



Jelani Resources (Pty) Ltd Underground Mining Project

Draft Scoping Report – Non-Technical Summary

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Kongiwe Environmental (Pty) Ltd.

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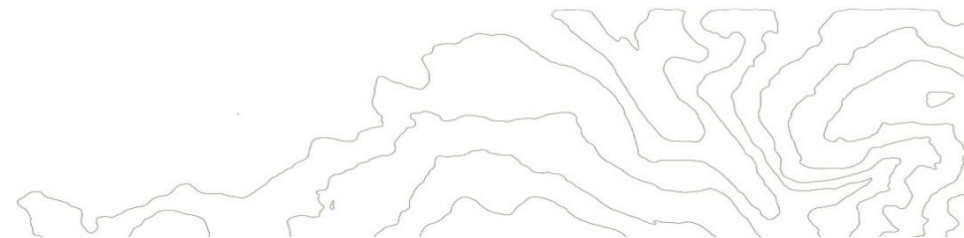
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1. Draft Scoping Report - Non-Technical Summary

Kongwiwe Environmental (Pty) Ltd (“Kongwiwe”) has been appointed by Jelani Resources (Pty) Ltd (“Jelani”), as the independent Environmental Service Provider and tasked with conducting the Scoping and Environmental Impact Assessment (S&EIA) process, which is aimed at critically evaluating the potential environmental and social impacts of the proposed **Jelani Joint Venture (JV) Area Underground Mining Project** (“Proposed Project”).

2. Project Description

Jelani Resources (Pty) Ltd is a joint venture (JV) company established by White Rivers Exploration (WRE) and Harmony Gold. The JV was formed to conduct underground mining operation within the Joint Venture (JV) area, which is made up of areas within the existing Harmony Target mining right (Harmony contribution) and Prospecting Rights (PR) areas to the west of Harmony Gold’s existing Target Mine (WRE contribution) in the Free State Province of South Africa. Following the exploration and licensing phases, Jelani intends to initiate underground mining operations within the same area.

The Proposed Project entails licensing the underground mining of the following potential mineral resources:

- Gold ore (primary target),
- Silver ore,
- Uranium ore,
- Sulphur,
- Platinum Group Metals,
- Rare earths,
- Diamonds (alluvial),
- Copper ore,
- Cobalt ore,
- Manganese ore,
- Molybdenum ore,
- Nickel ore,
- Lead ore,
- Tungsten ore,
- Zinc ore, and
- Iron ore.

Jelani’s underground mining operations initially will target shallower mineral resource deposits at the project site (approximately 1 200 mbs). As mine development progresses, new mining areas will be developed which will allow for the production rate to be steadily increased to the targeted full production rate of 60 000 tonnes of mined ore per month.

Two mining methods have been identified as the most practical for exploiting the mineral resources: conventional breast mining and shrinkage stoping. The selection of each method is primarily based on the dip of the mineralised reef, with the shrinkage stoping being used for the steeper slopes (3% of the total stope tonnage). Where the orebody dips below 55°, conventional breast mining will be used.

Ore will be transported to the shaft ore pass system using conveyor system loaded by a fleet of 30-tonne dump trucks which are loaded by 10-tonne loaders (LHD). Subsequently, the broken rock will be loaded into hoisting bins and will be hoisted to surface, where the rock will either be sent to the processing plant or to the waste rock dump.

Existing underground access (shafts and level access) will be refurbished and re-equipped. Target No 2 and Target No 3 shafts will, over the course of the mines life, be used for the movement of men, material and rock depending on which phase the mine is in.

2.1 Infrastructure Requirements

All operational mining infrastructure required for the Proposed Project will be located within Harmony's existing Target Mine mining right area. No new operational mining infrastructure planned within the JV project area. Underground access infrastructure will comprise either refurbished facilities at Target Shafts No. 3, 4, and 5 or newly constructed infrastructure at the Target No. 2 Shaft site, all within the existing mining right.

