

# WEST WITS MINING MLI (PROPRIETARY) LIMITED

## BACKGROUND INFORMATION DOCUMENT FOR THE WEST WITS PROJECT, A PROPOSED NEW UNDERGROUND AND OPENCAST GOLD MINE, GAUTENG PROVINCE

March 2018

### INTRODUCTION

West Wits Mining MLI (Proprietary) Limited (West Wits) holds a prospecting right (GP 30/5/1/1/2/10035 PR) over various portions of the farms Glen Lea 228 IQ, Perdekraal 226 IQ, Rand Glen 229 IQ, Dobsonville 386 IQ, Doornkop 239 IQ, Fleurhof Township, Roodepoort 236 IQ, Roodepoort 237 IQ, Uitval 677 IQ, Vlakfontein 233 IQ, Vlakfontein 238 IQ, Witpoortjie 245 IQ, Vogelstruisfontein 231 IQ, Vogelstruisfontein 233 IQ, Soweto 387 IQ, Klipspruit 298 IQ, Klipriviersoog 299 IQ, Durban Roodepoort Deep 641 IQ, Bram Fischerville 663 IQ, Bram Fischerville 649 IQ and Tshekiso 710 IQ in the City of Johannesburg Metropolitan Municipality, Gauteng Province. Consent in terms of Section 11(2) of the Mineral and Petroleum Resources Development Act (MPRDA) (No. 28 of 2002) to cede a renewed prospecting right MPT No. 29/2016 from Mintails SA Soweto Cluster (Proprietary) Limited to West Wits was granted by the Department of Mineral Resources (DMR) in 2018.

West Wits intends to apply to the DMR for a mining right for gold, uranium, silver, sandstone and aggregate over their current prospecting right area. The resource would be accessed via a combination of underground and opencast mining activities. Refer to Figure 1 for the local setting of the project.

### ENVIRONMENTAL AUTHORISATION PROCESS

Prior to the granting of the mining right for the proposed project, a Scoping and Environmental Impact Assessment (EIA) process must be conducted in terms of the National Environmental Management Act (NEMA) (No. 107 of 1998) as activities which require a mining right are listed in the EIA Regulations, 2014 (Government Notice Regulation (GNR) 983, R984 and 985). The Scoping and EIA process is required to inform a decision by the DMR on an environmental authorisation which is required in terms of Section 22 of the MPRDA. In addition to this, the proposed project would also require a waste management licence in terms of the National Environmental Management: Waste Act (NEM:WA) (No. 59 of 2008), and a water use licence in terms of the National Water Act, 36 of 1998 which will be undertaken in accordance with Regulations Regarding the Procedural Requirements for Water Use Licence Applications WULA's (GNR 267 of 2017).

SLR Consulting (South Africa) (Pty) Ltd (SLR), an independent firm of environmental consultants, has

*SLR Consulting (South Africa) (Pty) Ltd*

been appointed to manage the environmental regulatory processes and conduct the public participation process in support of these applications.

### PURPOSE OF THIS DOCUMENT

This document has been prepared by SLR to inform you about:

- \* The proposed project, including a background to the mining right application process and associated submissions such as the Social and Labour Plan and Mining Work Programme;
- \* The baseline environment of the project area;
- \* The EIA process to be followed;
- \* Possible environmental impacts; and
- \* How you can have input into the environmental authorisation process.

### YOUR ROLE

You have been identified as an interested and/or affected party (I&AP) who may want to be informed about the proposed project and have input into the environmental process and reports.

You have an opportunity to review this document and to provide your initial comments to SLR for incorporation in the environmental impact assessment process. You will also be given the opportunity to provide input at public meetings, and to review and comment on the following reports:

- \* Scoping Report; and
- \* EIA and Environmental Management Programme (EMPr) Report.

All comments will be recorded and included in the reports submitted to the DMR for decision-making.

### HOW TO RESPOND

Responses to this document can be submitted by means of the attached comments sheet and/or through communication with the person(s) listed below.

### WHO TO CONTACT

Marline Medallie and/or Clive Phashe  
(011) 467 0945 (Tel) or  
(011) 467 0978 (Fax) or

[720.13087.00001@slrconsulting.com](mailto:720.13087.00001@slrconsulting.com)

