READY MIX CONCRETE BATCHING PLANT

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COMPILED BY:
Victor Manavhela
Biogeotech Environmental Services (Pty,Ltd)
01 Goldengroove
Cnr Oosthuizen and Leiphodt
Germiston
1401
Cell: 072 130 2932
E-mail: info@biogeotech.co.za / VManavhela@biogeotech.co.za

TABLE OF CONTENTS

GLOSSARY OF TERMS ..... **ii**

ABBREVIATIONS ..... **iv**

1. INTRODUCTION **1**

1.1 Project Location 2

1.2 Purpose and Objectives of the Environmental Management Programme (EMPr) 5

1.3 DETAILS OF THE ENVIRONMENTAL MANAGEMENT PRACTITIONER 6

2. LEGAL FRAMEWORK **7**

3. MANAGEMENT AND MONITORING PROCEDURES **10**

3.1 Organisational Structure and Responsibility 10

3.2 EMPr Training and Awareness 12

3.3 Complaints Procedure 12

3.4 Reporting Procedure 13

3.5 Monitoring of Impact Management Actions 13

3.6 Responsible persons 13

3.7 Time period for implementing impact management actions 13

3.8 Mechanism for monitoring compliance 13

4. ENVIRONMENTAL MANAGEMENT PROGRAMME **14**

Table 1: Impacts to be mitigated in their respective phases 15

5 ENVIRONMENTAL AWARENESS PLAN **33**

5.1 Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work. 33

5.2 Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment. 34

5.3 Site Inductions 34

5.4 Toolbox talks 34

6 MECHANISMS FOR MONITORING COMPLIANCE **35**

6.1 Monitoring of Impact Management Actions 35

6.2 Monitoring and reporting frequency 35

6.3 Responsible persons 35

6.4 Time period for implementing impact management actions 35

6.5 Mechanism for monitoring compliance 35

7 CONCLUSION **39**

GLOSSARY OF TERMS

ALIEN VEGETATION: undesirable plants which shall include, but not limited to, all declared category 1 and 2 listed invader species as set out in the Conservation of Agricultural Resources Act (CARA) regulations. Other vegetation deemed to be alien shall be those plant species that shoe the potential to occupy in numbers, in any area within the defined construction area and which are declared to be undesirable.

AUDITING: Systemic, documented periodic and objective evaluation to ensure that the Environmental Management Plan is implemented appropriately and that the maintenance activities comply with the stipulations of the Plan, whether the stipulations are effective or not. If the stipulations are not effective in that they do not achieve the desired outcome of the maintenance process in comparison with the original state of the environment, the EMP needs to be revised. Also referred to as Compliance Auditing or Compliance Monitoring.

BUNDED AREA: the area enclosed by the bund wall around a liquid storage tank.

CONTRACTOR: Companies and or individua persons on behalf of the Client to undertake activities, as well as their sub-contractors and suppliers.

CONSTRUCTION ACTIVITY: a construction activity is any action taken by the contractor, his subcontractors, suppliers or personnel during the construction process.

DOMESTIC WASTE: waste, excluding hazardous waste, that emanates from the premises that are used wholly or mainly for residential, educational, health care, sport or recreational purposes generated directly by the consumption of products for domestic use

EMERGENCY: an undesired event that results in a probable significant environmental impact and requires the notification of the relevant statutory body such as local or provincial authority

ENVIRONMENT: the surroundings within which humans exist and that could be made of :-

i. The land, water and atmosphere of the earth;
ii. Micro-organisms, plant and animal life;
iii. any part or combination of (i) and (ii) and the interrelationships among and between them; and
iv. The physical, chemical, aesthetic and cultural properties and conditions of the foregoing that influence human health and well-being.

ENVIRONMENTAL IMPACT: an impact or environmental impact is the change to the environment, whether desirable or undesirable, that will result from the effect of a construction activity. An impact may be the direct or indirect consequence of a construction activity.

ENVIRONMENTAL CONTROL OFFICER: an individual nominated through the client to be present on site to act on behalf of the client in matters conserning the implementation and day to day monitoring of the EMPr and conditions stipulated by the authorities as prescribed in NEMA

ENVIRONMENTAL MANAGEMENT PROGRAMME: a detailed plan of action prepared to ensure that recommendations for enhancing or ensuring positive environmental impacts and limiting or preventing negative environmental impacts are implemented during the life cycle of the project.

GENERAL WASTE LANDFILL SITE: A waste disposal site that is designed, managed, permitted and registred to allow for the disposal of general waste.

HAZARDOUS WASTE: Any waste that contains organic or inorganic elements or compunds that may, owing to the inherent physical, chemical and toxicological characteristics of that waste, have a detrimental impact on health and the environment.

INCIDENT: An undesired event which may result in a significant environmental impact but can be managed through internal response.

MITIGATION: measures designed to avoid, reduce or remedy adverse impacts

WASTE: waste is any substance, whether or not that substancecan be reduced, re-used, recycled and recoverd:-

i. that is surplus, unwanted, rejected, discarded, abandoned or disposed of
ii. which the generater has no further use of for the purposes of production
iii. that must be treated or disposed off; or
iv. that is identified as a waste by the relevant Minister by notice in the Gazette, and includes waste generated by the mining, medical or other sector, but;-
    - a by-product is not consideed waste
    - any portion of waste, once re-used, recycled and recovered, ceases to be waste

WASTE DISPOSAL FACILITY: any site or premises used for the accumulation of waste with the purpose of disposing of that waste at that site or on that premises

ABBREVIATIONS

EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPR	Environmental Management Programme
OHSA	Occupational Health and Safety Act
PPE	Personal Protective Equipment

1. INTRODUCTION

Afrimat Readymix proposes to erect a mobile batching plant on erf 4886, Macassar for commercial use to service the Khayelitsha, Strand and Somerset West area. A total of 9ha is being is needed for the yard, and thus only a portion of the entire erf measuring 90 632.13m2 will be utilised for this development. The site is located next to the Zandvliet Waste Water Treatment Works, East of the R310 (Baden Powell Drive) and opposite Sandvlei Smallholdings, situated in the City of Cape Town Municipal area.

The yard will consist of 2x 100ton silos on foundation, one karoo batching plant, two 6X2 mobile containers, a water scale, admix scale, loader ramp and one loader on site. An existing gravel road of approximately 6m wide runs adjacent to the site and will be utilised as an access road, the road currently provides access to the existing sand mine to the south of the proposed development.

A total area of 3900m^2 is needed for the proposed batching plant and the applicant is still considering including other activities in the future for the 9ha, and thus only a portion of the entire erf 4886, measuring 90 632.13m^2 will be utilised for this development. The Readymix Batching yard will consist of:

- 2x 100 ton silos on foundation
- 1x Karoo Mobile Batching Plant including a hopper and conveyor belt
- 2x 6x2 Mobile containers
- Water scale
- Admix scale
- Loader ramp
- 1x Loader
- Wash-out bunker
- 2x water recycling ponds
- Water storage tanks (Jojo tanks)
- Dry-out bunker
- Parking area
- Aggregate storage area
- Additive storage

The majority of the infrastructure is mobile, with built structures being restricted too:

- Foundations or footings
- Walling to form the aggregate bins
- Floor and walls enclosing the wash-out and dry-out bunkers, and water recycling ponds
- Surface sealing (cement) of all wet and spillage areas to facilitate drainage of spillage and run-off to the dry-out bunker and water recycling ponds.

An existing gravel road of approximately 6m wide runs adjacent to the site. The road is currently utilised by the existing sand mine to the South of the Erf 4886, Macassar. The existing road will be utilised as an access road to the proposed Readymix Batching Plant.

