BACKGROUND **I**NFORMATION **D**OCUMENT

Basic Assessment Report for the Proposed Prospecting Right Application By Pan African Mineral Development Company (PAMDC) Pty Ltd and Milima Investement Pty Ltd. Please refer to **Appendix A for all farm maps with farm names**

Short presentation structure

The process of the prospecting right and environmental authorisation

- a. A prospecting right application is lodged along with the environmental authorisation application at the Department of Mineral Resources and Energy online portal.
- b. After the application has been lodged, the applicant receives an instruction to undertake an environmental impact assessment and public participation process for the project to ensure that the proposed project will not cause detrimental damage to the socio-economic and the natural environment
- c. The environmental impact assessment involves review of the available data (desktop study) and most importantly
- d. site visit visual assessment.
- e. My team and I came here to undertake the site visit visual assessment. This assessment ensures the quality of the report we compile and also most importantly ensures that the interests of the landowners are taken into consideration when a decision is made My team and I came here to undertake the site visit visual assessment
- f. This assessment ensures the quality of the report we compile and also most importantly ensures that the interests of the landowners are taken into consideration when a decision is made
- g. What are the land owners interests, simply his livelihood and properties that he owns. Things like the land use, environmental sensitivities, heritage structures (like graves) and other things can be protected or well manged by the applicant during the prospecting activities if they are addressed in the environmental report

PURPOSE OF THE DOCUMENT

The purpose of the Background Information Document (BID) is to provide information to assist stakeholders in participating in the basic assessment process. This BID has been developed to:

- Share information about the proposed project;
- Present the Basic Assessment (BA) process that will be followed to obtain environmental authorisation (EA) according to NEMA;
- Provide more details about the Public Participation Process (PPP) which will be followed.
- Discuss the impacts and mitigation measures

PROJECT AND REFERENCE NUMBER PAMDC Project Areas

Project area 1: Ref No: NC30/5/1/1/2/12531PR Project area 2: Ref No: NC30/5/1/1/2/12532PR Project area 3: Ref No: NC30/5/1/1/2/12533PR Project area 4: Ref No: NC30/5/1/1/2/12534PR Project area 5: Ref No: NC30/5/1/1/2/12535PR. Project area 6: Ref No: NC30/5/1/1/2/12536PR Project area 7: Ref No: NC30/5/1/1/2/12537PR.

Milima Investement Project Areas

Project Area 1: Ref No: NC30/5/1/1/2/12530PR Project Area 2: Ref No: NC30/5/1/1/2/12529PR

INTRODUCTION

Milima Investment Pty (Ltd) and Pan African Mineral Development Company (PAMDC) Pty Ltd has appointed Joan Consulting as the independent Environmental Assessment Practitioner (EAP), to undertake to undertake the required Basic (Environmental) Assessment and Public Participation Process (PPP) for Prospecting Right Application for Manganese Ore; Iron Ore; Lead; Zinc; Nickel; Limestone; Copper and Cobalt on the farm listed in appendix A..

This application has been lodged in terms of Section 16 of the Mineral and Petroleum Resources Development Act, 2002 ,and Section 24 of the National Environmental Management Act, 1998, (Act No 107 of 1998, read with Regulation 19,40 to 44 of the Environmental Impact Assessment Regulations 2014 as amended.

PROJECT LOCALITY

The project sites are located in various local municipalities within Northern Cape Province of South Africa. PAMDC Project 1, 2, 3 & 7 and Milima project 1 and 2 falls within Joe Morolong Local Municipality whereas PAMDC project 4, 5 and 6 falls Gasigonyana Local municipality all within John Taolo Gaetsewe District Municipality. Please refer to appendix A demonstrating the location of the project areas in relations to the major towns and surrounding villages.

PROJECT DESCRIPTION

The prospecting activities will be undertaken over a period of approximately 5 years, and include both non-invasive and invasive prospecting methods and will be devided into various phases;

PHASE 1- NON-INVASIVE METHOD

Literature review: -

Literature survey is a comprehensive review of published and unpublished work from secondary data sources. Re-evaluation of previously explored areas of similar nature is very important at this stage to build conceptual geological model. This review will be conducted as an expectation guide of the field

Geological Mapping: -

The area will be geologically mapped to update already existing information. All gathered information will be integrated with the existing information acquired during literature review assist with informed site planning.