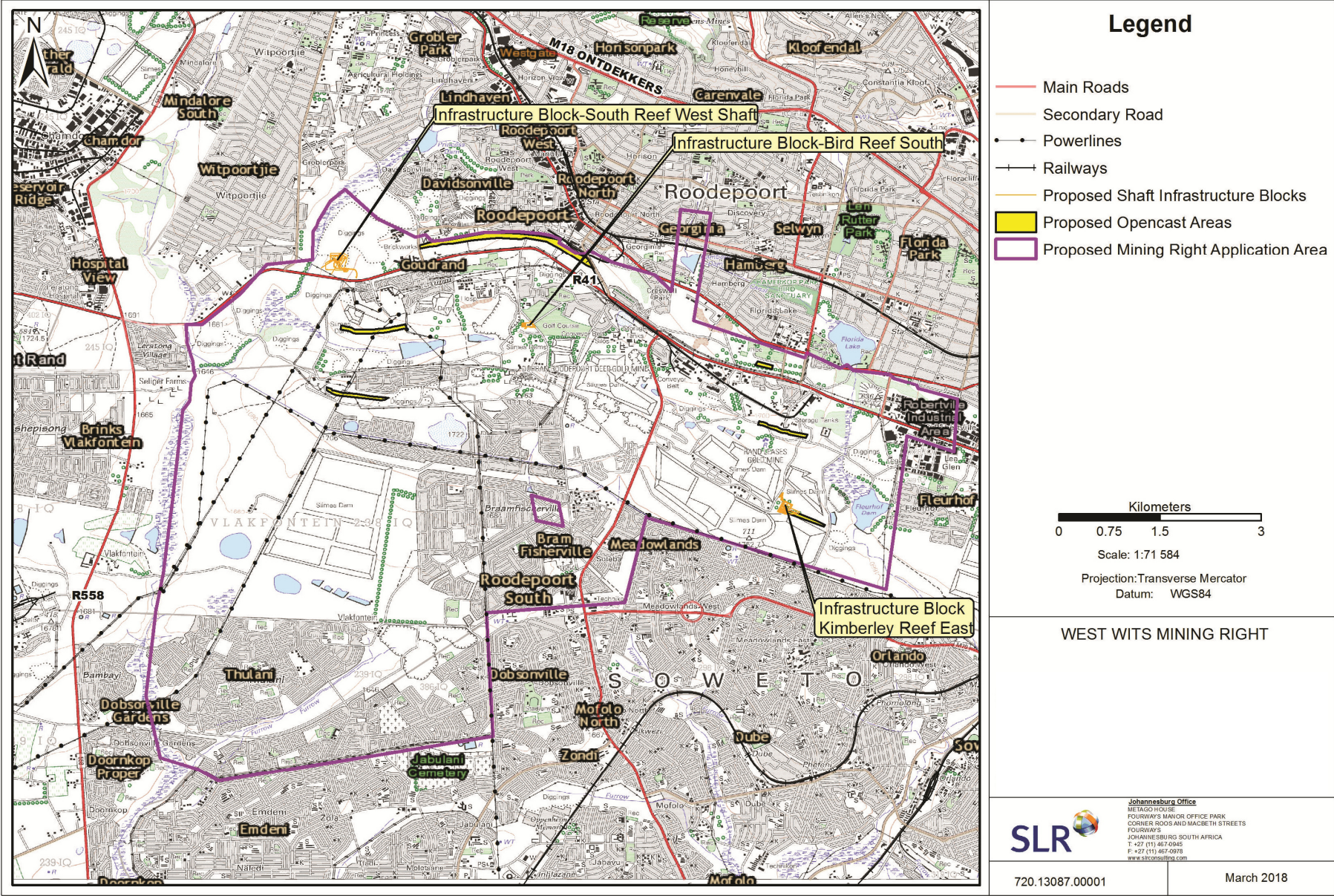


Figure 1: Locality Map

## PROJECT OVERVIEW

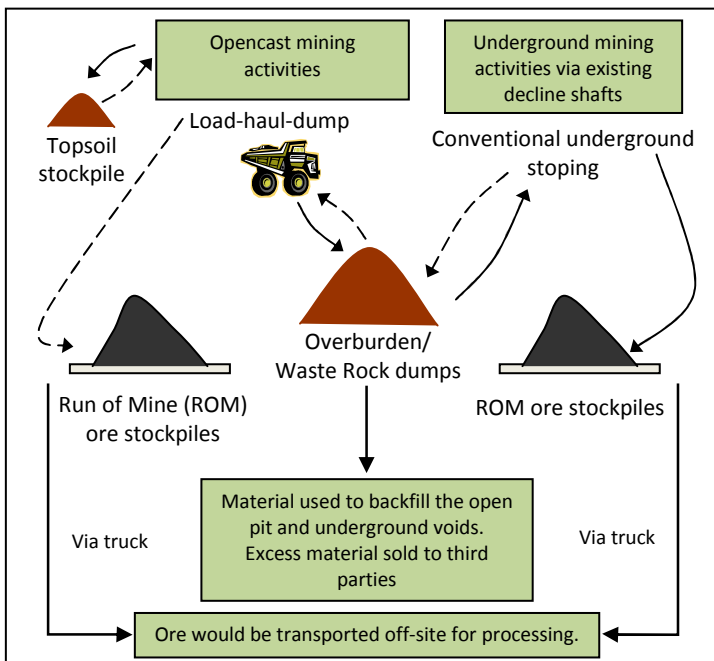
### MINING

The proposed project would involve a combination of opencast mining and refurbishing of existing underground shafts and infrastructure to conduct longer term underground mining operations. Opencast mining activities would include conventional open pit mining operations of load and haul, not excluding the option to blast, but predominantly rock breaking will be conducted through using modern methods and equipment which is less intrusive on communities. Underground mining methods during the later phases would include conventional as well as where appropriate mechanized underground stoping methods.

It is anticipated that up to 360 000 tonnes of ore would be mined per annum from the opencast and underground resources. A number of opencast areas which are located along the northern sections of the proposed mining right area would be mined. It is envisaged that opencast activities would take place in a phased approach. In this regard, once an opencast area has been mined and rehabilitated, the next opencast area would be targeted. Once the areas are rehabilitated and stabilised, they would be made available for housing developments and/or for agriculture purposes. The opencast reserves would be mined first while underground reserves would be phased in once the opencast reserves are depleted. Overburden and other non-mineralised rock will be excavated to expose the targeted reefs of the opencast reserves. This material would be used to backfill and rehabilitate the pit areas. Excess material would be crushed and trucked off of site as sandstone and aggregate. Appropriate facilities will be developed in order to access the targeted reefs of the underground reserves. The ore would be transported off-site for processing. No processing will take place on site.

### CONCEPTUAL FLOW DIAGRAMME

The conceptual flow diagramme associated with the proposed project is illustrated below.



### SUPPORT SERVICES

Support services associated with the proposed project include a centralised infrastructure facility. This facility will comprise offices, centralised workshops and stores to service the open pit and underground mining areas proposed by the project. At each underground area, localised change houses, lamp rooms, workshops and stores will support the underground operations. These satellite facilities will be secured and fenced off with access control. Municipal water and power will be supplied to each of these infrastructure facilities for operations. Support services associated with the proposed project are described in more detail below.

### SERVICES

- **Water:** Potable and process water would be sourced from the local municipality. Underground water would be abstracted, treated and re-used as service water in the underground workings. Water from dewatering of the open pits would be used for dust suppression. A network of pipelines may further be established on site for the transportation of mining related water operations.
- **Power:** Power would be sourced from the local municipal supply. Powerlines would be established as part of the proposed project and would link up to existing municipal take-off points.
- **Waste:** General and hazardous waste would be temporarily stored in designated areas and disposed at off site permitted waste disposal facilities by a third-party contractor.
- **Waste Rock:** The proposed project would generate waste rock as part of both underground and opencast activities. Waste rock would be backfilled into the open pit and underground voids during rehabilitation. It is anticipated that any excess waste rock could be sold to third parties.
- **Sewage:** Sewage generated as part of the proposed project will be stored in septic tanks prior to being removed off-site by a third party contractor.
- **Transport:** New access roads would be established that would link to the existing local road network. Internal gravel haul roads would be established to allow for the movement of vehicles on-site.

### SUPPORT FACILITIES

Other support facilities that would be constructed include the following:

- \* Material storage and handling areas (run-of-mine (ROM) ore stockpiles, topsoil stockpiles, waste rock dumps, fuel, lubricants, process materials, general and hazardous substances).
- \* Water management infrastructure (clean and dirty water dams and storm water channels).
- \* Communication and lighting facilities.
- \* Centralised and satellite offices, workshops, washbays and stores. Localised change houses, lamprooms, vent fans and security facilities.

## OPERATING TIMES AND HOUSING

**Operating times:** Open cast mining activities would take place during normal working hours from Monday to Friday. Underground mining activities would take place between 16 to 24 hours a day during the week, depending on the number of shifts and on every second Saturday.

**Employment:** Employment numbers would be confirmed as part of the EIA process.

**Housing:** No housing would be provided during the construction and operational phases. Employees would be sourced from the local communities and the greater Johannesburg area. Housing areas are situated within close proximity to the areas of operation.

## TIMING

The planned life of mine (LOM) based on the current mine plan is approximately 30 years. The LOM for the opencast pits is anticipated to be 5 years. It is anticipated that the construction phase for the underground mining would take approximately 5 to 7 years.

## MOTIVATION FOR THE PROPOSED PROJECT

The proposed project would produce ore that will be transported to existing processing plants for refinement and sale. The anticipated market prices in the medium and long-term are considered favourable for the proposed project development. Therefore, depending on the price and profitability, the project would allow for the generation of jobs and would have a positive impact on both indirect businesses and employment but the numbers will be highly dependent on the scale of the operation which depends on the profits, and during the early stages only a limited number of opportunities will likely be available. These will increase over time depending on market condition and the mine's profitability as work progresses.

## PROJECT ALTERNATIVES

The process of considering alternatives is on-going and will form part of the scoping and EIA phases of the environmental impact assessment process. Limited alternatives exist due to the position of the ore body and the location of existing infrastructure to be refurbished.

## STATUS OF EXISTING ENVIRONMENT

This section provides a basic description of the current status of the biophysical and socio-economic environment of the proposed project area. More detailed information will be sourced as part of the environmental impact assessment process, with input from specialists (where relevant).

**Geology:** The dominant geological formations found within the project area are those of the Witwatersrand Supergroup which are dominated by quartzites and conglomerates. The Witwatersrand Supergroup is divided into two sub-divisions; the lower dominantly marine slate rich West Rand Group and the upper dominantly alluvial quartzite rich Central Rand Group.

**Climate:** The project area falls within the Highveld Climatic Zone, which is generally associated with a cool temperate climate with high extremes between maximum summer and winter temperatures. The area is characterised by summer rainfall with a mean annual precipitation of 662 mm. Average daytime temperatures are 16.3°C in winter and 26°C in summer with night time temperatures in winter dropping to approximately 0.5°C. The area is also prone to frost and large thermic diurnal differences especially during autumn and spring.