Operational Process

The following outlines the process:

(i) Delivery to Site:

- Sand and aggregates are delivered to the site and stored in aggregate bins according to aggregate size.
- Cement is delivered to the site and stored in the silos.
- Additive mixture ("admixture") is delivered to the site and stored in a tank.

(ii) Weighing and discharging materials into a truck mixer:

- Sand and aggregates are loaded via a front-end loader into an aggregates weigh-hopper and then conveyed and discharged into a truck-mixer.
- Cement from the silo is discharged via a totally enclosed cement screw conveyor into the truck-mixer.
- Water and admixture is measured and pumped into the truck-mixer.

(iii) Mixing and delivery:

- The truck mixer capacity is limited to 5-6m³, with such quantity constituting a "batch" or load.
- All "mixing" takes place within the mixer unit mounted on the truck chassis. Mixing commences prior to leaving the plant in order that the mixture ("slumps") are checked and corrected (e.g. addition of water) at the checkpoint.
- On leaving the plant, mixing continues en-route to the final destination where the concrete is poured.

(iv) Mixer-truck return, washing and reloading:

- Subsequent to delivery, mixer-trucks return, with mixer drums being washed (wash-out bay) prior to being reloaded for the next delivery.

1.1 Project Location

The site is located approximately 1.3km from Macassar and the township of Khayelitsha. The Erf 4886, Macassar is located directly on Macassar Road (M9), 830m east of the R310 (Baden Powell Drive), directly east of the Zandvliet Waste Water Treatment Works and opposite the Sandvlei Smallholdings.

Locality of the site are shown on the images below.

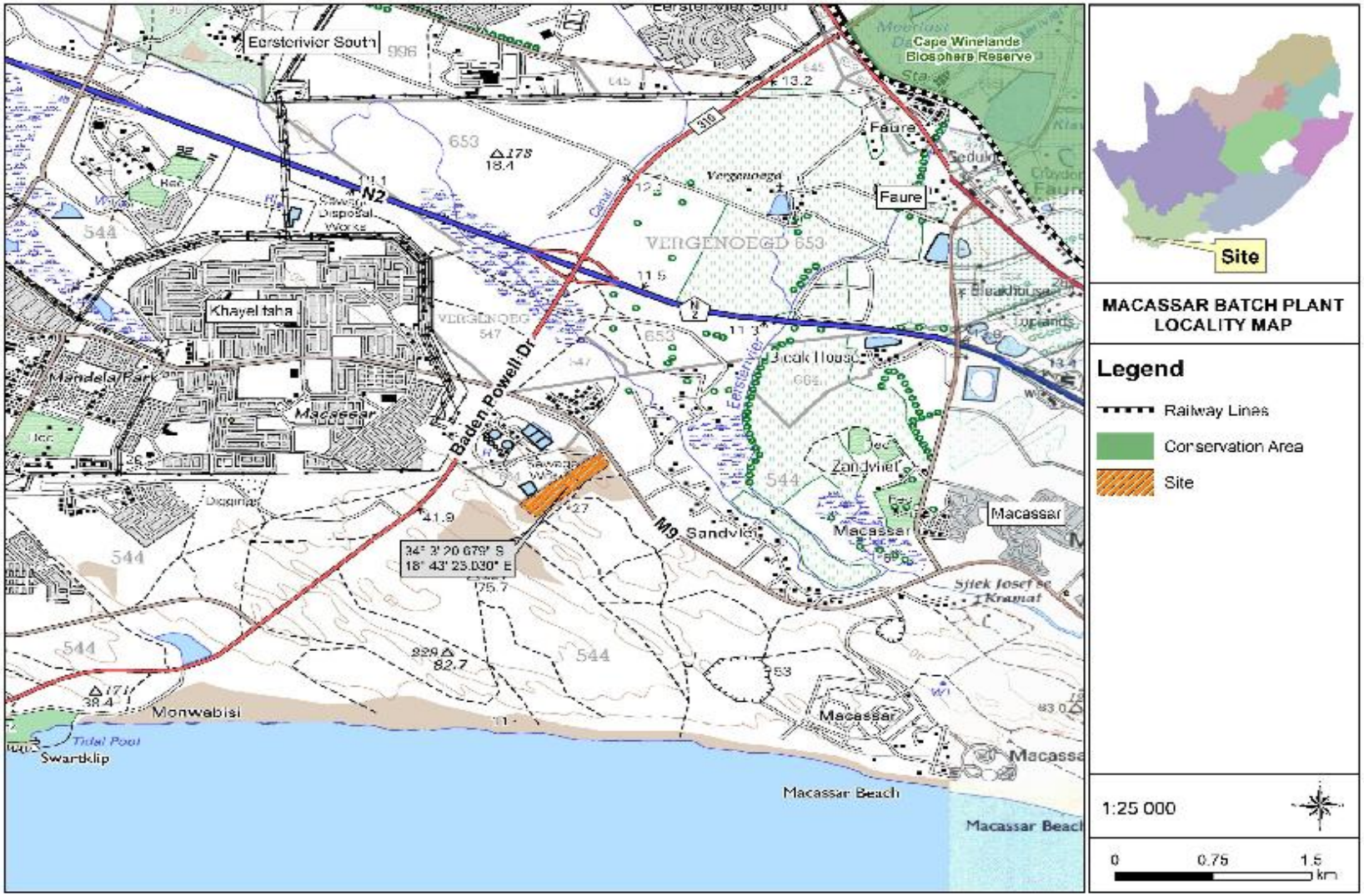
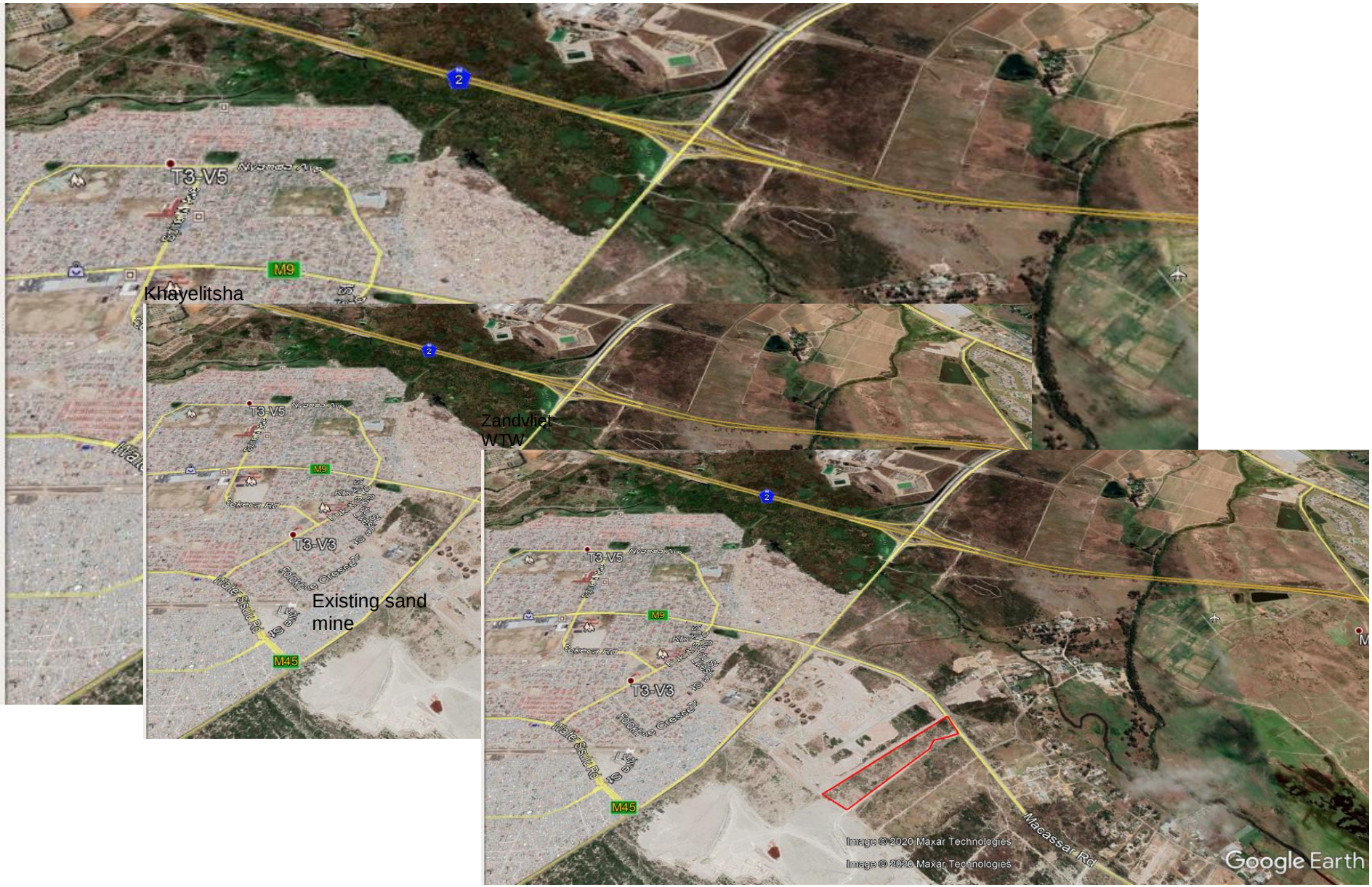


