-oil) during boiling and centrifugation as well as disposal of wastewater to effluent system and sludge to waste skips.</p> | <p>Preferred treatment technology alternative 1</p> | <ul style="list-style-type: none"> • The boiler and centrifuges must be placed on impermeable bunded surfaces amounting to 110% of the volume of the contents within it to ensure that any spills will be contained within the bunded area. • Spill kits must be available on the premises at all times. • An Emergency Protocol must be in place, it must be known to all staff and the procedures followed in the event of spillages/leaks. • The waste skips where sludge will be disposed of must be placed within an impermeable bunded area. The waste skips should be monitored regularly for any leaks or spillages. • The sludge must be collected by a licensed service provider, Enviroserv on a monthly basis however, the frequency of removal required will be determined during the operation of the facility. • Receipt slips from a licensed service provider must be kept on site for record purposes. |
| <p>During the operation phase there may be accidental spillages or leaks during the treatment of hazardous waste (used-oil) through the settling tank process and disposal of wastewater to the evaporation ponds for biodegradation.</p> | <p>Alternative treatment technology 2</p> | <ul style="list-style-type: none"> • The settling tanks must be placed within an impermeable secondary containment that amounts to 110% of the volume of the tanks to ensure that spillages will be contained. • Evaporation ponds will need to be continually monitored for cracks/ leaks resulting in spillages of wastewater and sludge or during high rainfall periods. • The sludge must be collected by a licensed service provider, Enviroserv on a monthly basis however, the frequency of removal required will be determined during the operation of the facility. • Receipt slips from a licensed service provider must be kept on site for record purposes. • Spill kits must be available on the premises at all times. • An Emergency Protocol must be in place, it must be known to all staff and the procedures followed in the event of spillages/leaks. |
| <p>Handling, use, storage and transporting of hazardous substances</p> | | |
| <p>During the operation phase, inappropriate management of transporting of hazardous substances to and from the facility may result in accidental spillages and pollution of the environment.</p> | <p>All</p> | <ul style="list-style-type: none"> • Construct concretised base and bunding for oil receiving and distribution area. • Integrity of bunded areas must be maintained through regular inspections and immediate repairs of any cracks/leakage areas. • All transporters must be trained and know how to respond to accidental spillages. |
| <p>During the operation phase inappropriate use and storage</p> | | <ul style="list-style-type: none"> • Spill kits must be available and used in the event of |

| Issue | Alternative | Mitigation measure |
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| of hazardous substances in facilities complying with legislative specifications may result in the pollution of the surrounding environment. | | any spillages. <ul style="list-style-type: none"> Oil storage tanks must not be overfilled to the brim as oil expands during hot weather and may cause leakages. All processing equipment must be maintained in good working condition. |
| During the operation phase there may spillages during treatment and processing which may ultimately result in soil and water pollution. | | |
| Visual | | |
| During the operation phase, failure to implement good housekeeping and maintenance of all infrastructure may affect the aesthetic appeal of the area. | All + Preferred treatment technology alternative 1 | <ul style="list-style-type: none"> During the operation phase existing vegetation should remain where possible to act as a screen and limit the impact of the facility within the area. Appropriate walling or fencing that blends in with the surrounding neighbourhood and is not visually intrusive should be utilized and maintained. |
| During the operation phase, the presence of oxidation ponds can further reduce the aesthetic appeal of the area as the infrastructure does not blend in with the nature of the surrounding infrastructure/buildings and businesses. | Alternative treatment technology 2 | <ul style="list-style-type: none"> Good housekeeping should be maintained throughout the operational phase of the facility. |
| Noise | | |
| During the operation phase, there is likely to be some noise that is typically of industrial activities. | All | <ul style="list-style-type: none"> All operational activities must take place within working hours. |
| Air quality | | |
| During the operation phase, there is likely to be some air emissions from operational activities, storage of used-oil, storage of waste, storage of recycled product and trucks transporting oil to and from the site. | All + Preferred treatment technology 1 | <ul style="list-style-type: none"> Storage of all waste, substance and products must be done in such a manner so as to reduce any air emissions associated with these. A complaints register must be maintained on the site and all complaints must be recorded and addressed. All equipment, machinery and vehicles must be maintained in a good working condition so as to minimise any emissions emanating from them. |
| During the operation phase, there may be some odours associated with the evaporation ponds if the ponds are not managed properly. | Alternative treatment technology 2 | <ul style="list-style-type: none"> The bio-degradation process associated with the evaporation ponds must be managed properly to reduce any odours emanating from the ponds. |
| Traffic | | |
| During the operation phase, there is likely to be an increase in traffic in the area from staff and trucks transporting oil to | All | <ul style="list-style-type: none"> Traffic calming measures should be in place along approaching roads. Flagmen should be deployed when trucks are leaving the facility and entering Osmond Street. |

| Issue | Alternative | Mitigation measure |
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| and from the site. | | <ul style="list-style-type: none"> All trucks transporting used-oil must comply with all National Road Traffic Regulations. An Emergency Response plan must be in place that outlines and addresses both emergency action that is required and the remedial action that is required. This must be known to the drivers. All trucks must be equipped with fire extinguishers. |
| On-site fire risk | | |
| During the operation phase, there is the chance of fires which may harm staff and/or surrounding businesses/landowners. | All | <ul style="list-style-type: none"> Fire extinguishers must be placed throughout the site. No smoking or open flame should be permitted on the site. An Emergency Response Plan must be in place and must be known by all employees. |
| Socio-economic | | |
| During the operation phase, there may be an increase in employment opportunities and skills development. | All | <ul style="list-style-type: none"> No mitigation required. |
| During the operation there may be reduction in the amount of used-oil that is disposed to landfills and an increase in similar recycling businesses in the area which may reduce the use of scarce natural resources. | | <ul style="list-style-type: none"> No mitigation required. |
| Health and safety | | |
| During the operation phase, there is the potential for health of employees to be affected from accidents and/or exposure to hazardous waste, substances and emissions. | All | <ul style="list-style-type: none"> First aid kits must be available on site. All employees or personnel dealing handling hazardous waste or substances must wear the appropriate Personal Protective Equipment. |