**Topography:** The project area is dominated by rolling plains with interspersed hills, with a dominant hill crest in the north where previous mining activities have impacted on the outcrop. The average height above sea level for the area ranges from 1 650 – 1 850 m. Historical mining activities have altered the natural topography of the area.

**Soils and land capability and land use:** Typical soils associated with the project area include Hutton, Bainsvlei, Avalon and Longsland soil types. Soils are red, yellow or greyish in colour with shallow horizons. These soil types are associated with a moderate arable land potential and a moderate to low grazing potential. The soils and land capability within the proposed project area have been influenced by residential activities, historical mining and prospecting activities.

**Biodiversity (terrestrial):** The project area is dominated by the Soweto Highveld Grassland vegetation type, with a small portion located within the Eastern Temperate Freshwater Wetlands and Tsakane Clay Grasslands Vegetation type. The Grassland vegetation types are considered an endangered ecosystem in terms of National Environmental Management: Biodiversity Act (NEM:BA) (No. 10 of 2004). The wetlands vegetation is considered a vulnerable ecosystem in terms of the NEM:BA. These ecosystems have been influenced by existing residential activities, historical mining and prospecting activities.

Dominant plant species include: *Themeda Triandra* (red grass), *Elionurus muticus* (Matrass grass), *Eragrostis racemose* (Lovegrass), *Heteropogon contortus* (Black spear grass) and *Tristachya leucorhix* (Trident grass). Non-indigenous species such as *Pinus spp* (Pine Trees), *Eucalyptus sp* (Bluegums) and *Acacia mearnsii* (Black Wattle) are found within the project area. Very little evidence of wild faunal populations is associated with the project area due to the presence of historical mining, prospecting and residential related activities within and surrounding the project site.

**Aquatic environment:** Numerous wetlands identified in the National Freshwater Ecosystem Priority Area are located within the proposed project area. Wetlands found within the project area are either naturally occurring depressions or because of mining related alterations to the topography. Many of the natural wetlands have been influenced by historical mining, prospecting and residential related activities.

**Surface water:** The project is located in the Upper Vaal Water Management Area, within quaternary catchment C22A which has a gross total catchment area of 548 km<sup>2</sup>. The Klip River is located on the western boundary of the mining right application area, with numerous tributaries located within the project area. Various tributaries of the Fleurhof Dam (located in the east of the project area) are also located within the project area. Surface water flow is towards the east, south and west.

**Groundwater:** The average ground water level within the project area ranges from 30 m to 50 m below ground level. Groundwater yields are expected to be in the range of 2 l/s.

**Air quality:** The surrounding ambient air quality has been influenced by neighbouring industries, household fuel combustion, vehicle tailpipe emissions, entrained dust and wind erosion from open and exposed areas.

**Noise:** The greater area is subjected to elevated noise levels. Noise levels in the project area are mainly because of current residential activities, mining and prospecting activities and surrounding industries.

**Visual:** The natural visual character of the area has been influenced by historical mining, prospecting and residential related activities.

**Heritage/cultural and palaeontological resources:** Heritage resources likely (but not limited to) to occur within the proposed project area include historical mine infrastructure from the historical period, although these have deteriorated and been vandalised. The palaeontological resources of the site consist of a combination of low, medium and high sensitivity.

**Socio-economic:** Johannesburg faces a number of economic challenges, including high poverty levels, inequalities in terms of incomes and opportunities and youth unemployment. While Johannesburg is associated with an extensive power and water supply network, there are challenges with supply, particularly in the poorer areas. Johannesburg is the largest single metropolitan contributor to the national economic product. The city's economy is dominated by the finance, business services, wholesale and retail, community, social services and manufacturing sectors.

**Land use:** Land uses associated with the project area and surrounds include a combination of informal settlements, low cost and high cost residential areas, industrial areas and manufacturing and distribution facilities, historical mine infrastructure (tailings dams, shafts, derelict/abandoned buildings and water dams), powerlines and road infrastructure.

**POTENTIAL ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS AND SPECIALIST INPUT**

A preliminary list of potential impacts that have been identified and will be investigated as part of the EIA process in support of the mining right application process are tabulated below. Where specialist input is required, this has been indicated in the table below. Relevant issues gathered during the scoping process will further inform the identification and assessment of impacts in the EIA.

<b>BIOPHYSICAL/SOCIO-ECONOMIC ASPECT</b>	<b>POTENTIAL IMPACT</b>	<b>SPECIALIST INPUT (WHERE RELEVANT)</b>
<b>Geology</b>	<b>Loss and sterilisation of mineral resources:</b> The project has the potential to access gold resources but also result in the loss and sterilisation of mineral resources through the placement of infrastructure in close proximity to a mineable resource and through the disposal of mineral resources onto mineralised waste facilities (waste rock dumps).	Will be addressed by project team.
<b>Topography</b>	<b>Hazardous excavations, infrastructure and surface subsidence:</b> The project has the potential to alter the topography.	Will be addressed by project team
<b>Soils and land capability</b>	<b>Loss of soil and land capability:</b> The project has the potential to compromise soil resources through physical disturbance (erosion and compaction) and/or pollution, by the placement of infrastructure and mining activities. Loss of soil resources has a direct impact on the natural capability of the land. However, rehabilitated land is anticipated to have uses for agriculture purposes.	Soils and land capability study
<b>Biodiversity</b>	<b>Loss of biodiversity (terrestrial and aquatic):</b> The placement of infrastructure and mining activities has the potential to disturb and/or destroy vegetation, habitat units (terrestrial and aquatic) and related ecosystem functionality, including the disturbance of protected species.	Biodiversity study (terrestrial and aquatic)
<b>Surface water</b>	<b>Alteration of natural drainage patterns and pollution:</b> The project has the potential to alter surface drainage patterns through the placement of infrastructure and to pollute surface water resources.	Hydrological study
<b>Groundwater</b>	<b>Groundwater contamination and lowering of groundwater levels:</b> The project has the potential to contaminate groundwater resources and to lower groundwater levels through abstraction.	Geohydrological study and Waste assessment
<b>Air</b>	<b>Air quality:</b> The proposed project has the potential to emit pollution into the air which could have a negative impact on ambient air quality.	Air quality study
<b>Noise</b>	<b>Disturbing noise levels:</b> The project has the potential to cause noise pollution through the mining activities.	Noise study
<b>Visual</b>	<b>Negative visual views:</b> The placement of infrastructure and mining activities has the potential to create visual impacts.	Visual study
<b>Traffic</b>	<b>Road disturbance and traffic safety:</b> The project has the potential to result in an increase in traffic volumes along existing roads resulting in safety risks to road users.	Traffic study
<b>Radiation</b>	<b>Radiation impact:</b> The project has the potential to impact on third parties through inhalation (of radon gas and particulate matter), ingestion (of water or contaminated foodstuffs) and exposure to gamma radiation pathways.	Radiological study
<b>Heritage/cultural and palaeontological resources</b>	<b>Loss of heritage/cultural and palaeontological resources:</b> The project has the potential to damage heritage/cultural and palaeontological resources.	Heritage/cultural and palaeontological study
<b>Socio-economic</b>	<b>Positive and negative socio-economic impact:</b> The project has the potential for positive and negative socio-economic impacts. Positive impacts include job creation and stimulation of local and regional economy as well as a parallel economy to mining. Negative impacts include the influx of job seekers and related issues of crime, disease and disruption to social structures	Economic study
<b>Land use</b>	<b>Change in land use:</b> The proposed project has the potential to impact on surrounding land uses such as residential areas.	Will be addressed by project team.