Geochemical Sampling & Anomaly Screening:

The target mineralization identified during the desktop study and mapping exercise would be further defined using surveyed line/grid based traversing geochemical soil / stream sediment and grab / float sampling activities.

Geophysical Surveys: -

Various methods of geophysical applications will be applied on the target areas if need be and this may include: ground magnetics, gravity and radiometric traversing on irregular grids

PHASE 2- CONSTRUCTION & OPERATIONAL

Phase 2 will commence with reconnaissance / stratigraphical drilling. The construction part entails the site preparation of clearing the site and bringing the equipment such as the drill rig and chemical toilets on site only on government farms.

Reconnaissance/Stratigraphical Drilling:

Five (5) reconnaissance diamond drill holes are planned at this stage for each PAMDC project 4, 5, 6, 7 and Milima Investment project 1&2. This is because the total number of envisaged boreholes for these projects are 10. Ten (10) reconnaissance diamond drill holes are planned at this stage for each PAMDC project 1, 2, 3. This is because the total number of envisaged boreholes for these projects are 20. All these holes will serve to establish the stratigraphy of the project area and to establish mineralized portions within the stratigraphy. The boreholes will be drilled closer to the outcrop position, and will be drilled to a depth of 200m. Few boreholes will be correlated to establish the preliminary stratigraphical column. Drilled boreholes will be sampled and analysed for mineral content and the results of the sampling will be used as a basis for the next phase of exploration drilling.

Resource Diamond Drilling:

All the reminaing holes will be drilled during this stage of exploration. Drilling targets for this phase will be based on the results of the Reconnaissance/ phase coupled with the conceptual geological and structural model to be established from the geophysical studies and associated interpretation.

This drilling phase will define the orientation and shape of the ore body and also define the grade and tonnage and improve the geological confidence. Drilled core will be logged (structure, lithology and facies), sampled and analysed for the proposed minerals. Additional hole-deflections or holes will be drilled for value verification and to ascertain variance in metallurgical and mineralogical parameters.

Decommissioning and Rehabilitation

Upon completion of the drilling and logging process, the drilling equipment and all machineries will be removed from site. The drilled boreholes will be closed with a steel casing to suitable depth and a concrete cap will be placed on top with the exception of locations were boreholes will be drilled on cultivated land. Topsoil that has been removed from drill sites will also be replaced, and all disturbed areas (including roads) will be ripped and allowed to return to the natural state. Cleared areas will be revegetated by spreading a seed mixture that represent the local vegetation.

PHASE 3

Pre-Feasibility Study: -

A multi-disciplinary pre-feasibility study will be done based on the geological model and Indicated Resource outlined in the previous phases.

The outcome of the pre-feasibility study will be a complete future mine and plant design, together with a preliminary EMP for the operations. The associated infrastructure, human resourcing, and social and labour plan will have been completed to a lesser accuracy. Should this prove positive, feasibility study work will commence

OTHER ANCILLARY ACTIVITIES

Access to the site- movement of vehicles

Exisiting roads will be used to access all the sites. No new road will be developmed during the life cycle of the operation.

Water Supply

No local water will be used for the drilling operation. All water required for operational work will be outsourced from the local municipality and will be transported to site by the use of water cart.

Accommodation and Office

No office or accommodation for staff and workers will be provided on - site and all persons will be accommodated in nearby towns. Workers will be transported to and from the prospecting site on a daily basis. Night security staff will be employed once equipment has been established on site.

Storage of Dangerous Goods

No diesel will be stored on site.

ENVIRONMENTAL AUTHORISATION PROCESS

The proposed development requires Environmental Authorisation in terms of the National Environmental Management Act (NEMA) (Act 107 of 1998). Activity 20 and 27 of Government Notice Regulations (GNR) 327 of the EIA Regulations of 2014 as amended in 2017 will be triggered by the proposed project. Thus a Basic Assessment (BA) process is being undertaken to obtain the authorisation.