6 ENVIRONMENTAL MONITORING

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (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 (f);

A monitoring programme should be implemented for the duration of the construction and operation of the project. This programme should include:

- Establishing a baseline of pre-construction site conditions validated with photographic evidence;
- Bi-monthly (fortnightly) monitoring during the first month of construction, where after monthly audits will be conducted by an independent ECO for the remainder of the construction phase to ensure compliance with the EMPr conditions, and where necessary make recommendations for corrective action. These audits can be conducted randomly and do not require prior arrangement with the Project Manager;
- Compilation of an audit report with a rating of compliance with the EMPr. The ECO must keep a photographic record of the demarcated site and construction area. The Contractor will be held liable for all unnecessary damage to the environment. A register must be kept of all complaints from the community. All complaints / claims must be handled immediately to ensure timeous rectification / payment by the responsible party; and
- Compilation of a final audit report after all site construction and rehabilitation is complete.

The following method statements/plans must be developed by the Contractor:

- Alien vegetation management plan;
- Rehabilitation plan; and
- Waste management plan.

The ECO will audit the Contractor's compliance with the specifications in the abovementioned plans.

7 ROLES AND RESPONSIBILITIES

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (i) An indication of the persons who will be responsible for the implementation of the impact management actions;

Applicant

Rec-Oil is the applicant and will therefore be the entity monitoring the implementation of the EMPr and compliance with the environmental authorisation. However, the Applicant's Project Manager may appoint a Contractor to implement the project and hence implement the proposed mitigation measures documented in this EMPr on their behalf.

The Applicant's Project Manager must:

- Ensure that all third parties who carry out all or part of the Applicant's obligations under the Contract comply with the requirements of this EMPr;
- Be responsible for obtaining any further environmental permits which are required for the design, construction and operation of the development; and
- Ensure that the infrastructure is maintained and functional during the operational phase of the development.

Contractor

The successful Contractor is responsible for:

- The finalisation of the EMPr in terms of methodologies (method statements) which are required to be implemented to achieve the environmental specifications contained herein and the relevant requirements contained in the environmental authorisation, if issued by DEDEAT;
- The overall implementation of the EMPr in accordance with the requirements of the environmental authorisation, if issued by DEDEAT;
- Ensuring that all third parties who carry out all or part of the Contractor's obligations under the Contract comply with the requirements of this EMPr; and
- Obtaining any environmental permits which are required for the design, construction and operation of the development.

Environmental Control Officer

For the purposes of implementing the conditions contained herein, the Applicant's Project Manager must appoint an Environmental Control Officer (ECO) for the contract. The ECO will be the responsible person for ensuring that the provisions of the EMPr as well as the conditions of the environmental authorisation are complied with during the construction period. The ECO will be responsible for issuing instructions to the contractor where environmental considerations call for action to be taken. The ECO will submit regular written reports to the applicant, but not less frequently than once a month.

The ECO's duties in this regard will include, inter alia, the following:

- Confirming that all the environmental authorisations and permits required in terms of the applicable legislation have been obtained prior to construction commencing;
- Monitoring and verifying that the EMPr, Environmental Authorisation and Contract are adhered to at all times and taking action if specifications are not followed;
- Monitoring and verifying that environmental impacts are kept to a minimum;

- Reviewing and approving construction method statements, where necessary, in order to ensure that the environmental specifications contained within this EMPr and environmental authorisation are adhered to;
- Inspecting the site and surrounding areas on a regular basis regarding compliance with the EMPr, the Environmental Authorisation and the Contract;
- Monitoring the undertaking, by the Contractor, of environmental awareness training for all new personnel on site;
- Ensuring that activities on site comply with all relevant environmental legislation;
- Undertaking a continual internal review of the EMPr and submitting any changes to the Applicant's Project Manager and/or DEDEAT (in case of major changes) for review and approval;
- Checking that the required actions are/were undertaken to mitigate the impacts resulting from non-compliance;
- Reporting all incidences of non-compliance to the Applicant's Project Manager;
- Keeping a photographic record of progress on site from an environmental perspective and recommending additional environmental protection measures, should this be necessary; and
- Providing feedback on any environmental issues at site meetings.

The ECO must have:

- A good working knowledge of all relevant environmental policies, legislation, guidelines and standards;
- The ability to conduct inspections and audits and to produce thorough, readable and informative reports;
- The ability to manage public communication and complaints;
- The ability to think holistically about the structure, functioning and performance of environmental systems; and
- Proven competence in the application of the following integrated environmental management tools:
 - Environmental Impact Assessment.
 - Environmental management plans/programmes.
 - Environmental auditing.
 - Mitigation and minimisation of impacts.
 - Monitoring and evaluation of impacts.
 - Environmental Management Systems.

The ECO must be fully conversant with this EMPr and the Environmental Authorisation (if issued) and all relevant environmental legislation.

The Applicant's Project Manager will have the authority to replace the ECO if, in their opinion, the appointed officer is not fulfilling his/her duties in terms of the requirements of the EMPr or this specification. Such instruction will be in writing and will clearly set out the reasons why a replacement is required and within what timeframe.

8 COMPLIANCE WITH THE EMPr

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (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);

A copy of the EMPr must be kept on site at all times during the construction and operation period. The EMPr will be binding on all staff operating on the site and must be included within the Contractual Clauses.

It should be noted that in terms of Section 28 of the National Environmental Management Act (No. 107 of 1998) those responsible for environmental damage must pay the repair costs both to the environment and human health and the preventative measures to reduce or prevent further pollution and/or environmental damage (The 'polluter pays' principle).