The infrastructure requirements are intended to support the managerial, supervisory, and operational functions associated with the respective underground mining operations/targets. A layout of the proposed Target 3 shaft surface infrastructure which either needs to be refurbished or constructed is presented in Figure 1. Target 3 shaft will be used to access the underground workings during Phase 1 of the project whilst Target 2 shaft is refurbished. Mining activities during this phase will take place between 57 Level and 48 Level (Figure 2). An overview of the Target 3 Shaft with level elevations, is shown in Figure 3.





The No 3 shaft surface infrastructure will comprise of the following (as numbered):

- | | |
|---|---|
| 1. No 3 shaft | 21. Security office |
| 2. Shaft facilities | 22. Explosives store |
| (a) Lamp repair | 23. Conveyors |
| (b) Proto room | 24. Laydown area and salvage yard |
| (c) Lamp room | 25. Walkway |
| 3. Change house facilities | 26. Marshalling yard |
| (a) Main laundry | 27. Drop off area |
| (b) Main change house | 28. Ablution block |
| 4. Compressor house | 29. Laundry |
| 5. Waste rock dump (not on Figure 1-6) | 30. Change houses |
| 6. Surface rock handling | 31. Offices |
| 7. Main substation | 32. Lapa |
| 8. Parking area | 33. Parking (not on Figure 1-6) |
| 9. Offices | 34. Parking |
| (a) Management, administration and technical services | 35. Turnstiles |
| (b) Mining | 36. Waiting area |
| (c) Engineering | 37. Lean to roof |
| 10. Man winder | 38. Underground store |
| 11. Barlow winder | 39. Pump house |
| 12. Rock winder | 40. Service boiler shop (not on Figure 1-6) |
| 13. Fridge plant | 41. Services boiler store (not on Figure 1-6) |
| 14. Store building | 42. Rail line |
| 15. Services/fitting workshops | 43. Pipeline |
| 16. Dirty water dam & pump station | 44. Security |
| 17. Sewerage plant | 45. Timber yard |
| 18. Evaporation plant | 46. Electrical workshop |
| 19. Change house (not on Figure 1-6) | 47. Flammable store |
| 20. No 4 shaft ventilation fans | 48. Old oil store |

An overview of the Target 3 Shaft with level elevations, is shown in Figure 1.