Figure 1: Locality Map


T3-V5
M9
Khayelitsha
Zandvliet WTW
T3-V3
Existing sand mine
M45
Image © 2020 Maxar Technologies
Google Earth

1.2 Purpose and Objectives of the Environmental Management Programme (EMPr)

The purpose of this EMPr is to provide an easily interpreted reference document that ensures that the project environmental conditions, safeguards and mitigation measures from the environmental planning documents, project approval and scope of works are implemented. It aims to minimise the impacts associated with the proposed Readymix batching plant operation. This includes ensuring that mitigation measures are implemented, to ensure continuous monitoring of the operational phase, and to ensure the involvement of interested and affected parties (I&APs) in a meaningful way.

This EMPr document should be used as a working document and will always be made available at the site office. The stipulations and provisions of this report should be conveyed to and familiarised by the site senior personnel (site manager) and workers responsible throughout the operation.

The key objectives of the EMPr/Draft BAR are:

- To assign clear accountability and responsibility for environmental protection and social responsibility to management and employees
- To facilitate environmental planning throughout the life cycle of the Readymix batching plant
- To provide a process for achieving targeted performance level in terms of environmental management.
- To provide appropriate and sufficient resources, including training, to achieve targeted performance levels on an on-going basis;
- To outline mitigation measures and environmental specifications which are required to be implemented for all phases of the project in order to minimise the extent of environmental impacts
- To prevent long-term or permanent environmental degradation

This document should therefore be seen as a guideline that will assist in minimizing the potential environmental impact of the anticipated activities to occur during the construction and operational phases of the proposed Readymix batching plant.

1.3 DETAILS OF THE ENVIRONMENTAL MANAGEMENT PRACTITIONER

Table 1: Details of the Environmental Assessment Practitioner

Consultant:	Biogeotech Environmental Consultance
Contact Person:	Victor Manavhela
Postal Address	Biogeotech Environmental Services (Pty,Ltd) 01 Goldengroove Cnr Oosthuizen and Leiphodt Germiston 1401
Telephone:	072 130 2932
E-mail:	info@biogeotech.co.za / vmanavhela@biogeotech.co.za
Expertise:	Mr Victor Manavhela hold a Bachelor of science: Environmental Sciences, Certificate of Environmental Law and Certificate: EIA Reviewers course. He has over 20 years in the field of environmental management and sustainability. Out of the 20 years, at least over 6 years were spent on EIA regulations which include review of EIA applications to advice on EIA decisions at government level. He has also worked as an Environmental specialist for Anglo American company in Pulp and Paper industry. In addition he also holds the vast experience in ISO standards implementation and has participated in global standard development for Aluminium mining and processing sector led by IUCN.

2. LEGAL FRAMEWORK

Several rules and regulations apply to the protection of the environment and contain environmental principles and standards that need to be applied as well as permits and licenses that need to be obtained. This EMPr will be subject to regulatory control under a range of State, Provincial and Local regulations. Such legislation largely embraces pollution prevention, resource use and conservation, and cultural (heritage) protection. This chapter reviews legislation pertaining to the Readymix batching plant operation:

LEGISLATION	SECTION	DESCRIPTION RELATING TO THE EXISTING QUARRY
The Constitution of South Africa	Section 24	Environmental rights.
National Environmental Management Act (No 107 of 1998 [as amended])	Section 24	Provides for the prohibition, restriction and control of activities which are likely to have a detrimental effect on the environment.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
National Environmental Management: Waste Act (No. 59 of 2008)		Waste management measures and the remediation of contaminated land.
Environment Conservation Act (No 73 of 1989) and regulations	Sections 19 and 19A	Prevention of littering by employees and subcontractors during construction and the operational phases of the existing quarry.
National Environmental Management Biodiversity Act (Act No. 10 of 2004)		The management, protection and conservation of South Africa's biodiversity and it's components
National Environmental Management: Air Quality Act (No 39 of 2004)	Section 32	Control of dust
	Section 34	Control of noise
	Section 35	Control of offensive odours
National Water Act (No 36 of 1998) and regulations	Section 19	Prevention and remedying the effects of pollution
	Section 20	Control of emergency incidents

Hazardous Substances Act (No 15 of 1973) and regulations		The storage and/or use of substances which may cause injury or ill-health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products and radioactive material.
Occupational Health and Safety Act (No 85 of 1993)	Section 8 and 9	Protection of health and safety of persons at work and for the health and safety of persons in connection with the use of plant and machinery; the protection of persons other than persons at work, against hazards to health and safety arising out of or in connection with the activities of persons at work.
	Section 9	General duties of employers and self-employed persons to persons other than their employees
National Heritage Resources Act (No 25 of 1999) and regulations	Section 34	No person may alter or demolish any structure or part of a structure which is older than 60 years without a permit issued by the relevant provincial heritage resources authority.
	Section 35	No person may, without a permit issued by the responsible heritage resources authority destroy, damage, excavate, alter, deface or otherwise disturb any archaeological or palaeontological site.
	Section 36	No person may, without a permit issued by the South African Heritage Resource Agency (SAHRA) or a provincial heritage resources authority destroy, damage, alter, exhume, remove from its original position or otherwise disturb any grave or burial ground older than 60 years which is situated outside a formal cemetery administered by a local authority. "Grave" is widely defined in the Act to include the contents, headstone or other marker of such a place, and any other structure on or associated with such place.

	Section 38	This section provides for Heritage Impact Assessments (HIAs) of existing developments

3. MANAGEMENT AND MONITORING PROCEDURES

3.1 Organisational Structure and Responsibility

3.1.1. Afrimat Readymix's responsibility for EMPr implementation

Afrimat Readymix (referred to as "Afrimat" for the remainder of the document) remains ultimately responsible for ensuring that the operation is implemented according to the requirements of the EMPr. Afrimat is responsible for ensuring that sufficient resources (time, financial, human, equipment, etc.) are available to the other role players (contractor/s if any) to efficiently perform their tasks in terms of the EMPr. Afrimat is liable for restoring the environment in the event of negligence leading to damage to the environment.