Non-compliance

The contractors must act immediately when notice of non-compliance is received from any government entity and corrective actions must be implemented. Complaints received regarding activities on the construction site pertaining to the environment must be recorded in a dedicated register and the response noted with the date and action taken.

The Contractor is deemed not to have complied with the EMPr if, inter alia:

- There is evidence of contravention of the EMPr specifications within the boundaries of the construction site, site extensions and roads;
- There is contravention of the EMPr specifications which relate to activities outside the boundaries of the construction site.
- Environmental damage ensues due to negligence;
- Construction activities take place outside the defined boundaries of the site; and/or
- The Contractor fails to comply with corrective actions or other instructions issued by the Engineer within a specific time period.

It is recommended that the Contractor institutes penalties for the following less serious violations and any others determined during the course of work as detailed below:

- Littering on site;
- Lighting of illegal fires on site;
- Persistent or un-repaired fuel and oil leaks;
- Any persons, vehicles or equipment related to the Contractor's operations found within the designated "no-go" areas;
- Excess dust or excess noise emanating from site;
- Possession or use of intoxicating substances on site;
- Any vehicles being driven in excess of designated speed limits;
- Removal and/or damage to fauna, flora or cultural or heritage objects on site; and
- Urination and defecation anywhere except at designated facilities.

Emergency preparedness

The Contractor must compile and maintain environmental emergency procedures to ensure that there will be an appropriate response to unexpected or accidental actions or incidents that will cause environmental impacts, throughout the construction period. Such activities may include, inter alia:

- Accidental discharges of polluting substances to water and land;
- Accidental exposure of employees to hazardous substances;
- Accidental fires;
- Accidental spillage of hazardous substances;
- Accidental toxic emissions into the air; and
- Specific environmental and ecosystem effects from accidental releases or incidents.

These plans must include:

- Emergency organisation (manpower) and responsibilities, accountability and liability;
- A list of key personnel and contact details;
- Details of emergency services available (e.g. the fire department, spill clean-up services, etc.);
- Internal and external communication plans, including prescribed reporting procedures where required by legislation;
- Actions to be taken in the event of different types of emergencies;
- Incident recording, progress reporting and remediation measures required to be implemented;
- Information on hazardous materials, including the potential impact associated with each, and measures to be taken in the event of accidental release; and
- Training plans, testing exercises and schedules for effectiveness.

The Contractor must comply with the emergency preparedness and incident and accident-reporting requirements, as required by the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), the NEMA, 1998 (Act No. 107 of 1998) and the National Water Act, 1998 (Act No. 36 of 1998) and/or any other relevant legislation.

Incident reporting and remedy

If a leakage or spillage of hazardous substances occurs on site, the local emergency services must be immediately notified of the incident. The following information must be provided:

- The location;
- The nature of the load;
- The extent of the impact; and
- The status at the site of the accident itself (i.e. whether further leakage is still taking place, whether the vehicle or the load is on fire).

Written records must be kept on the corrective and remedial measures decided upon and the progress achieved therewith over time. Such progress reporting is important for monitoring and auditing purposes.

Penalties to contractors

Where environmental damage is caused or a pollution incident, and/or failure to comply with any of the environmental specifications contained in the EMPr, the Project Applicant and/or contractor will be liable to pay a penalty fine.

The following violations, and any others determined during the course of work, should be penalised:

- Hazardous chemical/oil spill and/or dumping in non-approved sites;
- Damage to sensitive environments;
- Damage to cultural and historical sites;
- Unauthorised removal/damage to indigenous trees and other vegetation, particularly in identified sensitive areas;
- Uncontrolled/unmanaged erosion; and
- Pollution of water sources.

9 REPORTING

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (l) A program for reporting on compliance, taking into account the requirement as prescribed by the regulations;

Administration

The Contractor must provide the Applicant's Project Manager and/or the ECO with a written method statement, prior to the commencement of the construction phase, setting out the following:

- The type of construction activity;
- Locality where the activity will take place;
- Identification of impacts that might result from the activity;
- Identification of activities that may cause an impact;
- Methodology and/or specifications for impact prevention for each activity or aspect;
- Methodology and/or specifications for impact containment for each activity or aspect;
- Emergency/disaster incident and reaction procedures; and
- Treatment and continued maintenance of the impacted environment.

New submissions must be given to the Applicant's Project Manager and/or the ECO whenever there is a change or variation to the original.

The Applicant's Project Manager and/or the ECO should provide comment on the methodology and procedures proposed by the Contractor but they will not be responsible for the Contractor's chosen measures of impact mitigation and emergency/disaster management systems.

Good housekeeping

The Contractor must undertake "good housekeeping" practices during construction. This will help avoid disputes on responsibility and allow for the smooth running of the contract as a whole. Good housekeeping extends beyond the wise practice of construction methods to include the care for and preservation of the environment within which the construction activities are situated.

Record keeping

The Applicant's Project Manager and/or the ECO will continuously monitor the Contractor's adherence to the approved impact prevention procedures and the ECO must issue the Contractor a notice of non-compliance whenever transgressions are observed. The ECO should document the nature and magnitude of the non-compliance in a designated register, the action taken to discontinue the non-compliance, the action taken to mitigate its effects and the results of the actions. The non-compliance will be documented and reported to the Applicant's Project Manager in the monthly report. These reports must be made available to DEDEAT when requested.

Document control

The Applicant's Project Manager and/or the ECO will be responsible for establishing a procedure for electronic document control. The document control procedure should comply with the following requirements:

- Documents must be identifiable by organisation, division, function, activity and contact person;

- Every document must identify the personnel and their positions, who drafted and compiled the document, who reviewed and recommended approval, and who finally approved the document for distribution; and
- All documents must be dated, provided with a revision number and reference number, filed systematically, and retained for a five year period.