## ENVIRONMENTAL AUTHORISATION PROCESS

The EIA Regulatory process provides information on the project and environment in which it is being undertaken; identifies, in consultation with interested and/or affected parties (I&APs), the potential negative as well as positive impacts of the proposed project; and reports on management measures required to mitigate impacts to an acceptable level. The likely process steps and timeframes are provided below. The steps outlined in the environmental authorisation process below are in accordance with the EIA Regulations, 2014, as amended. I&APs and other stakeholders registered on the project's database will receive notification of public meetings and report review periods in advance.

STEPS IN THE ENVIRONMENTAL AUTHORISATION PROCESS
<b>PHASE I - Pre-application phase (February 2018 to April 2018)</b>
<ul style="list-style-type: none"> <li>• Pre-application meeting with the DMR;</li> <li>• Notify other commenting authorities and I&amp;APs of project and environmental impact assessment (via social scan, newspaper and radio advertisements, site notices and this document); and</li> <li>• Scoping public meeting(s) with regulatory authorities and I&amp;APs.</li> </ul>
<b>PHASE II –Scoping phase (April 2018 to July 2018)</b>
<ul style="list-style-type: none"> <li>• Submission of NEMA and NEM:WA and mining right application to the DMR;</li> <li>• Compile Scoping Report and submit to the DMR, I&amp;APs and other commenting authorities for review;</li> <li>• Public review of Scoping Report (30 days);</li> <li>• Update the Scoping Report with any comments received during the review period;</li> <li>• Submit updated Scoping Report to the DMR;</li> <li>• Review of the Scoping Report by the DMR (43 days); and</li> <li>• DMR either accepts the Scoping Report or refuses the environmental authorisation.</li> </ul>
<b>PHASE III – EIA and EMPr phase (July 2018 to February 2019)</b>
<ul style="list-style-type: none"> <li>• Complete specialist studies;</li> <li>• Compile EIA and EMPr and submit to DMR, I&amp;APs and other commenting authorities for review;</li> <li>• Public review of EIA and EMPr (30 days);</li> <li>• Update the EIA and EMPr report with any comments received during the review period;</li> <li>• Submit updated EIA and EMPr to the DMR;</li> <li>• Review of the EIA and EMPr by the DMR (107 days); and</li> <li>• Circulate decision to I&amp;APs registered on the project database.</li> </ul>
<b>PHASE IV – Water Use Licence Application phase (March 2019 to June 2019)</b>
<ul style="list-style-type: none"> <li>• Compile water use licence application and submit to the Department of Water and Sanitation</li> </ul>

The following public scoping meetings have been arranged, the details are as follows:

DATE AND	TIME	VENUE
Tuesday 3 April	11h00	Goudrand Hostel Hall, Sol Plaatje: From Randfontein Road, turn into Nick Toomey Boulevard then turn left into the third road.
	17h00	E-Hall, Matholoseville: From Randfontein Road, turn into Nick Toomey Boulevard then turn into the first road on the right and then right again into the second road.
Wednesday 4 April (venue may change)	17h00	Hoërskool Bastion, Trezonalaan, Mindalore
Thursday 5 April	17h00	Multi-Purpose Centre, 6732 Loerblaar Avenue, Braamfischerville
Friday 6 April	17h00	Moses Kotane Primary School, Corner Unity Boulevard & Freedom Drive, Braamfischerville.

**You are invited to attend.**

## PARTIES INVOLVED IN THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

### I&APs

- \* Surrounding landowners, land users, adjacent landowners and communities;
- \* Non-governmental organisations and associations; and
- \* Parastatals

### COMMENTING AUTHORITIES

- \* Gauteng Department of Agriculture and Rural Development (GDARD);
- \* Department of Agriculture, Forestry and Fisheries (DAFF);
- \* South Africa Heritage Resource Agency (SAHRA);
- \* Gauteng Department of Roads and Transport (DRT); and
- \* Gauteng Department of Rural Development and Land Reform (DRDLR) including land claims commissioner.

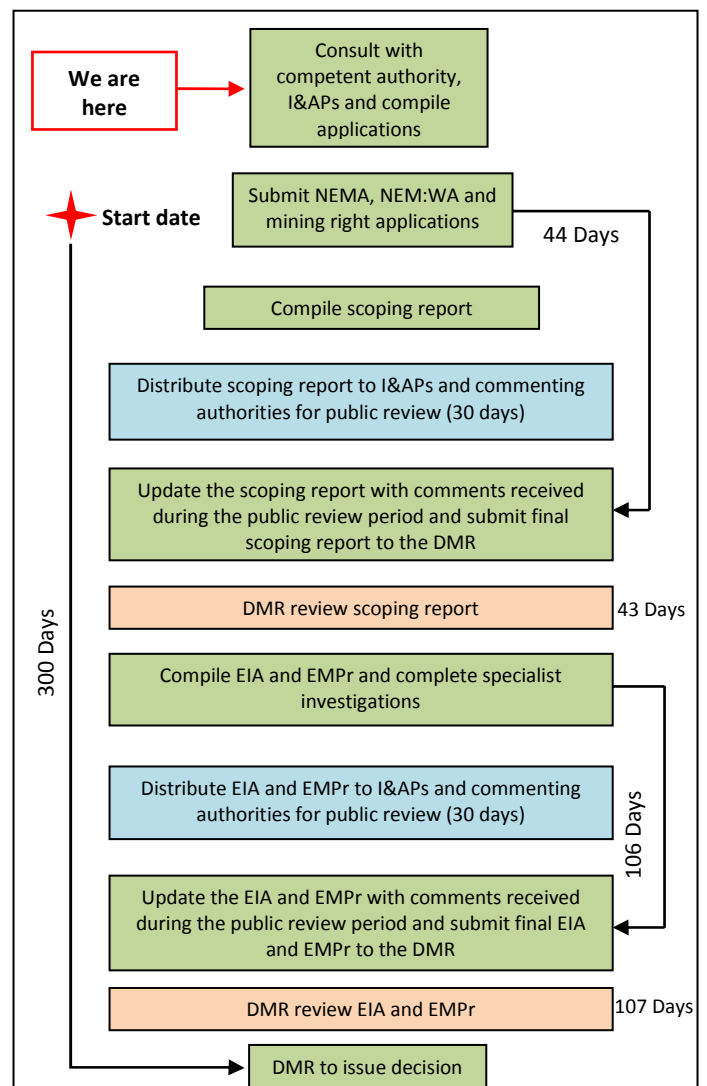
### DECISION MAKING AUTHORITIES

- \* DMR; and
- \* Gauteng Department of Water and Sanitation (DWS).

### LOCAL AUTHORITIES

- \* City of Johannesburg Metropolitan Municipality; and
- \* Ward Councillors.

**Please let us know if there are any additional parties that should be involved.**



**WEST WITS MINING MLI (PROPRIETARY) LIMITED**

**BACKGROUND INFORMATION DOCUMENT FOR THE WEST WITS PROJECT, A PROPOSED NEW UNDERGROUND AND  
OPENCAST GOLD MINE, GAUTENG PROVINCE**

**REGISTRATION AND RESPONSE FORM FOR INTERESTED AND AFFECTED PARTIES**

<b>DATE</b>		<b>TIME</b>	
<b>PARTICULARS OF THE INTERESTED AND AFFECTED PARTY</b>			
<b>NAME</b>			
<b>POSTAL ADDRESS</b>			
		<b>POSTAL CODE</b>	
<b>STREET ADDRESS</b>			
		<b>POSTAL CODE</b>	
<b>WORK/ DAY TELEPHONE NUMBER</b>		<b>WORK/ DAY FAX NUMBER</b>	
<b>CELL PHONE NUMBER</b>		<b>E-MAIL ADDRESS</b>	