Figure 1: Target No 3 shaft surface infrastructure layout



Figure 2: Harmony Target No 3 Shaft

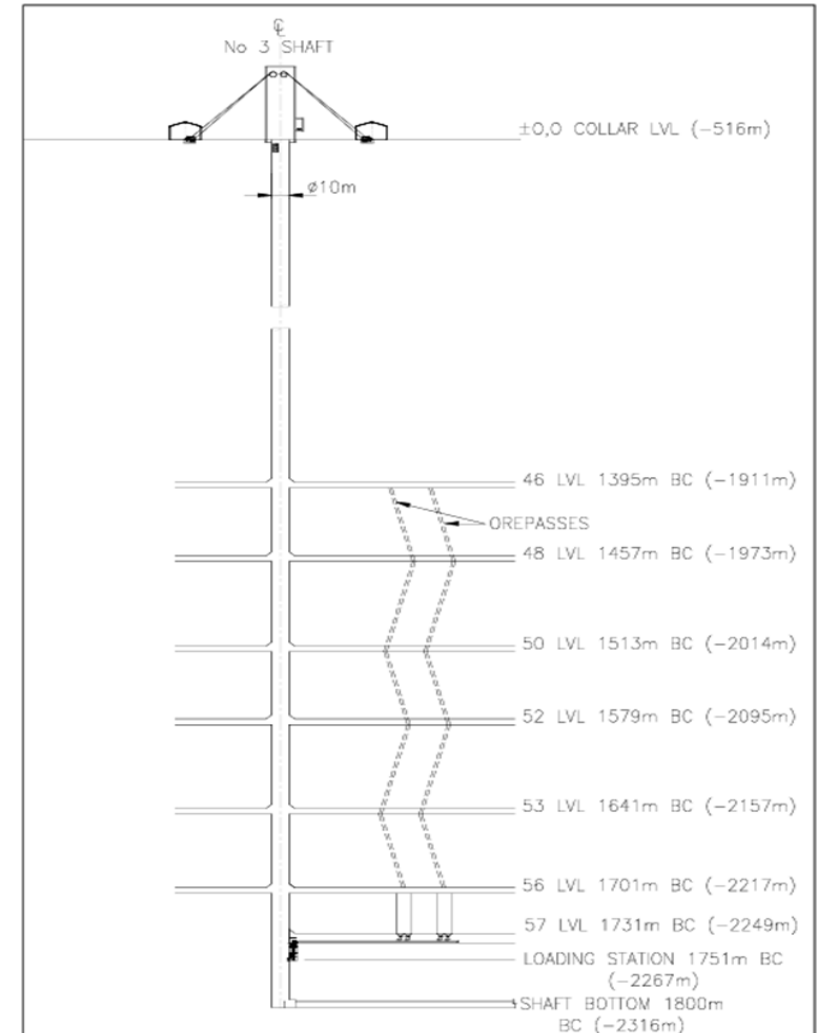


Figure 3: Target 3 shaft longitudinal arrangement

The Target No 2 shaft will be used as the main access to the underground orebody and workings in Phase 2 and Target No 3 shaft will be maintained as a second outlet. Mining activities in this phase are planned to occur above 48 Level and below 57 Level.

The Target No 2 shaft is currently not utilised for mining production activities. Instead, it acts as the emergency exit for Target No. 1 Shaft with only a limited amount of infrastructure remaining in place. Once the shaft has been refurbished and surface infrastructure is completed and the shaft commissioned, mining operations associated with the Proposed Project will be relocated to this shaft.



Figure 4: Harmony Target No 2 Shaft

A layout of the current Target No 2 Shaft surface infrastructure as well as the proposed new infrastructures which are required to be constructed are presented in Figure 5.