The Applicant's Project Manager and/or the Contractor must ensure that documents are periodically reviewed and revised, where necessary, and that current versions are available at all locations where operations essential to the functioning of the EMPr are performed. All documents must be made available to the ECO and other independent external auditors.

10 ENVIRONMENTAL AWARENESS

According to APPENDIX 4 of the EIA Regulations (2014) (as amended), an environmental management programme must include:

- (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

Contractors must ensure that their employees and any third party that carries out all or part of the Contractor's obligations are adequately trained with regard to the implementation of the EMP, as well as regarding environmental legal requirements and obligations.

Environment and health awareness training programmes should be targeted at three distinct levels of employment, i.e. project manager, supervisor and labour.

The appointed ECO must provide training and ensure that records of all training interventions are kept in accordance with the record keeping and documentation control requirements as set out in this EMP.

The environmental training should, as a minimum, include the following:

- Environmental legal requirements and obligations;
- The importance of conformance with all environmental policies;
- The environmental impacts, actual or potential, of their work activities;
- The environmental benefits of improved personal performance;
- Their roles and responsibilities in achieving conformance with the environmental policy and procedures, including emergency preparedness and response requirements;
- The potential consequences of departure from specified operating procedures;
- The mitigation measures required to be implemented when carrying out their work activities;
- Details regarding floral/faunal species of special concern and protected species, and the procedures to be followed should these be encountered during construction activities;
- The importance of not littering;
- The importance of using supplied toilet facilities;
- The need to use water sparingly; and
- Details of and encouragement to minimise the production of waste and re-use, recover and recycle waste where possible.

11 CLOSURE PLANNING

Final site restoration

The Contractor must clear and restore the site and ensure that all excess building material and construction debris is removed from site once the construction phase has been completed.

Rehabilitation

The Contractor (landscape architect/horticulturist) will be responsible for the rehabilitation and re-vegetation of all disturbed areas earmarked for conservation during construction to the satisfaction of the Applicant's Project Manager and/or the ECO.

Post-construction audit

A post-construction audit must be carried out for submission to the Applicant. Objectives should be to audit compliances with the key components of the EMPr, to identify the main areas requiring attention and recommend priority actions. The audit should be undertaken annually and should cover a cross section of issues, including implementation of environmental controls, environmental management and environmental monitoring.

Results of the audits should inform changes required to the specifications of the EMPr or additional specifications to deal with any environmental issues which arise on site and have not been dealt with in the current document.

12 CONCLUSIONS

Although all foreseeable actions and potential mitigations or management actions are contained in this document, the EMPr should be seen as a day-to-day management document. The EMPr thus sets out the environmental and social standards that would be required to minimise the negative impacts and maximise the positive benefits of the construction and operational activities.

All attempts should be made to have this EMPr available, as part of any tender documentation, so that the Engineers and Contractor are made aware of the potential cost and timing implications needed to fulfil the implementation of the EMPr, thus adequately costing for these.

The EMPr will be reviewed by the ECO on an on-going basis. Based on observations during site inspections and issues raised at site meetings, the ECO will determine whether any procedures require modification to improve the efficiency and applicability of the EMPr on-site.

Any such changes or updates will be registered in the ECO's records, as well as being included as an annexure to this document.



<http://www.webweaver.nu/clipart/environmental.shtml>

Reasons why should we look after the environment

-  We have a right to a clean environment
-  A clean environment is essential to healthy living
-  All our basic needs come from the environment
-  A contract has been signed – development vs the environment
-  Penalties / fines could be issued

How to look after the environment

- 🍃 Report issues
- 🍃 Teamwork
- 🍃 Follow the set rules and guidelines (EA, EMPr, Method statements etc.)
- 🍃 Conserve, reuse and recycle

Tips and Guidelines

- 🍃 Workers and equipment should not be allowed outside demarcated areas
- 🍃 No swimming or polluting of water bodies allowed
- 🍃 No damage / disturbance to vegetation or water bodies without consent / permits
- 🍃 No disturbance allowed in no-go areas
- 🍃 No hunting of animals
- 🍃 Report all fires
- 🍃 No burning or burying of waste
- 🍃 No smoking near hazardous materials
- 🍃 Training on fire fighting equipment
- 🍃 Hazardous materials to be stored in designated and bunded areas
- 🍃 Spill kits and drip trays a must
- 🍃 Report all spills
- 🍃 Control dust and Noise
- 🍃 Maintain construction vehicles
- 🍃 Availability and maintenance of sanitation facilities



Tips and Guidelines

- 🍃 Only eat in designated areas
- 🍃 Do not litter
- 🍃 Vehicles to remain on approved tracks and adhere to speed limit
- 🍃 Ensure emergency phone numbers are available
- 🍃 Ensure PPE is worn
- 🍃 Report fires, leaks and injuries
- 🍃 Ask if unsure



APPENDIX 2 METHOD STATEMENT

EXAMPLE OF A METHOD STATEMENT

METHOD STATEMENT

CONTRACT:..... **DATE:**.....