**PLEASE IDENTIFY YOUR INTEREST IN THE PROPOSED PROJECT**

**PLEASE WRITE YOUR COMMENTS AND QUESTIONS HERE**

**Please return completed forms to:**

**Marline Medallie and/or Clive Phashe  
SLR Consulting (South Africa) (Pty) Ltd  
(011) 467 0945 (Tel) and/or ( 011) 467 0978 (Fax)  
[720.13087.00001@slrconsulting.com](mailto:720.13087.00001@slrconsulting.com)**



# WEST WITS MINING MLI (PROPRIETARY) LIMITED

## BACKGROUND INFORMATION DOCUMENT FOR THE WEST WITS PROJECT, A PROPOSED NEW UNDERGROUND AND OPENCAST GOLD MINE, GAUTENG PROVINCE

March 2018

### INTRODUCTION

West Wits Mining MLI (Proprietary) Limited (West Wits) holds a prospecting right (GP 30/5/1/1/2/10035 PR) over various portions of the farms Glen Lea 228 IQ, Perdekraal 226 IQ, Rand Glen 229 IQ, Dobsonville 386 IQ, Doornkop 239 IQ, Fleurhof Township, Roodepoort 236 IQ, Roodepoort 237 IQ, Uitval 677 IQ, Vlakfontein 233 IQ, Vlakfontein 238 IQ, Witpoortjie 245 IQ, Vogelstruisfontein 231 IQ, Vogelstruisfontein 233 IQ, Soweto 387 IQ, Klipspruit 298 IQ, Klipriviersoog 299 IQ, Durban Roodepoort Deep 641 IQ, Bram Fischerville 663 IQ, Bram Fischerville 649 IQ and Tshekiso 710 IQ in the City of Johannesburg Metropolitan Municipality, Gauteng Province. Consent in terms of Section 11(2) of the Mineral and Petroleum Resources Development Act (MPRDA) (No. 28 of 2002) to cede a renewed prospecting right MPT No. 29/2016 from Mintails SA Soweto Cluster (Proprietary) Limited to West Wits was granted by the Department of Mineral Resources (DMR) in 2018.

West Wits intends to apply to the DMR for a mining right for gold, uranium, silver, sandstone and aggregate over their current prospecting right area. The resource would be accessed via a combination of underground and opencast mining activities. Refer to Figure 1 for the local setting of the project.

### ENVIRONMENTAL AUTHORISATION PROCESS

Prior to the granting of the mining right for the proposed project, a Scoping and Environmental Impact Assessment (EIA) process must be conducted in terms of the National Environmental Management Act (NEMA) (No. 107 of 1998) as activities which require a mining right are listed in the EIA Regulations, 2014 (Government Notice Regulation (GNR) 983, R984 and 985). The Scoping and EIA process is required to inform a decision by the DMR on an environmental authorisation which is required in terms of Section 22 of the MPRDA. In addition to this, the proposed project would also require a waste management licence in terms of the National Environmental Management: Waste Act (NEM:WA) (No. 59 of 2008), and a water use licence in terms of the National Water Act, 36 of 1998 which will be undertaken in accordance with Regulations Regarding the Procedural Requirements for Water Use Licence Applications WULA's (GNR 267 of 2017).

SLR Consulting (South Africa) (Pty) Ltd (SLR), an independent firm of environmental consultants, has

*SLR Consulting (South Africa) (Pty) Ltd*

been appointed to manage the environmental regulatory processes and conduct the public participation process in support of these applications.

### PURPOSE OF THIS DOCUMENT

This document has been prepared by SLR to inform you about:

- \* The proposed project, including a background to the mining right application process and associated submissions such as the Social and Labour Plan and Mining Work Programme;
- \* The baseline environment of the project area;
- \* The EIA process to be followed;
- \* Possible environmental impacts; and
- \* How you can have input into the environmental authorisation process.

### YOUR ROLE

You have been identified as an interested and/or affected party (I&AP) who may want to be informed about the proposed project and have input into the environmental process and reports.

You have an opportunity to review this document and to provide your initial comments to SLR for incorporation in the environmental impact assessment process. You will also be given the opportunity to provide input at public meetings, and to review and comment on the following reports:

- \* Scoping Report; and
- \* EIA and Environmental Management Programme (EMPr) Report.

All comments will be recorded and included in the reports submitted to the DMR for decision-making.

### HOW TO RESPOND

Responses to this document can be submitted by means of the attached comments sheet and/or through communication with the person(s) listed below.

### WHO TO CONTACT

Marline Medallie and/or Clive Phashe  
(011) 467 0945 (Tel) or  
(011) 467 0978 (Fax) or

[720.13087.00001@slrconsulting.com](mailto:720.13087.00001@slrconsulting.com)