Table 1: Triggered Activities from NEMA

Applicable Listing Notice	Name of Activity
Activity 20 of	Any activity including the operation of that activity which
GNR 327	requires a prospecting right in terms of section 16 of the

Mineral	and	Petro	oleum
Resources	Develo	pment	Act,
2002 (Act 1	No		

PUBLIC PARTICIPATION PROCESS

The aim of the Public Participation Process (PPP) is to allow interested and Affected Parties (I&APs) the opportunity to gain an understanding of the project and consider all facets of the proposed development. The PPP will:

- Provide I&APs with information about the proposed development and associated potential impacts;
- Allow I&APs the opportunity to raise concerns on the proposed project; and
- Incorporate the concerns raised by I&APs in the study and ultimate decision-making process.

The following activities has been undertaken to date:

- •
- Site notices has been stratigically placed in various sites, public areas and farm areas.
- Distribution of notification letters to the loca, and district municipality
- Distibution of notification letters to some farms owners.
- An advertisement has been placed in the *Stellalander newspaper*
- Public meeting with Agri Kuruman committee

The following tasks are still to be completed

- Undertaking the public meeting
- Recording all comments, issues and concerns raised by I&APs and preparation of a PPP report and comments & responses report.
- Updating of the BAR taking into consideration all comments received; and
- Submission of the final basic assessment report to the DMR for Authorisation.

GETTING INVOLVED

All persons who wish to take part in the Public Participation Process by commenting on or raising any concerns regarding the development are invited to do so through the following means:

- Registering as an Interested and Affected Party (In writing / email or telephonically at the details provided below);
- 2. Submit any comments in writing on the response sheet attached to this document to the details below
- 3. Request and review Scoping Report and raise any concerns or comments.

Contact Details:

Lufuno Mutshathama;

Tel: (011) 791 5032|0739120800;

E-mail: lufuno@joanprojects.co.za;

Postal Address: PO Box4147, Honeydew, 2040

Once the authorities have made a decision regarding the project, stakeholders will be informed accordingly.

Activity	Impact	Mitigation measures
Clearing of vegetation and movement of vehicles for site establishment	Generation of Dust	 Dust suppression using water will be under taken to manage dust emitting from vegetation removal. Footprint earmarked for vegetation removal must be clearly marked
Clearing of vegetation and movement of vehicles for site establishment	Increased noise levels from movement of vehicles	 Trucks, machinery, and equipment must be regularly serviced to reduce noise levels Work should be conducted during day time only to minimise disruption of neighbours and animal life
Clearing of vegetation and movement of vehicles for site establishment	Destruction of archaeological remains	 LIA site must be mapped and documented A management plan for the site must be drawn Section where scatters of potsherds were recorded must be avoided where possible An archaeologist must be appointed to monitor during prospecting Use chance find procedure to cater for accidental finds
Clearing of vegetation and movement of vehicles for site establishment	Disturbance of graves	 Maintain 25m buffer zones for all burial sites Burial sites must be mapped Consult Landowners and farm workers to identify burial sites before prospecting
Clearing of vegetation and movement of vehicles for site establishment	Disturbance of buildings and structures older than 60 years old	None required

Activity	Impact	Mitigation measures
Clearing of vegetation and movement of vehicles for site establishment	Destruction public monuments and plaques	Mitigation is not required because there are no public monuments within the mining right application site
Clearing of vegetation and movement of vehicles for site establishment	Destruction of protected plant species	 Supervision by an ecologist to ensure success of the rescue operation Place drilling holes away from any red listed and/or protected plant species Use already available farm roads to avoid trampling red listed plant species
Clearing of vegetation and movement of vehicles for site establishment	Removal of the natural vegetation	Due to the sensitivity of the areas, it is advised that areas designated for vegetation clearing should be identified and visibly marked off and also approved as part of final drilling map
		• Avoid drilling on The Falls area as it provides habitat for Vultures as well as Blue Cranes.
		• Use already available farm roads and avoid creating new ones
		• Vegetation clearing areas should be kept to a minimum and restricted to the proposed drilling sites.
		• Exposed areas should be rehabilitated with indigenous plants to the project area as soon as construction is finished.
Clearing of vegetation and movement of vehicles for site	Disturbance to animals on site	• Do not disturb nests, breeding sites or young ones. Do not attempt to kill or capture snakes unless directly threatening the safety of employees.
establishment		• Dogs or other pets are not allowed to the worksite as they are threats to the natural wild animal
		• A low-speed limit should be enforced on site to reduce wild animal-vehicle collisions
		• No animals should be intentionally killed or destroyed and poaching and