Afrimat must ensure that the EMPr is included in the tender documentation so that contractors who are appointed are bound to the conditions of this EMPr. When adjudicating relevant tenders, Afrimat must ensure that the contractors have made appropriate allowance for the management of environmental matters. Afrimat includes adherence to the EMPr as a contractual condition in all agreements with contractors. To this end, Afrimat will undertake the following:

- Educate its personnel, contractors and visitors with regard to the SHE requirements applicable in general to the existing Site;
- Provide professional staff to give effect to its safety, health and environmental management commitments;
- Undertake monthly internal EMPr compliance inspections and annual audits during the operational phase. These inspections and audits will include all activities associated with the Readymix batching plant;
- Monitor, evaluate and report performance in safety, health and environmental protection to the relevant management level;
- Maintaining a public complaints register

3.1.2 Environmental Control Officer (ECO)

Afrimat currently has its own Environmental Specialists in house who serve under this role. The Environmental Control Officer (ECO) is appointed to monitor the implementation of this EMPr and ensuring compliance with this EMPr. The ECO forms part of the project team and is involved in all aspects of project planning that can influence environmental conditions on the site. The ECO attends relevant project meetings, conducts inspections to assess compliance with the EMPr and is responsible for providing feedback on potential environmental problems associated with the development. Considering the nature of the baseline environment and the existing activities, the ECO does not have to be based on

site on a full time basis. The ECO can visit the site on a monthly basis or as when required to be on site. In addition, the ECO is responsible for:

- Liaison with relevant authorities;
- Liaison with contractors regarding environmental management;
- Undertaking routine monitoring and appointing a competent person/institution to be responsible for specialist monitoring, if necessary;
- Take appropriate action if the specifications contained in the EMPr are not followed;
- Monitor and verify that environmental impacts are kept to a minimum, as far as possible;
- Review and approve construction methods (where it could result in environmental impacts), with input from the Site Manager where necessary;
- Ensure that activities on site comply with all relevant environmental legislation;
- Order the removal from the construction site of any person(s) and/or equipment in contravention of the specifications of the EMPr; and
- Report any non-compliance or remedial measures that need to be applied to the appropriate environmental authorities, in line with the requirements of the Environmental Authorisation.

The ECO has the right to enter the site and undertake monitoring and auditing at any time, subject to compliance with health and safety requirements applicable to the site (e.g. wearing of safety boots and protective gear).

3.1.3 The Contractor (including subcontractors)

The contractor/s appointed will receive a copy of the EMPr at the time of the tender. Contractors familiarise themselves with the mitigation measures for the site and ensure that contracting prices allow for environmental management costs.

Upon appointment it is the responsibility of Afrimat to ensure that contractors receive a copy of the EMPr in their place of work. It will also be their responsibility to ensure that all staff are aware of all the measures applicable to their area of work. In addition the contractors will have the responsibility of:

- Complying with the environmental management specifications;
- Adhering to any instructions given by the Site Manager;
- Keep record of all incidents that have occurred during the construction period. This should be available during audits;
- Maintain a public complaints register;
- The contractor shall arrange for the site induction on the Environmental Awareness issues before commencement of the project;
- Records of all training sessions including names, dates and information presented should be kept by the contractor.

3.2 EMPr Training and Awareness

Afrimat will inform all employees of any environmental risks which may result from their works and risks that must be dealt with in order to avoid pollution or the degradation of the environment through the implementation of the company (Afrimat) Environmental Policy. Training needs are identified based on the available and existing capacity of site personnel (including the Contractors and Sub-contractors) to undertake the required EMPr management actions and monitoring activities. It is vital that all personnel are adequately trained to perform their designated tasks to an acceptable standard.

The environmental training is aimed at:

- Promoting environmental awareness;
- Informing employees of all environmental method statements, policies and programmes applicable;
- Provide generic training on the implementation of environmental management specifications;
- Providing job-specific environmental training in order to understand the key environmental features of the site and surrounding environment.

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

- 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;
- The mitigation measures required to be implemented when carrying out their work activities.

In the case of permanent staff the Site Manager provides evidence that such induction courses have been presented. In the case of new staff (including contract labour) the Site Manager informs the supervisor when and how he/she intends concluding his environmental training obligations. All environmental training are kept in the environmental file on site.

3.3 Complaints Procedure

A complaint and environmental incident registers is kept on site, including the actions they take in response to these complaints. All complaints are reported to the relevant departments.

A register of public complaints is kept by the Site Manager. This register is placed in a separate file containing the following information where it has been supplied by the plaintiffs:

- Name, address and contact telephone number;
- Nature and the description of the complaint;
- Date and time of the complaint; and
- How the complaint was resolved or followed up.

3.4 Reporting Procedure

A dedicated file will be established by the Contractor for the development to contain all documentation pertaining to environmental management of the works.

The following documentation must be kept on site in order to record compliance with the EMPr:

- Record of Complaints;
- Monitoring results;
- Non-conformance Reports;
- Written Corrective Action Instructions;
- Notification of Emergencies and Incidents.

3.5 Monitoring of Impact Management Actions

A monitoring programme will be in pace not only to ensure compliance with the EMPr through the contract/work instruction specifications, but also to monitor any environmental issues and impacts which have not been accounted for in the EMPr that are, or could result in significant environmental impacts for which corrective action is required. Afrimat will carry out the internal audits.

Afrimat will stipulate the period and frequency of monitoring required. This will be determined from applicable permits and authorisations from authorities. The Site Manager will ensure that the monitoring is carried out.

3.6 Responsible persons

Afrimat has its own Environmental Specialists and Officers as well as SHEQ Officers under the Sustainability Department. These officials serve as independent Environmental Control Officers to its subsidiaries. These officials serve as an external auditor/s responsible for ensuring that all necessary environmental monitoring required for the Readymix Batching Plant is undertaken as per the monitoring programmes. The Site Manager and other staff allocated for certain monitoring activities also assist in required monitoring on site.

3.7 Time period for implementing impact management actions

Impact Management is undertaken in each respective phase in which it would be applicable. In terms of monitoring, each management action is implemented immediately after the monitoring reporting has been undertaken.

3.8 Mechanism for monitoring compliance

Monitoring programmes to be developed.

4. ENVIRONMENTAL MANAGEMENT PROGRAMME

The following tables form the core of this EMPr for the construction and operation of the Readymix batching plant. This EMPr entails recommendations and mitigation methods for all the phases of the Readymix batching plant. The operational phase is estimated to be approximately 15 years (market dependent). Compliance with this EMPr will be audited monthly to ensure compliance with the proposed mitigation measures for the site. During the construction and operation of the Readymix batching plant impacts may occur on soils, natural vegetation, surface water, ground water, sensitive landscapes, air quality, noise, visual aspects and sites of archaeological and cultural importance should the EMPr not be adhered to.

Afrimat will undertake measures to ensure that the identified impacts are minimized. Assessment of the impacts with the proposed mitigation measures has shown the significance of the impacts on all affected environmental aspects to be reduced to low and have negligible significance if mitigation measures are implemented.