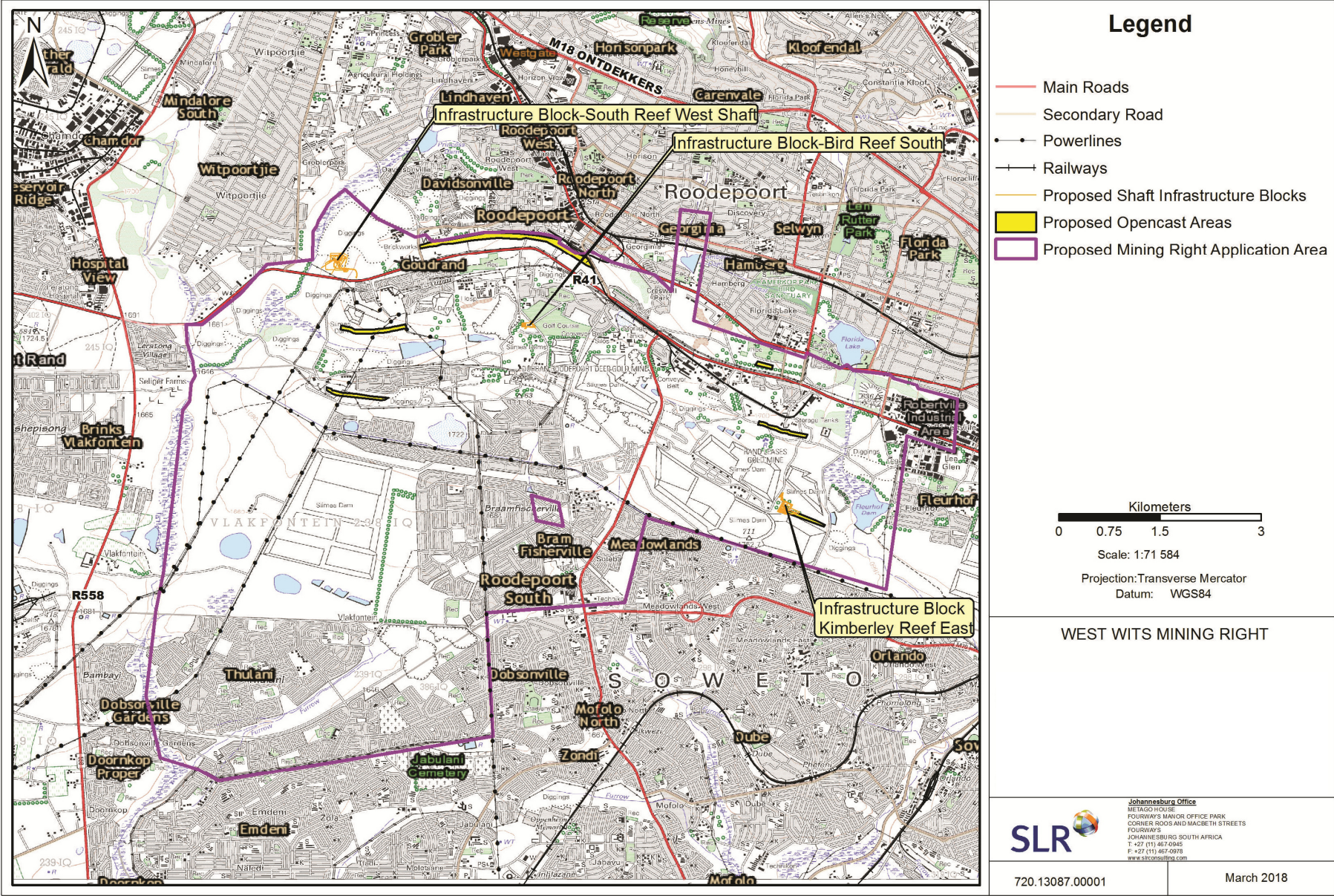


Figure 1: Locality Map

## PROJECT OVERVIEW

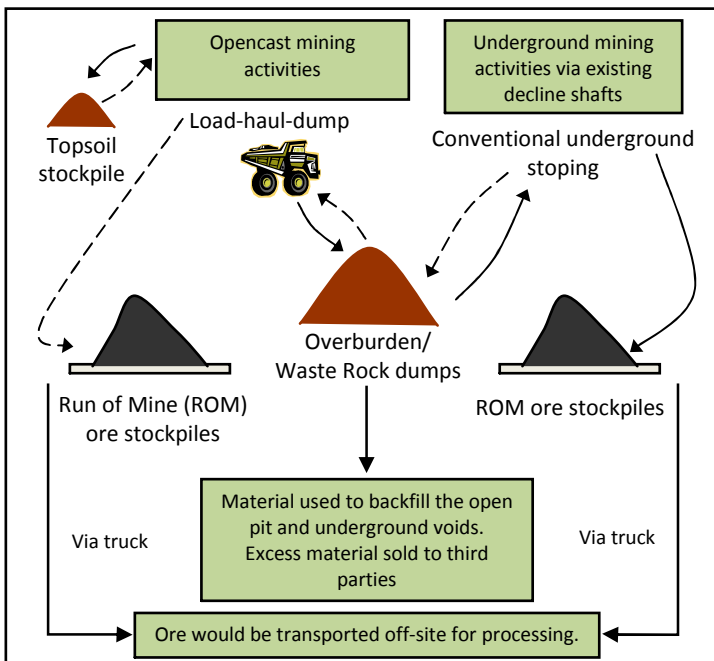
### MINING

The proposed project would involve a combination of opencast mining and refurbishing of existing underground shafts and infrastructure to conduct longer term underground mining operations. Opencast mining activities would include conventional open pit mining operations of load and haul, not excluding the option to blast, but predominantly rock breaking will be conducted through using modern methods and equipment which is less intrusive on communities. Underground mining methods during the later phases would include conventional as well as where appropriate mechanized underground stoving methods.

It is anticipated that up to 360 000 tonnes of ore would be mined per annum from the opencast and underground resources. A number of opencast areas which are located along the northern sections of the proposed mining right area would be mined. It is envisaged that opencast activities would take place in a phased approach. In this regard, once an opencast area has been mined and rehabilitated, the next opencast area would be targeted. Once the areas are rehabilitated and stabilised, they would be made available for housing developments and/or for agriculture purposes. The opencast reserves would be mined first while underground reserves would be phased in once the opencast reserves are depleted. Overburden and other non-mineralised rock will be excavated to expose the targeted reefs of the opencast reserves. This material would be used to backfill and rehabilitate the pit areas. Excess material would be crushed and trucked off of site as sandstone and aggregate. Appropriate facilities will be developed in order to access the targeted reefs of the underground reserves. The ore would be transported off-site for processing. No processing will take place on site.

### CONCEPTUAL FLOW DIAGRAMME

The conceptual flow diagramme associated with the proposed project is illustrated below.



### SUPPORT SERVICES

Support services associated with the proposed project include a centralised infrastructure facility. This facility will comprise offices, centralised workshops and stores to service the open pit and underground mining areas proposed by the project. At each underground area, localised change houses, lamp rooms, workshops and stores will support the underground operations. These satellite facilities will be secured and fenced off with access control. Municipal water and power will be supplied to each of these infrastructure facilities for operations. Support services associated with the proposed project are described in more detail below.

### SERVICES

- **Water:** Potable and process water would be sourced from the local municipality. Underground water would be abstracted, treated and re-used as service water in the underground workings. Water from dewatering of the open pits would be used for dust suppression. A network of pipelines may further be established on site for the transportation of mining related water operations.
- **Power:** Power would be sourced from the local municipal supply. Powerlines would be established as part of the proposed project and would link up to existing municipal take-off points.
- **Waste:** General and hazardous waste would be temporarily stored in designated areas and disposed at off site permitted waste disposal facilities by a third-party contractor.
- **Waste Rock:** The proposed project would generate waste rock as part of both underground and opencast activities. Waste rock would be backfilled into the open pit and underground voids during rehabilitation. It is anticipated that any excess waste rock could be sold to third parties.
- **Sewage:** Sewage generated as part of the proposed project will be stored in septic tanks prior to being removed off-site by a third party contractor.
- **Transport:** New access roads would be established that would link to the existing local road network. Internal gravel haul roads would be established to allow for the movement of vehicles on-site.

### SUPPORT FACILITIES

Other support facilities that would be constructed include the following:

- \* Material storage and handling areas (run-of-mine (ROM) ore stockpiles, topsoil stockpiles, waste rock dumps, fuel, lubricants, process materials, general and hazardous substances).
- \* Water management infrastructure (clean and dirty water dams and storm water channels).
- \* Communication and lighting facilities.
- \* Centralised and satellite offices, workshops, washbays and stores. Localised change houses, lamprooms, vent fans and security facilities.

## OPERATING TIMES AND HOUSING

**Operating times:** Open cast mining activities would take place during normal working hours from Monday to Friday. Underground mining activities would take place between 16 to 24 hours a day during the week, depending on the number of shifts and on every second Saturday.

**Employment:** Employment numbers would be confirmed as part of the EIA process.

**Housing:** No housing would be provided during the construction and operational phases. Employees would be sourced from the local communities and the greater Johannesburg area. Housing areas are situated within close proximity to the areas of operation.

## TIMING

The planned life of mine (LOM) based on the current mine plan is approximately 30 years. The LOM for the opencast pits is anticipated to be 5 years. It is anticipated that the construction phase for the underground mining would take approximately 5 to 7 years.

## MOTIVATION FOR THE PROPOSED PROJECT

The proposed project would produce ore that will be transported to existing processing plants for refinement and sale. The anticipated market prices in the medium and long-term are considered favourable for the proposed project development. Therefore, depending on the price and profitability, the project would allow for the generation of jobs and would have a positive impact on both indirect businesses and employment but the numbers will be highly dependent on the scale of the operation which depends on the profits, and during the early stages only a limited number of opportunities will likely be available. These will increase over time depending on market condition and the mine's profitability as work progresses.

## PROJECT ALTERNATIVES

The process of considering alternatives is on-going and will form part of the scoping and EIA phases of the environmental impact assessment process. Limited alternatives exist due to the position of the ore body and the location of existing infrastructure to be refurbished.

## STATUS OF EXISTING ENVIRONMENT

This section provides a basic description of the current status of the biophysical and socio-economic environment of the proposed project area. More detailed information will be sourced as part of the environmental impact assessment process, with input from specialists (where relevant).

**Geology:** The dominant geological formations found within the project area are those of the Witwatersrand Supergroup which are dominated by quartzites and conglomerates. The Witwatersrand Supergroup is divided into two sub-divisions; the lower dominantly marine slate rich West Rand Group and the upper dominantly alluvial quartzite rich Central Rand Group.

**Climate:** The project area falls within the Highveld Climatic Zone, which is generally associated with a cool temperate climate with high extremes between maximum summer and winter temperatures. The area is characterised by summer rainfall with a mean annual precipitation of 662 mm. Average daytime temperatures are 16.3°C in winter and 26°C in summer with night time temperatures in winter dropping to approximately 0.5°C. The area is also prone to frost and large thermic diurnal differences especially during autumn and spring.