Activity	Impact	Mitigation measures
		hunting should not be permitted on the site.
		• Severe contractual fines must be imposed and immediate dismissal on any contract employee who is found attempting to snare or otherwise harms remaining faunal species.
		• Hunting weapons are prohibited on site.
		• Contract employees must be educated about the value of wild animals and the importance of their conservation.
		• The ECO must conduct regular site inspections of removing any snares or traps that have been erected.
		• Employees and contractors should be made aware of the presence of, and rules regarding, flora and fauna through suitable induction training and on-site signage.
Clearing of vegetation and	Increased soil erosion, increase in silt loads	• Following prospecting, rehabilitation of disturbed areas is required
movement of vehicles for site establishment	and sedimentation	• Avoid areas with sensitive soils, steep slopes during rain or windy season.
		• Ensure that roads are not paved but well maintained (as gravel) to reduce the speed of water by promoting infiltration.
Clearing of vegetation and movement of vehicles for site establishment	Establishment and spread of declared weeds	• The best mitigation measure for alien and invasive species is the early detection and eradication of these species which will be ensured with the use of a monitoring programme.
		• An alien invasive management programme should be developed and implemented in order to control alien invasive species
		• The best mitigation measure for alien and invasive species is the early detection and eradication of these species which will be ensured with the use of a monitoring programme.
		• An alien invasive management programme should be developed and

Activity	Impact	Mitigation measures
		implemented in order to control alien invasive species
Clearing of vegetation and movement of vehicles for site establishment	Loss of fertile topsoil	• The construction footprint should be kept as small as possible; Keep as much original land cover as possible; Stripped soils should be stockpiled surrounding the disturbed area
Clearing of vegetation and movement of vehicles for site establishment	Soil Compaction	 Avoid creating many access routes; Keep the speed limit to minimum to reduce the tire contractions on the soil.
Clearing of vegetation and movement of vehicles for site establishment	Soil contamination from hydrocarbon spills	 Clean all hydrocarbon spills from machinery immediately, and Dispose contaminated soils at a permitted site; Drip trays are to be watertight, and must be emptied regularly and before rain events. The contents of drip trays are to be treated as hazardous waste; Only emergency and essential repairs of vehicles and equipment may take place on site.
Clearing of vegetation and movement of vehicles for site establishment	Uncontrolled soil erosion and change in the area topography	 Demarcate construction footprint and limit activities to within this footprint as far as possible; Keep the clearance area as small as possible; and Keep as much original land cover as possible
Clearing of vegetation and movement of vehicles for site establishment	Increased sedimentation, surface runoff and Soil Erosion	 limit the development footprint to reduce high-sediment runoff; Avoid clearing the site during the rainy seasons Rehabilitate the area by re-using stockpiled soil within as short a period of time.
Clearing of vegetation and movement of vehicles for site	Surface water contamination from	• Clean all hydrocarbon spills from machinery immediately, and

Activity	Impact	Mitigation measures
establishment	hydrocarbon spills	 Dispose contaminated soils at a permitted site; Drip trays are to be watertight, and must be emptied regularly and before rain events; The contents of drip trays are to be treated as hazardous waste.
Clearing of vegetation and movement of vehicles for site establishment	Increased visual levels such as dust and infrastructures	 The development footprints and disturbed areas should be kept as small as possible; Construction activities should be restricted to daylight hours to limit the need to bright floodlighting and the potential for skyglow; Dust suppression should be carried throughout, whenever dust emanates
Clearing of vegetation and movement of vehicles for site establishment	Impact on Game Lodges, Lodges & Guest Houses: Dust Generation Noise Generation	 Dust suppression using water will be under taken to manage dust emitting from vegetation removal Footprint earmarked for vegetation removal must be clearly marked Trucks, machinery, and equipment must be regularly serviced to reduce noise levels Work should be conducted during day time only to minimise disruption of neighbours and animal life
Clearing of vegetation and movement of vehicles for site establishment	Impact on Game Lodge Dispersing and disruption of animals	 No wild animal may under any circumstance be handled, removed or be interfered with No wild animal may be fed on site No wild animal may under any circumstance be hunted, snared, captured, injured or killed No wild animal may under any circumstance be hunted, snared, captured, injured or killed