Table 1: Impacts to be mitigated in their respective phases

PLANNING PHASE		
ACTIVITY / ISSUE	**MITIGATION MEASURES**	**RESPONSIBLE PERSON**
Appointment of an ECO	• The Developer (Afrimat Readymix) must appoint an independent Environmental Control Officer (ECO) who must monitor the contractor's compliance with the EMPr. • The developer must provide the contractor and sub-contractors with a copy of the EMPr.	Developer (Afrimat Readymix)
EMPr	• The EMPr must be made binding to the main contractor as well as individual subcontractors and should be included in tender documentation for the construction contract. • A copy of this EMPr must be kept on site.	Developer, ECO
Flow of Information	• Adjacent landowners should be informed one month in advance of construction activities commencing in the vicinity of their properties. • Site notices must be erected around the development and at all entrance / exit points.	Contractor
Environmental Protection Plan	• Within **21 days of the Commencement Date**, the Site Contractor shall prepare and submit to the Project Manager/Site Manager for approval in consultation with the ECO an Environmental Protection Plan. The Plan shall cover all environmental protection works and shall also include descriptions of environmental safeguards and emergency procedures. • The Plan shall include a description of the administrative structure and lines of communication which shall be established between the Contractor's and his	Developer, ECO and Contractor

	subcontractors' workforce for the implementation of environmental protection procedures. Details of the expertise available for the implementation of environmental protection procedures must also be provided.
	• In addition, this plan must have a site layout plan and showing the final positions and extent of all permanent and temporary site structures and infrastructure, including:
	  ○ Buildings
	  ○ Contractors accommodation
	  ○ Contractors camp
	  ○ Roads and access routes
	  ○ Gates and fences
	  ○ Essential services (permanent and temporary water, electricity and sewage)
	  ○ Rubble and waste rock storage and disposal sites
	  ○ Site toilets and ablutions
	  ○ Firebreaks
	  ○ Excavations and trenches
	  ○ Topsoil stockpiles
	  ○ Spoil areas
	  ○ Construction materials stores
	  ○ Vehicle and equipment stores
	  ○ No go areas and buffers
	• All temporary and permanent water management structures including bunds and sumps.	

Environmental Awareness and Training	• The Contractor shall ensure that all site personnel have a basic level of environmental awareness training. Topics covered should include:	Developer, Contractor and ECO

	▪ What is meant by "Environment" ▪ Why the environment needs to be protected and conserved ▪ How construction activities can impact on the environment ▪ What can be done to mitigate against such impacts ▪ Awareness of emergency and spills response provisions ▪ Social responsibility during construction, e.g. being considerate to local residents o It is the contractors responsibility to provide the site foreman with environmental training and to ensure that the foreman has sufficient understanding to pass this information onto the construction staff o Training should be provided to the staff members in the use of the appropriate fire-fighting equipment. Translators are to be used where necessary. o Use should be made of environmental posters on site. o The need for a housekeeping also needs to be explained to the workers. o Staff operating equipment (such as excavators, loaders etc.) shall be adequately trained and sensitised to any potential hazards associated with their tasks. o The Contractor must monitor the performance of construction workers to ensure that the points relayed during their introduction have been properly understood and are being followed. • The Contractor shall establish his construction camps, offices and any other infrastructure as per the agreed site layout plan in a manner that does not adversely affect the environment.	

	• The Contractor shall submit a method statement for site clearance for approval by the Project Manager/Site Manager in consultation with the ECO. Site establishment shall take place in an orderly manner and all required amenities shall be installed at camp sites before the main workforce move onto site. • The construction camp shall have the necessary ablution facilities with chemical toilets at the commencement of construction activities to the satisfaction of the Project Manager/Site Manager. The Contractor shall inform all site staff to make use of supplied ablution facilities and under no circumstances shall indiscriminate sanitary activities be allowed other than in supplied facilities. • Safe drinking water for human consumption shall be available at the site offices and at other convenient locations on site. All water on site must be taken from a legal source and comply with the recognised standards for potable and other uses. Potable water on site must be clearly labelled.	
Environmental Incidents	• The Contractor must take corrective action to mitigate an incident appropriate to the nature and scale of the incident and must also rehabilitate any residual environmental damage caused by the incident or by the mitigation measures themselves.	ECO, Contractor
Emergency Preparedness	• If chemicals in sufficient quantity and toxicity have the potential to be released on the construction site, emergency contingency plans should be prepared as safety measures (i.e. bunded areas). These safety measures should be communicated to the relevant personnel on the construction site. All hazardous installations require a Risk Assessment in terms of the Occupational Health and Safety Act (Act No. 85 of 1993) for construction sites. Risk assessments must be updated after an incident occurs on site or when deemed necessary by the Site Manager or ECO.	Engineer, ECO
Sewage	• Provision of adequate sanitation facilities located outside of any natural water	Developer, Contractor, ECO

	flow / drainage lines or its associated buffer zone.	
Rehabilitation	• Rehabilitation of cleared surfaces and landscaping should as far as possible make use of indigenous vegetation. • Rehabilitation of damage/impacts that arise as a result of the construction phase must be implemented immediately upon completion of construction. • Rehabilitation plans must be submitted and approved for rehabilitation of any damage caused during the construction phase and that plan must be implemented immediately upon completion of construction. • Any cordon off area that are under rehabilitation must be treated as no-go areas using danger tape and steel droppers. If necessary, these areas should be fenced off to prevent vehicular, pedestrian and livestock access. • The use of environmentally friendly fertilizers and pesticides is recommended during maintenance of an area.	
CONSTRUCTION PHASE		
Clearing of site for construction	• Topsoil must be stockpiled separately during the clearance of the site. • Existing roads must be used to reduce soil erosion caused by vegetation clearance. • Selective bush clearing must take place. Indigenous vegetation which does not interfere with the construction of the Readymix Batching Plant should be left undisturbed. • Any intended vegetation clearance must be submitted as a plan of action to the ECO. The vegetation clearance should be in line with the botanist study. The ECO must ensure that sensitive vegetation species are conserved. • The Engineer must identify and demarcate the exact clearing of the Readymix Batching Plan area to ensure that minimum debushing takes place. • Where possible, all existing trees that fall outside of the earthworks should be conserved. These will assist in softening the local visual impact and aid in visual	Contractor, ECO and Engineer

	screening.	
Site Establishment	• Adequate ablutions should be supplied for workers. • Chemical toilets must be provided at least 100m from any natural drainage lines and must be regularly serviced to avoid spills or leaks into groundwater. • Potable water should be supplied. • Care should be taken that no erosion occurs on site. • To eliminate vegetation destruction, the main construction camp must be placed in an area that is already disturbed and not sensitive. • The camp will require rehabilitation at the end of the contract. **Toilet facilities, waste water and refuge disposal** • An adequate number of portable/chemical toilets shall be supplied. Regular inspections shall be carried out to ensure toilets are kept hygienic. • Toilets are to be cleaned once a week. • Toilet paper shall be supplied to all toilets. • Staff shall be advised to use the provided toilets at all times. • Refuse generated from the campsite, construction area, storage area or any other area shall be collected and placed in a suitably closed container within a designated area. • A litter patrol around the construction camp will take place every second day to collect any litter that may have been strewn around. • Refuse containers will be emptied on a regular basis by a certified waste disposal contractor and taken to a licensed waste disposal facility. Safe disposal certificates will be kept on record. • Refuse containers to be closed at all times to avoid attracting vermin. • The pilling of any material that could potentially cause a bad odour will be not be permitted on site.	Contractor