**Topography:** The project area is dominated by rolling plains with interspersed hills, with a dominant hill crest in the north where previous mining activities have impacted on the outcrop. The average height above sea level for the area ranges from 1 650 – 1 850 m. Historical mining activities have altered the natural topography of the area.

**Soils and land capability and land use:** Typical soils associated with the project area include Hutton, Bainsvlei, Avalon and Longsland soil types. Soils are red, yellow or greyish in colour with shallow horizons. These soil types are associated with a moderate arable land potential and a moderate to low grazing potential. The soils and land capability within the proposed project area have been influenced by residential activities, historical mining and prospecting activities.

**Biodiversity (terrestrial):** The project area is dominated by the Soweto Highveld Grassland vegetation type, with a small portion located within the Eastern Temperate Freshwater Wetlands and Tsakane Clay Grasslands Vegetation type. The Grassland vegetation types are considered an endangered ecosystem in terms of National Environmental Management: Biodiversity Act (NEM:BA) (No. 10 of 2004). The wetlands vegetation is considered a vulnerable ecosystem in terms of the NEM:BA. These ecosystems have been influenced by existing residential activities, historical mining and prospecting activities.

Dominant plant species include: *Themeda Triandra* (red grass), *Elionurus muticus* (Matrass grass), *Eragrostis racemose* (Lovegrass), *Heteropogon contortus* (Black spear grass) and *Tristachya leucorhix* (Trident grass). Non-indigenous species such as *Pinus spp* (Pine Trees), *Eucalyptus sp* (Bluegums) and *Acacia mearnsii* (Black Wattle) are found within the project area. Very little evidence of wild faunal populations is associated with the project area due to the presence of historical mining, prospecting and residential related activities within and surrounding the project site.

**Aquatic environment:** Numerous wetlands identified in the National Freshwater Ecosystem Priority Area are located within the proposed project area. Wetlands found within the project area are either naturally occurring depressions or because of mining related alterations to the topography. Many of the natural wetlands have been influenced by historical mining, prospecting and residential related activities.

**Surface water:** The project is located in the Upper Vaal Water Management Area, within quaternary catchment C22A which has a gross total catchment area of 548 km<sup>2</sup>. The Klip River is located on the western boundary of the mining right application area, with numerous tributaries located within the project area. Various tributaries of the Fleurhof Dam (located in the east of the project area) are also located within the project area. Surface water flow is towards the east, south and west.

**Groundwater:** The average ground water level within the project area ranges from 30 m to 50 m below ground level. Groundwater yields are expected to be in the range of 2 l/s.

**Air quality:** The surrounding ambient air quality has been influenced by neighbouring industries, household fuel combustion, vehicle tailpipe emissions, entrained dust and wind erosion from open and exposed areas.

**Noise:** The greater area is subjected to elevated noise levels. Noise levels in the project area are mainly because of current residential activities, mining and prospecting activities and surrounding industries.

**Visual:** The natural visual character of the area has been influenced by historical mining, prospecting and residential related activities.

**Heritage/cultural and palaeontological resources:** Heritage resources likely (but not limited to) to occur within the proposed project area include historical mine infrastructure from the historical period, although these have deteriorated and been vandalised. The palaeontological resources of the site consist of a combination of low, medium and high sensitivity.

**Socio-economic:** Johannesburg faces a number of economic challenges, including high poverty levels, inequalities in terms of incomes and opportunities and youth unemployment. While Johannesburg is associated with an extensive power and water supply network, there are challenges with supply, particularly in the poorer areas. Johannesburg is the largest single metropolitan contributor to the national economic product. The city's economy is dominated by the finance, business services, wholesale and retail, community, social services and manufacturing sectors.

**Land use:** Land uses associated with the project area and surrounds include a combination of informal settlements, low cost and high cost residential areas, industrial areas and manufacturing and distribution facilities, historical mine infrastructure (tailings dams, shafts, derelict/abandoned buildings and water dams), powerlines and road infrastructure.

**POTENTIAL ENVIRONMENTAL AND SOCIO-ECONOMIC IMPACTS AND SPECIALIST INPUT**

A preliminary list of potential impacts that have been identified and will be investigated as part of the EIA process in support of the mining right application process are tabulated below. Where specialist input is required, this has been indicated in the table below. Relevant issues gathered during the scoping process will further inform the identification and assessment of impacts in the EIA.

<b>BIOPHYSICAL/SOCIO-ECONOMIC ASPECT</b>	<b>POTENTIAL IMPACT</b>	<b>SPECIALIST INPUT (WHERE RELEVANT)</b>
<b>Geology</b>	<b>Loss and sterilisation of mineral resources:</b> The project has the potential to access gold resources but also result in the loss and sterilisation of mineral resources through the placement of infrastructure in close proximity to a mineable resource and through the disposal of mineral resources onto mineralised waste facilities (waste rock dumps).	Will be addressed by project team.
<b>Topography</b>	<b>Hazardous excavations, infrastructure and surface subsidence:</b> The project has the potential to alter the topography.	Will be addressed by project team
<b>Soils and land capability</b>	<b>Loss of soil and land capability:</b> The project has the potential to compromise soil resources through physical disturbance (erosion and compaction) and/or pollution, by the placement of infrastructure and mining activities. Loss of soil resources has a direct impact on the natural capability of the land. However, rehabilitated land is anticipated to have uses for agriculture purposes.	Soils and land capability study
<b>Biodiversity</b>	<b>Loss of biodiversity (terrestrial and aquatic):</b> The placement of infrastructure and mining activities has the potential to disturb and/or destroy vegetation, habitat units (terrestrial and aquatic) and related ecosystem functionality, including the disturbance of protected species.	Biodiversity study (terrestrial and aquatic)
<b>Surface water</b>	<b>Alteration of natural drainage patterns and pollution:</b> The project has the potential to alter surface drainage patterns through the placement of infrastructure and to pollute surface water resources.	Hydrological study
<b>Groundwater</b>	<b>Groundwater contamination and lowering of groundwater levels:</b> The project has the potential to contaminate groundwater resources and to lower groundwater levels through abstraction.	Geohydrological study and Waste assessment
<b>Air</b>	<b>Air quality:</b> The proposed project has the potential to emit pollution into the air which could have a negative impact on ambient air quality.	Air quality study
<b>Noise</b>	<b>Disturbing noise levels:</b> The project has the potential to cause noise pollution through the mining activities.	Noise study
<b>Visual</b>	<b>Negative visual views:</b> The placement of infrastructure and mining activities has the potential to create visual impacts.	Visual study
<b>Traffic</b>	<b>Road disturbance and traffic safety:</b> The project has the potential to result in an increase in traffic volumes along existing roads resulting in safety risks to road users.	Traffic study
<b>Radiation</b>	<b>Radiation impact:</b> The project has the potential to impact on third parties through inhalation (of radon gas and particulate matter), ingestion (of water or contaminated foodstuffs) and exposure to gamma radiation pathways.	Radiological study
<b>Heritage/cultural and palaeontological resources</b>	<b>Loss of heritage/cultural and palaeontological resources:</b> The project has the potential to damage heritage/cultural and palaeontological resources.	Heritage/cultural and palaeontological study
<b>Socio-economic</b>	<b>Positive and negative socio-economic impact:</b> The project has the potential for positive and negative socio-economic impacts. Positive impacts include job creation and stimulation of local and regional economy as well as a parallel economy to mining. Negative impacts include the influx of job seekers and related issues of crime, disease and disruption to social structures	Economic study
<b>Land use</b>	<b>Change in land use:</b> The proposed project has the potential to impact on surrounding land uses such as residential areas.	Will be addressed by project team.