PROPOSED ACTIVITY (give title of Method Statement and reference number from the EMPr):

WHAT WORK IS TO BE UNDERTAKEN (give a brief description of the works):

WHERE ARE THE WORKS TO BE UNDERTAKEN (where possible, provide an annotated plan and a full description of the extent of the works):

START AND END DATE OF THE WORKS FOR WHICH THE METHOD STATEMENT IS REQUIRED:

Start Date:

End Date:

HOW ARE THE WORKS TO BE UNDERTAKEN (provide as much detail as possible, including annotated sketches and plans where possible):

*** Note: Please attach additional pages should you require more space.**

DECLARATIONS

1) ENVIRONMENTAL CONTROL OFFICER (ECO)

The work described in this Method Statement, if carried out according to the methodology described, is satisfactorily mitigated to prevent avoidable environmental harm:

(Signed)

(Print name)

Dated: _____

2) PERSON UNDERTAKING THE WORKS

I understand the contents of this Method Statement and the scope of the works required of me. I further understand that this Method Statement may be amended on application to other signatories and that the ECO will audit my compliance with the contents of this Method Statement

(Signed)

(Print name)

Dated: _____

APPENDIX 3: ALIEN VEGETATION MANAGEMENT PLAN

3.1 Background and Legislative Framework

Henderson (2001) provides the invasive status classification, as outlined in the Conservation of Agricultural Resources Act (No. 43 of 1983a), for 11 alien invasive plant species. These plants can be classified as Category 1, 2 or 3 species, and as a 'Declared Weed' or 'Declared Invader' according to their level of invasiveness in South Africa. The description of the abovementioned classifications are:

- Category 1 plants
 - Are prohibited and must be controlled.
- Category 2 plants
 - (Commercially used plants) may be grown in demarcated areas providing that there is a permit and that steps are taken to prevent their spread.
- Category 3 plants
 - (Ornamentally used plants) may no longer be planted; existing plants may remain, as long as all reasonable steps are taken to prevent the spreading there of, except within the floodline of watercourses and wetlands.
- Declared weed (category 1)
 - Prohibited on any land or water surface in South Africa.
 - Must be controlled, or eradicated where possible (except in biological control reserves).
- Declared invader (category 2)
 - Allowed only in demarcated areas under controlled conditions.
 - Import of propagative material and trading allowed only by permit holders.
 - Outside demarcated areas must be controlled, or eradicated where possible (except in biological reserves).
 - Prohibited within 30 m of the 1:50 year floodline of watercourses or wetlands unless authorization obtained.
- Declared invader (category 3)
 - No further plantings allowed (except with special permission).
 - No trade of propagative material.
 - Existing plants may remain but must be prevented from spreading.
 - Prohibited within 30m or the 1:50 year floodline of watercourses or wetlands, or as directed by the executive officer.

It is essential that alien invasive species be removed from the study area. Following the Working for Water guidelines for effective alien vegetation removal (DWAf, 2009), an alien removal programme should consist of the following three phases:

1. Initial control: Clearing and eradication of alien invasive stands so as to drastically reduce the existing population;
2. Follow-up control: Control of re-growth (including seedlings, root suckers and coppice growth); which should be conducted annually for the first 5 years; and
3. Maintenance control: Sustain alien plant numbers with on-going annual monitoring for the life of the project, and if necessary implement additional control methods to avoid re-establishment of alien invasive stands.

3.2 Potential Alien Invasive Plant Species on the proposed used-oil recycling facility site

The following species are known to occur in the area and may colonise soil that has been impacted. A list of potential alien invasive plant species is provided in the table below. Further detail on the approved methods for eradication are provided in the event that these species are identified on impacted areas.

Table 3.1 List of alien invasive species potentially encroaching on the site.

| Species name | Common name | Classification |
|----------------------------|------------------|-------------------------------|
| <i>Lantana camara L.</i> | Lantana | Declared Weed (category 1) |
| <i>Cestrum laevigatum</i> | Inkberry | Declared Weed (category 1) |
| <i>Solanum mauritianum</i> | Bugweed | Declared Weed (category 1) |
| <i>Ricinus communis</i> | Castor-oil plant | Declared invader (category 2) |
| <i>Acacia mearnsii</i> | Black wattle | Declared invader (category 2) |
| <i>Psidium guajava</i> | Guava | Declared invader (category 2) |
| <i>Eucalyptus sp.</i> | Blue gum | Declared invader (category 2) |
| <i>Melia azedarach</i> | Syringa | Declared invader (category 3) |

3.2.1 General Requirements

- Large trees should be cut with chain-saws or axes and the open stems poisoned to ensure that the plant dies and does not re-sprout (coppice);
- Cuttings must be burnt in an open clearing where the risk of spreading fire is minimal, in order to kill the seeds on the plants;
- Follow up to cleared site must be conducted every two months to remove upcoming seedlings;
- In cases where large scale alien plant removal has been conducted, measures to stabilise the soil from wind and water erosion must be taken. Soils may be mulched and planted with indigenous pioneer species; and
- Continued monitoring throughout the life of the project will be required as the risk of alien plant species invasion is never eliminated.

3.3 Weed Removal as part of initial control programme

There are a number of possible methods which can be used to control alien invasive species; these include mechanical, chemical and biological control. The sections below outline possible techniques used in mechanical and chemical control methods. Biological control is not a feasible option for this site, and is thus not discussed further. Table 4.2 (below) outlines specific management details for each of the alien invasive species identified on site.

3.3.1 Mechanical control methods

Mechanical methods for alien plant removal may include felling, removing or burning invading alien plants. The following mechanical methods for felling are recommended:

- Hand pulling: Grip the young plant low down and pull out by hand (using gloves);
- Ring barking: Bark is removed to from the bottom of the stem to a height of 0.75-1.0 m to below ground level. Bush knives or hatchets can be used for debarking;
- Frill or Ring-bark: Using an axe or bush knife, angled cuts are made downward into the cambium layer through the bark in a ring; herbicide is applied into the cuts; and
- Cut stump treatment: Stems should be cut as low as practical as stipulated on the herbicide label. Chemical herbicides are applied in diesel or water as recommended. Applications in diesel should be to the whole stump and exposed roots and in water to the cut area as recommended on the label.

3.3.2 Chemical control methods

Chemical methods for alien plant removal include using a number of approved environmentally safe herbicides, which are applied to the leaves, stems or stumps of alien invader species (details of herbicides suitable for the various species are provided in Table 3.2).