	Provision of water • Sufficient potable water shall be provided for drinking, and ablutions. • Great care must be taken to avoid contamination of the water supply. • No abstraction of water must take place from any surrounding water courses or wetlands without permission from the Department of Water Affairs.	
Establishment of construction camp	• Locate construction camps in areas that are already disturbed or where it is not necessary to remove established vegetation. • Utilise existing screening features such as dense vegetation stands to place construction camps and lay-down yards out of the view of sensitive receptors. • Construction camps to be kept neat, clean and organised at all times. Ensure good housekeeping is practiced on site. • Screen the construction camp and laydown yard by enclosing the area with a dark green or black shade cloth of no less than 2m in height. • Where areas are going to be disturbed through the removal of vegetation, the vegetation occurring in the area must be salvaged and kept in a controlled environment for future re-planting in the disturbed areas as a measure of rehabilitation. • The construction camp, office and storage areas for material and equipment must be fenced off to prevent impacts and human interference. • The construction team shall at all times exercise due care and diligence not to damage fences, roads, tracks, buildings, hedges and trees. All damage shall be fixed depending on the type of damage and the responsible party. • To minimise air and noise pollution, the construction team shall only use equipment that is in a good condition, all equipment to be properly maintained and pre-start checklist to be carried out before use thereof. • Disturbance or disruption of the daily lives of the surrounding local community	Contractor and Construction Workers

	and their livelihood (including dust and noise) shall be minimised in so far as is possible and practical. • Fire breaks must be constructed on the inside perimeter of the camp to prevent fires from spreading from the site as well as fires entering the site from adjacent land. • The Contractor will ensure that the site is maintained in a neat and tidy condition at all times.	
Destruction of vegetation	• All invasive plant species must be removed from the site. Landscaping after construction and during the rehabilitation phase must be done with indigenous vegetation. • No fires are allowed on site. No fires are allowed with the intent to destroy the flora on site and surrounding properties.	Contractor, ECO
Storage and Handling of Hazardous Substances	• Before containment or storage facilities can be erected, the Contractor shall inform the Engineer of proposed preventative measures to mitigate against pollution of the surrounding environment. • The preferred method shall be a concrete floor that is bunded. • The proposal shall indicate emergency procedures to be implemented in the event of misuse or spillage of substances that will negatively impact on the environment. • All the necessary handling and safety equipment required for the safe use of chemicals on site shall be provided by the Contractor to the workforce whose duty it is to maintain and manage the machinery and equipment on site. • Identified hazardous chemical substances shall be stored under controlled conditions. • Materials Safety Data Sheets (MSDS) must be available for all chemicals on site. • All hazardous materials will be stored in a secured, appointed area that is	Contractor

	fenced and has restricted entry. • The Contractor shall provide proof that relevant authorisation to store such substances has been obtained from the relevant authority. • Hazard signs indicating the nature of the stored material must be clearly displayed on the storage facility. • In the event of a spillage, the Contractor is to appoint someone to clean up immediately. Spill kits must be provided on site. Once a spill kit has been used a new one must be ordered. • All hazardous substances must be clearly marked. • Areas where hazardous materials or substances are stored must be bunded to 110%.	
Erosion and Landscaping	• Natural areas adjacent to site must be rehabilitated and/or maintained. • No cutting or removal of indigenous vegetation adjacent to the Readymix Batching Plant area. • Building levels of the concrete surface must be planned and adequately sloped for surface runoff into the water recycling pit to minimise erosion of the surrounding soils. • All topsoil must be removed prior to construction and stockpiled closed to site for use during the rehabilitation phase. • Dust suppression is necessary for stockpiles – dust suppression through either water or a biodegradable chemical binding agent.	Contractor, ECO and Engineer
Use of Herbicides	• The use of herbicides shall be restricted to the removal and control of alien vegetation, and shall not be permitted in areas identified as sensitive areas by the Botanist study. • The use of herbicides shall be in compliance with the terms of the Fertiliser, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1974 (Act No. 36 of 1974). In terms of this Act, a registered pest control operator shall apply	Contractor, ECO

	herbicides, or shall supervise the application of herbicides.	
OPERATIONAL PHASE		
Soil and Groundwater Contamination	• Store all hydrocarbons on a hardened surface to contain spillages • Strict procedures for hydrocarbon management of the site must be developed and adhered to. • The oil/spill/leak must be cleaned immediately and any contaminated soil must be removed and disposed off through a recognisable waste disposal method • Used oil must be disposed off in accordance with the correct procedures. • All equipment that has the potential for spillages or leakages shall be equipped with drip-trays. • Ensure that care is taken to ensure that spillages of oils and effluent are limited during maintenance. In the event of a spill/leak, the source of the spill or leak must be identified and correctly addressed.	Site Manager, ECO
Vegetation management	• Avoid the unnecessary disturbance of the surrounding vegetation by means of fencing. • The batching plant surface should be properly sealed and bunded to prevent soil contamination. If needed, it should also be properly screened to prevent cement dust from settling on the adjacent vegetation. • Consider search and rescue of indigenous succulent and bulb species prior to construction for transplanting in the adjacent disturbed/degraded area. • Encourage the re-establishment of strandveld vegetation on the remainder of property and control aliens as a long-term management requirement and discourage further development. Please note that it is a legal requirement for landowners to clear alien vegetation on their land.	Site Manager, ECO

Possible increase in alien and invasive plants	• Edge effects arising from the proposed development, such as erosion and alien plant species proliferation, which may affect adjacent natural areas, need to be strictly managed. Specific mention in this regard is made of Category 1b and Category 2 AIP species (as listed in the NEMBA Alien species lists, 2016 and 2020 from March 2021), in line with the NEMBA Alien and Invasive Species Regulations (2014) (Appendix F of this report). For any activities taking place after 1 March 2021, the Alien and Invasive Species Regulations of 2020 apply; • Ongoing alien and invasive plant monitoring and clearing/control should take place throughout the operational phase, and the project perimeters should be regularly checked for AIP establishment to prevent spread into surrounding natural areas; and • Alien vegetation that is removed must not be allowed to lay on unprotected ground as seeds might disperse upon it. All cleared •	Site Manager, ECO
Servicing and Maintenance of site Vehicles	• Maintenance and servicing of vehicles on site will be done by the Afrimat Workshop team. All maintenance and servicing to be done on a concrete or impermeable surface. • Construction vehicles must be well maintained and serviced to minimise leakages and spills. • Drip trays are to be used during the service of a vehicle. Drip trays to be placed beneath all machinery on site when not in use or parked. • Used parts such as filters should be contained and disposed of by the Afrimat Workshop team or at a licenced hazardous waste facility. Safe disposal slips to be kept on file.	Site Manager/Contractor
Water Management	• Ensure that water service agreement is in order • Water conservation measures such as low flow taps, high pressure hoses, duel flush toilets, water wise gardens, rainwater tanks etc. must be encouraged and	Site Manager, ECO

	implemented. • Every reasonable effort must be made to reduce the long-term water demand. • Environmental training of personnel must include water conservation awareness. • A monthly water monitor program with the aim of ever reducing the water usage must be implemented (records must be kept). •	
Energy Management	• All reasonable steps must be taken to ensure the efficient management of energy. Energy management and conservation measures must be propagated and encouraged. The objective of energy management will be to encourage the conservation of energy, for example: o Install energy-efficient appliances (e.g. a grade one refrigerator is at least 35% more energy-efficient than a grade three one). o Install energy efficient lightning (which uses less energy to give the same amount of illumination and last longer than conventional incandescent bulbs). o Disconnect or switch- off units/appliances which are not in use. o Monitor different energy uses (e.g. electricity, fuels and/or gas).	Site Manager, ECO
Storm water management	• No aggregate to be placed in close proximity or within any natural storm water drainage lines on site. • The concrete area of the Readymix Batching Plant must be sloped to allow any water on site to drain directly into the water recycling pit. • Water recycling pit must be large enough to contain the runoff water from the Readymix Batching Plant area.	Site Manager, Engineer
Heritage management	• Should any unmarked burials be exposed during construction, potential custodians must be trekked, consulted and relevant rescue/ relocation permits must be obtained from Heritage Western Cape/SAHRA and or Department of Health before any grave relocation can take place. Furthermore, a professional archaeologist must be retained to oversee the relocation process in accordance with the National Heritage Resources Act 25 of 1999. • Should chance archaeological materials or human burial remains be exposed	Site Manager