Activity	Impact	Mitigation measures
		Remove and dispose of any snares or traps found on or adjacent to the site
Clearing of vegetation and movement of vehicles for site establishment	On Settlement and Residential Negatively impacting on residents' livelihoods	• The applicant must consult with the affected parties on which times are favourable for them before undertaking the activities which could negatively impact their livelihood
Clearing of vegetation and movement of vehicles for site establishment	Fear of farm attacks by farmers due to strangers in the area	 Notify the local farmer's forum (Agri-Kuruman and affected forums) Comply with all the local safety requirements
Prospecting works	Generation of waste	• Dedicate a storage area on site for the collection of wastes.
		• Litter bins must be equipped with a closing mechanism to prevent their contents from over following blowing out by wind;
		• Empty litter bins regularly to avoid overflow;
		• Proper ablution facilities on site must be provided
Prospecting works	Work injury- impacting on the wellbeing of employees	• Proper protective equipment must be allocated to all personnel working with high-risk equipment (drill rig)
		• Tool box talk must be conducted to address the risk associated with the proposed project.
Borehole drilling, construction of water sump and movement of vehicles	Generation of Dust	• Dust suppression using water will be under taken to manage dust emitting from vegetation removal.
Borehole drilling, construction of water sump and movement of vehicles	Increased noise levels from movement of vehicles	• Trucks, machinery, and equipment must be regularly serviced to reduce noise levels
Borehole drilling, construction of water sump and movement of	Destruction of archaeological remains and un identified graves	• Burial sites must be plotted, clearly marked and must be protected/barricaded to avoid accidental damage during prospecting

Activity	Impact	Mitigation measures
vehicles		 activities Custodians must be involved in any mitigation work to their family burial sites Should and graves or archaeological artifacts are discovery on site, work should cease immediately until a heritage specialist gives a go ahead
Borehole drilling, construction of water sump and movement of vehicles	Disruption and destruction of vegetation	 Do not disturb, deface, destroy or remove plants or natural features outside the demarcated area. No open fires are permitted under trees and no vegetative matter may be removed for firewood. Locate construction camps on the outside fringe of the riparian vegetation zone. Where damage to protected plants and natural features is a problem, then these should be fenced for protection.
Borehole drilling, construction of water sump and movement of vehicles	Loss of fertile topsoil	• The construction footprint should be kept as small as possible; Keep as much original land cover as possible; Stripped soils should be stockpiled surrounding the disturbed area
Borehole drilling, construction of water sump and movement of vehicles	Soil Compaction	 Avoid creating many access routes. Keep the speed limit to minimum to reduce the tire contractions on the soil.
Borehole drilling, construction of water sump and movement of vehicles	Soil contamination from hydrocarbon spills	 Clean all hydrocarbon spills from machinery immediately, and Dispose contaminated soils at a permitted site. Drip trays are to be watertight, and must be emptied regularly and before rain events. The contents of drip trays are to be treated as hazardous waste.

Activity	Impact	Mitigation measures
		• Only emergency and essential repairs of vehicles and equipment may take place on site.
Borehole drilling, construction of water sump and movement of	Uncontrolled soil erosion and change in the area topography	• Demarcate construction footprint and limit activities to within this footprint as far as possible;
vehicles		• Keep the clearance area as small as possible; and
		• Keep as much original land cover as possible
Borehole drilling, construction of water sump and movement of	Increased sedimentation, surface runoff and Soil Erosion	• limit the development footprint to reduce high-sediment runoff;
vehicles		• Avoid clearing the site during the rainy seasons
		• Rehabilitate the area by re-using stockpiled soil within as short a period of time.
Borehole drilling, construction	Surface water contamination from	• Clean all hydrocarbon spills from machinery immediately, and
of water sump and movement of vehicles	hydrocarbon spills	• Dispose contaminated soils at a permitted site.
		• Drip trays are to be watertight, and must be emptied regularly and before rain events.
		• The contents of drip trays are to be treated as hazardous waste.
Borehole drilling, construction of water sump and movement of	Increased visual levels such as dust and infrastructures (drill rig)	• The development footprints and disturbed areas should be kept as small as possible
vehicles		• Construction activities should be restricted to daylight hours to limit the need to bright floodlighting and the potential for skyglow
		• Dust suppression should be carried throughout, whenever dust emanates
	Impacts on Game Lodges, Lodges & Guest Houses:	• Dust suppression using water will be under taken to manage dust emitting from vegetation removal