Table 3.2 Summary of methods to be used for removal of alien invasive species identified on site.

| Species name | Hand pull or hoe | Foliar Spray | | Cut stump and herbicide | Frill and herbicide |
|----------------------------|--------------------------------------|--------------|------------------------------|-------------------------|---------------------|
| | | Seedlings | Trees | | |
| <i>Lantana camara</i> L. | seedlings | Touchdown | Touchdown | Chopper | |
| <i>Cestrum laevigatum</i> | seedlings | | | Chopper | Chopper |
| <i>Solanum mauritianum</i> | seedlings and saplings | Touchdown | | Chopper | Chopper |
| <i>Ricinus communis</i> | | | | Confront (2%) | |
| <i>Acacia mernsii</i> | Seedlings | Touchdown | Garlon (young trees) | Timbrel 3A * | Timbrel 3A * |
| <i>Acacia longifolia</i> | seedlings and saplings up to 2m tall | Garlon | Garlon | Timbrel 3A * | Timbrel 3A * |
| <i>Acacia saligna</i> | seedlings and saplings | Touchdown | Garlon (young trees) | Timbrel 3A * | Timbrel 3A * |
| <i>Acacia cyclops</i> | seedlings and saplings | Garlon | Garlon (trees up to 2m tall) | | Timbrel 3A * |
| <i>Psidium guajava</i> | | | | Chopper | |
| <i>Eucalyptus</i> sp. | seedlings | | | Chopper | Chopper |
| <i>Melia azedarach</i> | seedlings | | | Chopper | Chopper |

3.4 Visual Manual for Alien Invasive Plant Species identification

The following plates provide a guide to the alien invasive plant species with the potential to invade the used-oil recycling facility site. Each species is described in terms of how it looks, timing of flowering and/or fruiting, its invasive status (as classified by the Conservation of Agricultural Resources Act (Act 43 of 1983a).

Guideline to *Lantana camara* (Lantana)

| | |
|---|--|
| Scientific name | <i>Lantana camara</i> L. |
| Common name(s) | Lantana |
| Description | Compacts, floriferous shrub or untidy scrambler up to 2 m or higher; stems often four-angled, usually covered with short, stiff hairs and recurved prickles, but sometimes unarmed |
| Leaves | Dark green, paler below, rough, hairy becoming ± glabrous, strong smelling when crushed |
| Flowers | Pink, red, crimson, orange, yellow or white in compact flat-topped heads, often with several colours in one head All year flowering |
| Fruits | Glossy green turning purplish-black, one-seeded, fleshy drupes |
| Invasive status | Transformer. Declared Weed (category 1). Herbicide registration |
|  | |
| Proposed control methods | |
| Seedlings | Hand pull or hoe over small areas Foliar spray |
| Mature or large plants | Foliar spray Cut stump and herbicide |

Guideline to *Cestrum laevigatum* (Inkberry)

| | |
|---|--|
| Scientific name | <i>Cestrum laevigatum</i> |
| Common name(s) | Inkberry |
| Description | Sparsely hairy, evergreen shrubs 1-2 m high or trees up to 15 m on the coast; leaves and stems bruise easily, emitting an unpleasant smell |
| Leaves | Light or dark green, mainly along the distal ends of branches |
| Flowers | Greenish-yellow in axillary clusters Flowering from October to May |
| Fruits | Berries 10 mm long, green turning purple-black |
| Invasive status | Transformers. Declared weed (category 1). Herbicide registration |
|  | |
| Proposed control methods | |
| Seedlings | Hand pull |
| Large trees | Single stemmed: Basal stem and herbicide All: Cut stump and herbicide |

Guideline to *Solanum mauritianum* (Bugweed)

| | |
|---|--|
| Scientific name | <i>Solanum mauritianum</i> |
| Common name(s) | Bugweed |
| Description | Unarmed, branched shrub or small tree 2-4 (-10) m high; all parts except older stems covered with a whitish-felty hairs |
| Leaves | Dull green and velvety above, white-felty beneath, up to 205 mm long x 100 mm wide, emit a strong smell when bruised; stipules ovate, 20 mm long |
| Flowers | Purple in compact terminal clusters, on dense felty stalks up to 100 mm long Flowering all year |
| Fruits | Globose berries 10 mm across, green turning yellow, in compact terminal clusters |
| Invasive status | Transformer. Declared weed (category 1). Herbicide registration |
|  | |
| Proposed control methods | |
| Seedlings and saplings | Hand pull Foliar spray |
| Big trees | Cut down and spray coppice Cut stump and herbicide Frill or ring-bark |

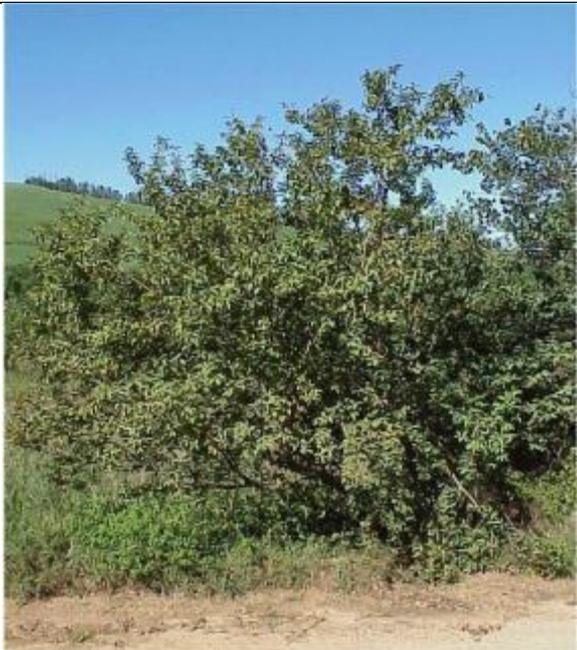
Guideline to *Ricinus communis* (Castor-oil)

| | |
|---|--|
| Scientific name | <i>Ricinus communis</i> |
| Common name(s) | Castor-oil plant |
| Description | Annual herb, softly woody shrub or small tree up to 4 m high, sap is not milky, leaf and flowering stalks often with a grey bloom |
| Leaves | Shiny, dark green or reddish, paler below, large up to 300 mm wide, palmately five- to nine-lobed, margins closely serrated, petioles up to 300 mm |
| Flowers | Reddish (upper), cream (lower), on stalks up to 150 mm long Flowering August- April (-all year) |
| Fruits | Green, brown or reddish, three-lobed capusules, 10-15 mm long, covered with soft spines, seeds silvery mottled-brown "beans" |
| Invasive status | Declared invader (category 2) |
|  | |
| Proposed control methods | Cut stump and poison with 'Confront' in a 2% solution. |