	during subsurface construction work on any section of the proposed development laydown sites, work should cease on the affected area and the discovery must be reported to the heritage authorities immediately so that an investigation and evaluation of the finds can be made. The overriding objective, where remedial action is warranted, is to minimize disruption in construction scheduling while recovering archaeological and any affected cultural heritage data as stipulated by the NHRA regulations.	
Traffic Impact	• It must be ensured that a backlog of traffic does not develop at the access points during peak hours, through the implementation of an efficient and effective access control system.	Site Manager, Engineer
Crime, Safety and Security	• The security fence around the development site must be completed before commencement of the operation. • The security fence must be inspected daily to ensure no illegal entry points were created. • The appropriate PPE (Personal Protective Equipment) must be worn at all times by all personnel on site. • Any open trenches or pits must be rehabilitated immediately to avoid injuries to pedestrians and animals. • The site and crew are to be managed in strict accordance with the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993) and the National Building Regulations. • A security service must be employed on site. • Ensure that emergency contact details are clearly displayed on site. • Access control to be implemented at the entrance and exit points of the Readymix Batching Plant facility. • Appropriate notification signs must be erected, warning residents and visitors about the hazards around the site and the presence of heavy vehicles and	Site Manager

	machinery. • Staff must be regularly updated of the safety procedures on site. Toolbox Talks to take place each morning.	
Noise pollution	• The Readymix Batching Plant operations must comply with the relevant local by-laws regarding health and noise. Noise levels should comply with the SANS Code of Practice (recommended noise levels). • Noise control measures must be practiced during the operation of the Readymix Batching Plant. • Maintain machinery in good working order. • Construction equipment may only operate between 08h00 and 17h00 weekdays. The operation is prohibited on Sundays and public holidays. • A complaints register must be kept on site and any complaints from the public must be adequately addressed. • Machinery must be fitted with noise reduction equipment.	Site Manager, ECO
Air Pollution	• Covering of sand loads when transported to the batching plant • Sprinklers appropriately mounted on dust generating equipment • Surface wetting of movement areas • Fitting of dedicated filtration/ extraction units on cement silos	Site Manager, ECO
Waste Management	• Ensure segregation of hazardous wastes from non-hazardous. • During the construction phase, temporary storage of construction waste to be stored in a bunded designated area. • No burning of refuse wastes are on the premises or on surrounding premises • All hazardous material must be carefully stored and then disposed of offsite at the licensed hazardous landfill site • Separate sealable waste skips/ bins for the different waste streams must be available on site	ECO, Site Manager

	• Waste bins must be emptied on a regular basis as to ensure bins do not overflow. • No littering will not be permitted on site and general housekeeping should be enforced • Site must be kept clean and free of rubbish that could potentially attract animal pests and that bins are scavenger proof. • Separate waste skips/ bins for the different waste streams must be available on site • Solid and chemical waste generated from construction and operational phases and the development must be kept away from drainage line • DO not dump waste of any nature, or any foreign material into any drainage line or stream • All waste to be disposed off at a suitably registered waste disposal facility • A suitable and registered waste service provider must remove all waste materials off site. • Proof of disposal to be obtained and kept on record •	
Visual Impact	• The generation of dust will be minimised by the regular water of roads and work areas should the need arise. • No fires will be allowed on site. • Bare surfaces must be rehabilitated as soon as possible with indigenous vegetation that will be able to grow in the area. • Vehicles used during the operation of the Readymix Batching Plant must be kept in good working condition to avoid being the source of excessive fumes and nuisance. • All vehicles transporting aggregate must be covered with green or black shade cloth or tarpaulin before leaving and entering the site.	Site Manager**,** ECO

	• Speed limits displayed along and within the site must be adhered to at all times.	
Employment of Workers, skills training and procurement of construction materials	• During community engagement/information dissemination, emphasis must be placed on the fact that permanent employment is directly related to the feasibility of the batch plant operation. • Strict adherence to Labour legislation (in terms of the employment of minors etc.) must at all times be made. • Maximise and monitor local recruitment where required. • Promote employment of women and youth. • Train locally recruited construction workers for longer-term employment where possible. • Support economic diversification through development of alternative markets.	Site Manager
Topsoil	• Control through restricting the footprint to be used • Prevent through restricting the disturbed area • Control through rehabilitation by replacing topsoil on the stripped land before the next strip is opened and mined. • Control by restricting topsoil stockpiles to 0.5m in height and must not be compacted • Control through implementation of storm water management measures • Soil stripping should forbidden on areas not required for mining work • Separately stockpiling subsoils and overburden to be returned for backfilling in the correct soil horizon order	Site Manager**, ECO**
Soil erosion	• Prevent through restricting the disturbed area • Prevent through restricting spillage from vehicles collecting concrete mix • Control through removal of all utilisable soil and storage of the same	Site Manager**, ECO**

	• Control through implementation of stormwater management • Prevent through establishment of runoff cut-off trenches and detention ponds on the down-slope side of mine. • Progressive rehabilitation will be implemented • Areas where vegetation has been removed or damaged should be lightly ripped with a vlegploeg or similar implement in order to release buried seed and organic material. • Locally collected seeds may be added.	
• Accidental fires	• No fires will be permitted on site for any reason. If required, a designated smoking area will be provided, and clearly demarcated and signposted, with a facility for safe containment and disposal of cigarette butts. • The following measures must be implemented: • Adequate firefighting equipment must be available on site and in good working order (including at least one type ABC (all purpose) 2.5 kg fire extinguisher and 3 fire beaters per working area). The persons on site must be trained in the use of such equipment. • Provide a list of all authorities involved in firefighting in the region. This list must include emergency contact numbers and must be visible at the site office. •	• Site Manager, ECO
DECOMISSIONG PHASE		
• Rehabilitation	• Stockpiles must be removed during the decommissioning phase, the area ripped and the top soil returned to its original depth to provide a growth medium • Rehabilitation of cleared surfaces, plant area and landscaping should be as far as possible make use of indigenous vegetation.	• Site Manager, Contractor

	• Repair all erosion damage as soon as possible and in any case not later than six months before the termination of the Maintenance Period to allow for sufficient rehabilitation growth. • Cordon off areas that are under rehabilitation as no go areas using danger tape and steel droppers. If necessary, these areas should be fenced off to prevent vehicular, pedestrian and livestock access. • The use of environmentally friendly fertilizers and pesticides is recommended during maintenance of area • Roads that can and will be used by other users post closure should, however, be left provided this is agreed upon by all parties concerned.	

5 ENVIRONMENTAL AWARENESS PLAN

5.1 Manner in which the applicant intends to inform his or her employees of any environmental risk which may result from their work.

General environmental awareness will be promoted among everyone working at the Readymix Batching Plant (including consultants and contractors) that encourages them to implement environmentally sound practices throughout the construction and operational phase.

This will ensure that environmental incidents are minimised and environmental compliance maximised.

The objectives of the Environmental Awareness Plan are as follows:

- To inform employees, contractors of any environmental risks which may result from their work;
- To inform employees and contractors of the relevant environmental procedures and actions required to be taken;
- To improve the knowledge of employees and provide the relevant training.

Environmental requirements are included in any operational contracts, thereby making employees aware of the potential environmental risks associated with the activities and the necessity to prevent potential environmental incidences by the implementation of good housekeeping practices.

The environmental awareness plan communicates the following:

- Importance of conformance with the environmental policy, procedures and other requirements of good environmental management;
- The significant environmental impacts and risks of an individual's work activities and the environmental benefits of improved performance;
- Individual's roles and responsibilities in achieving the aims and objectives of the environmental policy; and
- The potential consequences of not complying with environmental procedures.

All employees and contractors undergo induction, a part of which is environmental awareness training. At the end of this training, personnel are required to sign a register noting their completion of the training and their understanding thereof.

All personnel performing tasks which can cause significant or major environmental impacts are competent on the basis of training, education and/or experience. This applies to, but is not limited to, supervisor level and above.