## ENVIRONMENTAL AUTHORISATION PROCESS

The EIA Regulatory process provides information on the project and environment in which it is being undertaken; identifies, in consultation with interested and/or affected parties (I&APs), the potential negative as well as positive impacts of the proposed project; and reports on management measures required to mitigate impacts to an acceptable level. The likely process steps and timeframes are provided below. The steps outlined in the environmental authorisation process below are in accordance with the EIA Regulations, 2014, as amended. I&APs and other stakeholders registered on the project's database will receive notification of public meetings and report review periods in advance.

STEPS IN THE ENVIRONMENTAL AUTHORISATION PROCESS
<b>PHASE I - Pre-application phase (February 2018 to April 2018)</b>
<ul style="list-style-type: none"> <li>• Pre-application meeting with the DMR;</li> <li>• Notify other commenting authorities and I&amp;APs of project and environmental impact assessment (via social scan, newspaper and radio advertisements, site notices and this document); and</li> <li>• Scoping public meeting(s) with regulatory authorities and I&amp;APs.</li> </ul>
<b>PHASE II –Scoping phase (April 2018 to July 2018)</b>
<ul style="list-style-type: none"> <li>• Submission of NEMA and NEM:WA and mining right application to the DMR;</li> <li>• Compile Scoping Report and submit to the DMR, I&amp;APs and other commenting authorities for review;</li> <li>• Public review of Scoping Report (30 days);</li> <li>• Update the Scoping Report with any comments received during the review period;</li> <li>• Submit updated Scoping Report to the DMR;</li> <li>• Review of the Scoping Report by the DMR (43 days); and</li> <li>• DMR either accepts the Scoping Report or refuses the environmental authorisation.</li> </ul>
<b>PHASE III – EIA and EMPr phase (July 2018 to February 2019)</b>
<ul style="list-style-type: none"> <li>• Complete specialist studies;</li> <li>• Compile EIA and EMPr and submit to DMR, I&amp;APs and other commenting authorities for review;</li> <li>• Public review of EIA and EMPr (30 days);</li> <li>• Update the EIA and EMPr report with any comments received during the review period;</li> <li>• Submit updated EIA and EMPr to the DMR;</li> <li>• Review of the EIA and EMPr by the DMR (107 days); and</li> <li>• Circulate decision to I&amp;APs registered on the project database.</li> </ul>
<b>PHASE IV – Water Use Licence Application phase (March 2019 to June 2019)</b>
<ul style="list-style-type: none"> <li>• Compile water use licence application and submit to the Department of Water and Sanitation</li> </ul>

**The following public scoping meetings have been arranged, the details are as follows:**

**Additional meetings are being arranged. Initial planning for these meetings has begun and further details will be provided in due course.**

**You are invited to attend.**

## PARTIES INVOLVED IN THE ENVIRONMENTAL IMPACT ASSESSMENT PROCESS

### I&APs

- \* Surrounding landowners, land users, adjacent landowners and communities;
- \* Non-governmental organisations and associations; and
- \* Parastatals

### COMMENTING AUTHORITIES

- \* Gauteng Department of Agriculture and Rural Development (GDARD);
- \* Department of Agriculture, Forestry and Fisheries (DAFF);
- \* South Africa Heritage Resource Agency (SAHRA);
- \* Gauteng Department of Roads and Transport (DRT); and
- \* Gauteng Department of Rural Development and Land Reform (DRDLR) including land claims commissioner.

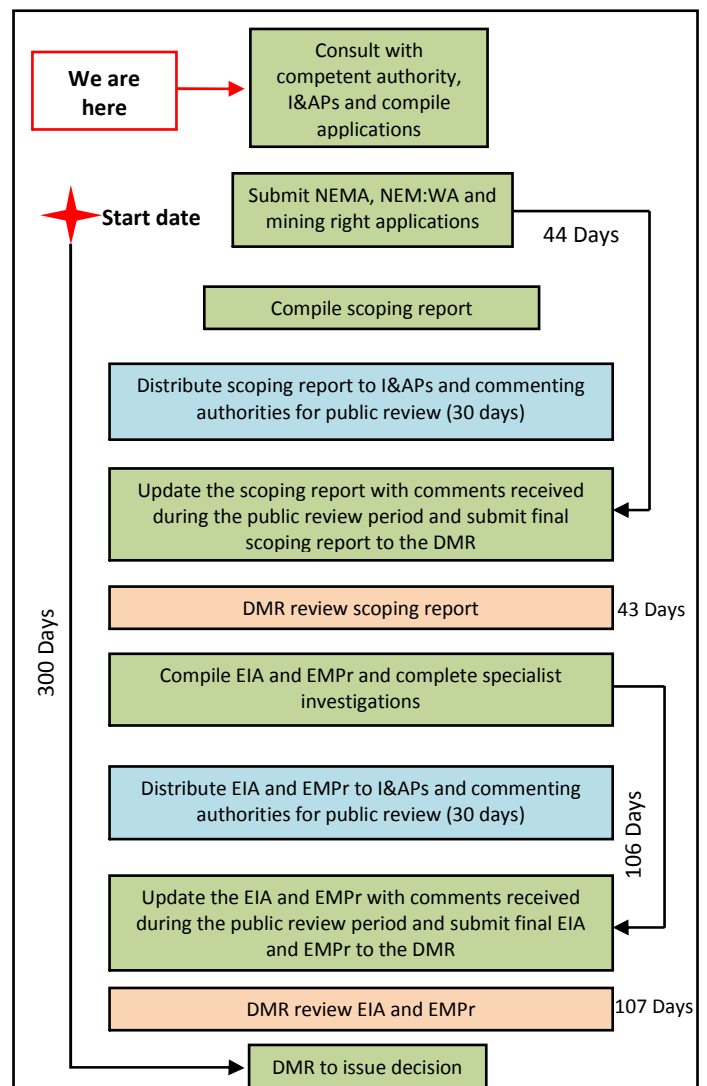
### DECISION MAKING AUTHORITIES

- \* DMR; and
- \* Gauteng Department of Water and Sanitation (DWS).

### LOCAL AUTHORITIES

- \* City of Johannesburg Metropolitan Municipality; and
- \* Ward Councillors.

**Please let us know if there are any additional parties that should be involved.**



**WEST WITS MINING MLI (PROPRIETARY) LIMITED**

**BACKGROUND INFORMATION DOCUMENT FOR THE WEST WITS PROJECT, A PROPOSED NEW UNDERGROUND AND  
OPENCAST GOLD MINE, GAUTENG PROVINCE**

**REGISTRATION AND RESPONSE FORM FOR INTERESTED AND AFFECTED PARTIES**

DATE		TIME	
<b>PARTICULARS OF THE INTERESTED AND AFFECTED PARTY</b>			
<b>NAME</b>			
<b>POSTAL ADDRESS</b>			
		<b>POSTAL CODE</b>	
<b>STREET ADDRESS</b>			
		<b>POSTAL CODE</b>	
<b>WORK/ DAY TELEPHONE NUMBER</b>		<b>WORK/ DAY FAX NUMBER</b>	
<b>CELL PHONE NUMBER</b>		<b>E-MAIL ADDRESS</b>	

**PLEASE IDENTIFY YOUR INTEREST IN THE PROPOSED PROJECT**

**PLEASE WRITE YOUR COMMENTS AND QUESTIONS HERE**

**Please return completed forms to:**

**Marline Medallie and/or Clive Phashe  
SLR Consulting (South Africa) (Pty) Ltd  
(011) 467 0945 (Tel) and/or ( 011) 467 0978 (Fax)  
[720.13087.00001@slrconsulting.com](mailto:720.13087.00001@slrconsulting.com)**