Guideline to *Acacia mearnsii* (Black wattle)

| | |
|--|---|
| Scientific name | <i>Acacia mearnsii</i> |
| Common name(s) | Black wattle |
| Description | Unarmed, evergreen tree 541 (-15) m high; branchlets shallowly ridged; all parts finely hairy, bipinnate; leaflets short (1.5-4.0 mm) and crowded; raised glands occur at and between the junctions of pinnae pairs |
| Leaves | |
| Flowers | Pale yellow or cream, globular flowerheads in large, fragrant sprays Flowering from August to September |
| Fruits | Dark brown pods, finely hairy, usually markedly constricted |
| Invasive status | Transformer. Declared invader (category 2). Herbicide registration. |
|  | |
| Proposed control methods | |
| Seedlings and saplings | Hand pull or hoe Foliar spray |
| Young trees | Foliar spray |
| Big trees | Cut stump Frill Stem treatment |
| Inaccessible trees | Stem treatment |

Guideline to *Psidium guajava* (Guava)

| | |
|--|--|
| Scientific name | <i>Psidium guajava</i> |
| Common name(s) | Guava |
| Description | Evergreen shrub or small tree 2-5 (-10) m high; branchlets four-angled and hairy |
| Leaves | Bronze turning light green, ovate to oblong-elliptic; often broad and rounded at both ends, with a small, pointed apex |
| Fruits | Edible. Many seeded berries, with a musky penetrating odour |
| Flowers | White, in groups of 1-3 Flowering from October- December |
| Invasive status | Transformer. Declared invader (category 2). Herbicide registration |
|  |  |
| Proposed control methods | |
| All trees | Cut stump and herbicide |

Guideline to *Acacia cyclops* (rooikrans)

| | |
|--|---|
| Scientific name | <i>Acacia cyclops</i> |
| Common name(s) | Red eye or Rooikrans |
| Description | Unarmed, evergreen, rounded shrub or small tree 1.5-4 (-6) m high; sometimes very low and wind-clipped at the coast |
| Leaves | Phyllodes, bright green, nearly straight |
| Fruits | Brown pods, as broad as leaves, 8-12 mm wide, not constricted, curved and finally twisted, persisting after seeds shed; seeds are encircled by a double row of bright red or orange fleshy stalks |
| Flowers | Bright yellow, globular flowerheads Sporadic flowering, October- February (- all year) |
| Invasive status | Transformer. Declared Invader (category 2). Herbicide registration |
|  |  |
| Proposed control methods | |
| Seedlings and saplings | Hand pull or hoe Foliar spray |
| Trees up to 2m tall | Cut low down Foliar spray |
| Large trees | Cut low down Frill |

Guidelines to *Eucalyptus* sp.

| | |
|--|--|
| Scientific name | <i>Eucalyptus</i> sp. (most likely <i>Eucalyptus camaldulensis</i>) |
| Common name(s) | Bluegum or Red river gum |
| Description | Evergreen tree 18-40 m high with a spreading crown and smooth, mottled, white or grey bark, often tinged red in very cold localities |
| Leaves | Pale, dull green; adult leaves 120-220mm long, narrow, pendulous; juvenile leaves smaller and broader; twigs and petioles red |
| Flowers | Cream with long-exserted stamens, buds conical, egg-shaped or beaked to 10 mm long Flowering September-January (-all year) |
| Fruits | Brown to reddish-brown capsules 7-8 mm long, with prominent rims and protruding triangular valves |
| Invasive status | Transformer. Declared invader (category 2). Herbicide registration |
|  |  |
| Proposed control methods | |
| Seedlings | Hand pull |
| Coppice | Foliar spray |
| Felled trees | Cut stump and herbicide Frill |

Guideline to *Melia azedarach* (Syringa)

| | |
|--|--|
| Scientific name | <i>Melia azedarach</i> |
| Common name(s) | Syringa |
| Description | Deciduous, spreading tree up to 23 m high; bark on young stems reddish-brown and smooth |
| Leaves | Deep green, glossy above, turning yellow in autumn; odd-pinnate, leaflets serrated and sometimes lobed |
| Fruits | Berries, green turning yellow, thinly fleshy, becoming wrinkled and persisting after leaves fall |
| Flowers | Lilac, +-10 mm long, with purplish central column, in large, terminal, heavily perfumed sprays Flowering September-November |
| Invasive status | Transformer. Declared invader (category 3). Herbicide registration. |
|  | |
|  | |
|  | |
| Proposed control methods | |
| Seedlings | Hand remove |
| All trees | Cut stump and herbicide Frill |

Source: Henderson (2001), ISSG (2006) and WESSA (2006)

APPENDIX 4 EMERGENCY PREPAREDNESS AND RESPONSE PLAN

4.1 Purpose of emergency preparedness plan

This document covers the emergency preparedness plan for the **Rec-Oil Used-oil Recycling Facility**. The emergency preparedness plan covers identifying, eliminating and mitigating incidents, injuries and impacts relating to accidental spillage, fires, flooding, and equipment malfunction during the operation of the facility.