Environmental awareness training includes the identification of significant environmental impacts, actual or potential, which their work activities could result in, as well as mitigation and prevention measures. Training is appropriate to the activity of individual employees. Monthly environmental topics are generated to raise awareness of employees on environmental issues and presented during the toolbox talk sessions before commencement of the day's activities.

5.2 Manner in which risks will be dealt with in order to avoid pollution or the degradation of the environment.

The EMPr details commitments in order to avoid pollution or the degradation of the environment. Compliance to and implementation of the management and mitigation measures contained in this EMPr. Compliance with the EMPr commitments forms part of the daily operations of the Readymix Batching Plant, and a copy of the EMPr commitments are provided to the contractors. Employees are also briefed regarding the EMPr commitments prior to the commencement of operations. In addition to this, monitoring by the internal Environmental Representative as well as by an external auditor.

5.3 Site Inductions

All employees undergo environmental awareness induction training on appointment. All records of such training are kept on the environmental file. Refresher induction training must periodically take place.

5.4 Toolbox talks

Regular meetings (recommended to be done daily, at least once a week) communicating the following are recommended:

- Findings of environmental performance reports;
- Awareness raising campaigns discussing environmental topics; and
- Information of any environmental risk which may result from employee's work.

Emergencies and risks that should be listed here, as a minimum, include: accidents, fires, spillages (hydrocarbon).

Communication is vital in an emergency and thus communication devices, such as mobile phones, radios, pagers or telephones, should be available around the site. A checklist of emergency response participants will be consulted and the relevant units notified.

- Fire department;
- Police;
- Emergency health services such as ambulances, paramedic teams, poisons centres;
- Hospitals, both local and for evacuation for specialist care;
- Public health authorities; and
- Environmental agencies, especially Department of Water and Sanitation (DWS).

6 MECHANISMS FOR MONITORING COMPLIANCE

6.1 Monitoring of Impact Management Actions

Afrimat Readymix will implement an ongoing monitoring programme for its proposed operations as recommended, ensuring environmental requirements stipulated in this EMPr are complied with. Various monitoring mechanisms have been suggested and included in specialist studies and revolves around Soil erosion, dust management, alien invasive vegetation, socio-economic issues (job creation), Noise and determine the progress of rehabilitation.

6.2 Monitoring and reporting frequency

The monitoring of impacts and reporting frequency will be different for the various environmental aspects. Table 5 details the environmental aspects to be monitored, the component of the aspect and the frequency of data collection and reporting.

Frequency of monitoring will differ from Weekly to Annually. It should be noted that other required monitoring will be added for purposes of the water use license application and the air emission license.

6.3 Responsible persons

Afrimat Readymix is a subsidiary of Afrimat which has its own Environmental Specialists and Officers as well as SHEQ Officers under the Sustainability Department. These officials serve as independent Environmental Control Officers to its subsidiaries. These officials will serve as an external auditor/s responsible for ensuring that all necessary environmental monitoring required for the Macassar Bacth Plant project is undertaken as per the monitoring programmes. The site manager and other staff that will be allocated for certain monitoring activities will also assist in required monitoring on site.

6.4 Time period for implementing impact management actions

Impact Management will be undertaken in each respective phase in which it would be applicable. In terms of monitoring, each management action will be implemented immediately after the monitoring reporting has been undertaken.

6.5 Mechanism for monitoring compliance

Monitoring programmes to be developed.

Table 2: Mechanisms for monitoring compliance

SOURCE ACTIVITY	IMPACTS REQUIRING MONITORING PROGRAMMES	FUNCTIONAL REQUIREMENTS FOR MONITORING	ROLES AND RESPONSIBILITIES (FOR THE EXECUTION OF THE MONITORING PROGRAMMES)	MONITORING AND REPORTING FREQUENCY and TIME PERIODS FOR IMPLEMENTING IMPACT MANAGEMENT ACTIONS
Clearance of land for establishment of infrastructure	Ecological degradation and biodiversity loss	Biodiversity monitoring to preserve the faunal and floral species of conservation concern Plant search and rescue management plan must be implemented for reinstating vegetation and ensuring rehabilitation objective is reached	ECO	• Rehabilitation monitoring and reporting to be conducted annually during the summer months for two years post-closure • ECO Annual Compliance Monitoring Reports
	Establishment of alien invasive species	Regular follow-up clearing of aliens No spraying of herbicides as it also kills many adjacent non-target species	Site Manager and appointed specialist service provider	• Bi-monthly inspection of site for the visible signs of alien species establishment during and construction and rehabilitation(closure) phases
Operations of the batch plant	Generation of noise	Noise readings undertaken with a hand held monitoring device will be required	• Environmental Control Officer/Environmental Officer/ SHEQ	• Baseline monitoring • Monthly reporting on compliance with the Noise quality standards

		Vehicles/plant/equipments must be inspected on a regular basis Records to be kept of monitoring activities.	Officer • Acoustical Consultant	• Review of vehicle/plan/equipment maintenance plan as or when required • Frequent inspections of vehicles/plant/equipment
Fuel and oil storage	Hydrocarbon contamination of soil and groundwater	Regular inspections of areas prone to hydrocarbon spills and contamination must be inspected on a regular basis. Contamination the affected environment will require remediation actions. **Soil contamination** After completion of remediation actions it is recommended that samples be taken to ensure the soil quality comply with the rehabilitation objectives. Records to be kept of monitoring activities.	All staff, Environmental Control Officer/Environmental Officer/ SHEQ Officer	• Annual review of the Emergency preparedness and response plan or review after occurrence of emergency incident • Review of vehicle/plan/equipment maintenance plan as or when required • The boreholes should be sampled quarterly throughout the life of the mine and post- closure. • Daily inspections of vehicles/plant/equipment • Weekly inspections of hazardous substances storage facilities • Weekly inspections of spill prevention equipment
Employment of workers and procurement of services	Job Creation and Skills Training	• A grievance procedure to be developed and address at least the	• Company Directors • Human Resource manager	• Ongoing recording of complaints received by I&AP • Review of Social Labour plan

		following: ○ Procedure for recoding and addressing all complaints received by site employees, contractors, or sub-contractors and surrounding I&APs.	• SHEQ/ Health and Safety Manger	as required by legislation and the competent authority
Rehabilitation	Dust, noise and alien invasive plants	• Rehabilitation of all mined out areas should be taken after the batching plant and associated infrastructure in that area has been completed • Regular follow up on alien invasive species	• Environmental officer – external audits • Rehabilitation / financial auditors	• Rehabilitation monitoring and reporting to be conducted annual during the summer months for two years post-closure • ECO Annual Compliance Reports

7 CONCLUSION

Should these recommended measures be implemented in the planning, construction and operation/maintenance phases of the proposed activity, the EAP finds that the predicted impacts of the proposed activity are within acceptable limits. It is the responsibility of Afrimat Readymix to ensure that this EMPr is made binding on the contractor by including the EMPr in the contract documentation.

Provided that this development is mitigated as per the EMP, the project will result in limited negative environmental impacts. The proposed project can be considered as environmentally acceptable and in keeping with the development frameworks of the City of Cape Town.

This EMP should be used as an on-site reference document during all phases of the development, and environmental auditing should take place in order to determine compliance with this EMPr. Parties responsible for transgression of the EMPr should be held responsible for any rehabilitation that may need to be undertaken. Parties responsible for environmental degradation through irresponsible behaviour / negligence should receive penalties.

It should however be noted that environmental management is dynamic and as such the EMPr must be flexible in order to accommodate changing circumstances and requirements. On-going environmental monitoring of the Afrimat Readymix Batching Plant will be carried throughout the projects lifecycle, and as such should be conducted by a dedicated Environmental Control Officer, to identify and address issues as they arise, and to update or amend the management plan accordingly.