Activity	Impact	Mitigation measures
	 Dust Generation Noise Generation 	 Footprint earmarked for vegetation removal must be clearly marked Trucks, machinery, and equipment must be regularly serviced to reduce noise levels Work should be conducted during day time only to minimise disruption of neighbours and animal life
	Impacts on Game Lodge Dispersing and disruption of animals	 No wild animal may under any circumstance be handled, removed or be interfered with No wild animal may be fed on site; No wild animal may under any circumstance be hunted, snared, captured,
		 injured or killed No wild animal may under any circumstance be hunted, snared, captured, injured or killed Remove and dispose of any snares or traps found on or adjacent to the site
	On Settlement and Residential Negatively impacting on residents' livelihoods	• The applicant must consult with the affected parties on which times are favourable for them before undertaking the activities which could negatively impact their livelihood
	Fear of farm attacks by farmers due to strangers in the area	 Notify the local farmer's forum (Agri-Kuruman and affected forums) Comply with all the local safety requirements
Prospecting works	Generation of waste	 Dedicate a storage area on site for the collection of wastes. Litter bins must be equipped with a closing mechanism to prevent their contents from over following blowing out by wind. Empty litter bins regularly to avoid overflow

Activity	Impact	Mitigation measures
		Proper ablution facilities on site must be provided.
Prospecting works	Work injury- impacting on the wellbeing of the employees	• Proper protective equipment must be allocated to all personnel working with high-risk equipment (drill rig)
		• Tool box talk must be conducted to address the risk associated with the proposed project.
Decommissioning	Dust generated from removal of site infrastructures and from spreading of topsoil	• Topsoil must be spread during less windy days;
		• Vegetation cover must be introduced as soon as possible to avoid soil erosion;
		• Implement dust suppression measures to minimize dust
		• Revegetation must be done during rainy season.
Decommissioning	Hydrocarbons spillages and wildlife deaths from Vehicles	• Protect vegetation and soil by avoiding hydrocarbon spillages;
		Vehicles must make use of existing roads to avoid destruction of vegetation;
Decommissioning	Rehabilitation activities (spreading of topsoil, removal of infrastructures and rehabilitation of access roads) will assist to reduce the negative visual impact of mining on the receiving environment.	• All unnecessary infrastructure must be removed from the site;
		• Spread topsoil over the rehabilitated area;
		• Surface water and drainage lines must be rehabilitated to create a free- draining topography;
		• Re-vegetate the rehabilitated areas; Ensure that the all boreholes are closed with a steel cap.
Decommissioning	Increase of ambient noise levels from vehicles movements	 Trucks, machinery, and equipment must be regularly serviced to ensure noise levels are not exceeded; Reduce the vehicles speed limits;
		 Switch off equipment when not in use.

Activity	Impact	Mitigation measures
Decommissioning	Restoration of the surrounding land and its land use	• No mitigation measure is required for this impact as is positive and land is reinstated back to the state prior prospecting activities
Decommissioning	Soil and Land contamination from Hydrocarbons spillages	Protect vegetation and soil by avoiding hydrocarbon spillages;
		• Vehicles must make use of existing roads to avoid destruction of vegetation;
		• Alien invasive control program must be adhered to.

BACKGROUND INFORMATION DOCUMENT

Basic Assessment Report for the Proposed Prospecting Right Application By Pan African Mineral Development Company (PAMDC) Pty Ltd and Milima Investement Pty Ltd. Please refer to Appendix A for all farm maps with farm names

Comments and Response Sheet			
Name and Surname			
Company/Organisation			
Capacity(landowner, manager,			
director etc.)			
Postal Address			
Email Address			
Fax Number			
Telephone and/or Cellphone			
Number			
Have you received a BID?	Yes		
~	No		
Questions, comments and response			
	~		
Would you like to be kept	Yes		
informed about progress of the	No		
proposed project?			
Are there any other individuals, organisations or stakeholders who you think should be consulted regarding the development? If yes, provide list their names and contacts details?			
Contact Details for Registering as an I&AP and commenting on the proposed project:			
Tel: (011) 791 5032 0739120800; E-mail: lufuno@joanprojects.co.za; Postal Address: PO Box4147,			
Honeydew,2040			