4.2 Possible emergency activities and impacts resulting from the activity

| Activity | Impacts | Equipment Requirements |
|--|--|--|
| Oil spills and leakages from the storage, handling, transport and disposal of hazardous substances | <ul style="list-style-type: none"> – Contamination of soil, surface and/or ground water – Health impact | <ul style="list-style-type: none"> – Oil spill response kit on site and in each transporting vehicle |
| Fires | <ul style="list-style-type: none"> – Danger to individuals on site – Impact on neighbouring properties – Loss of plant/ infrastructure/ services – Impact on surrounding natural environment | <ul style="list-style-type: none"> – Adequate firefighting equipment onsite and each transporting vehicle |
| Vehicle accidents | <ul style="list-style-type: none"> – Injury to drivers or general public | <ul style="list-style-type: none"> – First aid kit in all transporting vehicles |
| Natural disaster (excessive rain) | <ul style="list-style-type: none"> – Flooding | <ul style="list-style-type: none"> – Adequate drainage system |
| Equipment accidents and injury | <ul style="list-style-type: none"> – Injury to workers | <ul style="list-style-type: none"> – First aid kit and trained first aider |

4.3 Equipment requirements

- A trained first aider with sufficient first aid kit must be available on site;
- Selected staff must be trained in basic firefighting onsite;
- Fire extinguishers strategically placed around the facility;
- An oil spill kit is available onsite;
- Emergency contact details (fire department, ambulance, police etc.) must be available onsite; and
- Emergency incidents register kept on site where all incidents are recorded in detail.

4.4 Mitigation measures/methodology to address impacts

4.4.1 Oil spills

In the event that an oil spill occurs on site the following procedure must be followed:

- The spill must be contained immediately using the spill kit which should contain absorbent pads, bags etc;
- The sources of the spill/leak must be stopped immediately;
- Any contaminated soil must be removed and stored in an impermeable container or skip for hazardous waste. The soil must then be disposed of at a registered hazardous waste disposal site or collected by Enviroserv; and
- The supervisor must report the incident to the manager as soon as possible.

4.4.2 Fires

In the event of a fire on site the following procedure must be followed:

- All persons must head to the assembly point where a rollcall will be taken;
- The trained fire team must immediately report the incident to the manager;
- Immediate steps must be taken to extinguish the fire; and
- In the event that the fire is becoming severe, the fire department must be contacted immediately.

4.4.3 Vehicle accidents

All vehicle drivers must adhere to the following:

- Vehicles must be driven in compliance with traffic regulations at all times and stick to speed limits;
- Passengers are only allowed to travel in seats with functioning seatbelts;
- All passengers must wear seat belts at all times while the vehicle is in motion. It is the driver's responsibility to ensure that everyone is complying;
- Only work related people can be transported. No lifts can be provided for friends, relatives etc. without prior permission;
- When a vehicle is parked, driver's must ensure that all personal valuables, such as bags, clothes and any other items including equipment are kept out of sight and that the vehicle is locked; and
- Talking on a cell-phone while driving is not permitted. The driver must pull over into a safe area to complete the call.

In case of an accident, the following applies:

- If there is no immediate threat to safety from staying near the scene, record the address, contact and licence details of the other driver and witnesses to the accident. The driver should immediately contact the Manager and, unless instructed otherwise, the driver should report the incident to the police and follow their instructions;
- All accidents which involve an insurance claim must be reported to the police within 24 hours of the accident. The driver is responsible for obtaining a case number from the police and this must be handed to the Manager;
- If there is immediate threat to safety, the driver and passengers should leave the scene of the accident promptly and report it to the nearest police station;
- If in an accident and able to, the driver and passengers should move away from the vehicle; and
- If anyone is injured and requires medical assistance, the number on the Travel insurance card should be phoned for immediate medical attention.

All incidents that result in injury or property damage must be reported to the Manager or as soon as possible, with an incident report completed within one week of the accident

4.4.4 Natural disaster (flooding)

In the event of flooding on site the following evacuation procedure must be followed:

- All persons must head to the assembly point where rollcall will be taken; and
- The supervisor must immediately report the incident to the manager.

4.4.5 Equipment accidents and injury

In the event of equipment malfunction and injury the following procedure must be followed:

- The operator is instructed to switch the machine off immediately on the emergency stop buttons;
- The first aider must be contacted immediately; and
- In the event of a severe injury, an ambulance must be called immediately.

It is essential that training on the relevant aspects of the emergency response plan is provided during induction to ensure that they are aware of the necessary procedures. Specific training will need to be given to staff involved in certain activities which may lead to emergency activities. Specific training will include:

- Basic first aid;
- Basic fire-fighting;
- Pollutant spill containment and removal; and
- Handling, storage and disposal of hazardous waste.

4.5 Emergency contact details

| Department | Contact Details |
|--|--|
| Buffalo City Fire Department | Fleet Street, East London, 5201 Tel: 043 705 9000 |
| National Police | Tel: 101011 |
| Ambulance/Metro Control Room | Tel: 10177 |
| Public Hospital – Frere Hospital | Main Road, Amalinda, East London, Eastern Cape, South Africa 043 709 1111 |
| Private Ambulance – Dynamic Medical Emergency Services | Tel: 043 726 2225 |
| ER 24 Hours - Life Beacon Bay Hospital | 32 Quenera Drive, Beacon Bay North, East London, 5205 Tel: 043 711 5100 |
| ER 24 Hours – Life St Dominic’s Hospital | 24 Gately Street, Southernwood, East London, 5213 Tel: 043 707 9000 |
| Traffic Department | Tel: 043 705 9333 |
| Disaster Management | Tel: 043 743 7118 |
| Poison Information Centre | Tel: 021 931 6129 |