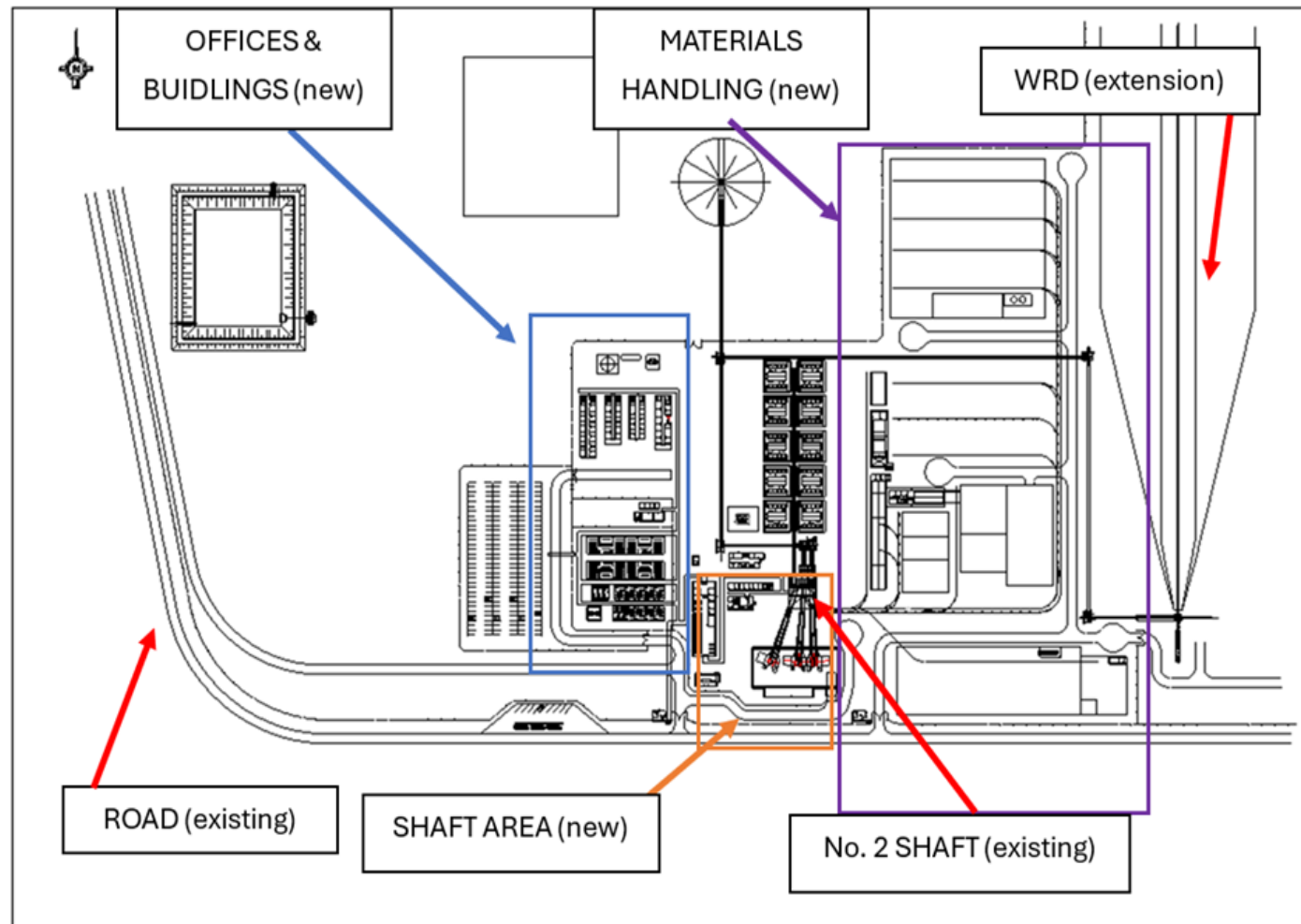


Figure 5: Target No 2 Shaft new and existing infrastructure

To monitor potential mining-induced seismicity and boundary interactions with the adjacent Harmony Gold operations, four seismographic monitoring stations will be installed, spread equally along the shared boundary, with short gravel access tracks provided for each station. These installations represent the only surface infrastructures on the JV project area.

Additionally, a new Tailings Storage Facility (TSF) will be constructed to the west of the existing Target metallurgical plant and north of the existing Target TSF. The total area required for this new facility is approximately 69 Hectares (Ha). This TSF is a separate project being undertaken by Harmony Gold.

2.2 Area Extent

The total extent of the application area is 956.76 hectares (ha).

2.3 Depth of Mineral Below Surface

The orebodies extend between 1 500m and 2 600m below surface.

2.4 Proposed Beneficiation Process

All ore produced from the underground mining operations will be transported to the existing Target 1 metallurgical plant for processing.

2.5 Project Schedule

Prior to the initiation of mine implementation and construction activities, various stages of design work will be required to be undertaken. It is expected that these activities will take approximately four years before implementation can be initiated. Active mining can commence during year 7. The key timelines are listed in Table 1 below:

Table 1: Project Timelines

Period	Description
Year 1 - 3	Site data gathering and feasibility studies
Year 4	Detailed engineering design
Year 5 - 8	Implementation and construction activities
Year 7	Hiring of employees
Year 7	Initiation of mining activities underground

The production build-up is planned to occur in two phases:

In Phase 1, which is planned to last for four years starting in Year 5, with construction and refurbishment with mining starting in Year 7. The first two years are required for level access and refurbishment, after which Target No 3 shaft will be used for hoisting of men, material and rock.

Phase 2 commences in Year 9, whereby access to the underground workings is via Target No 2 shaft, with Target No 3 shaft being reserved as a second outlet.

As mine development progresses over the first four years, new mining areas will be developed which will allow for the production rate to be steadily increased to the targeted full production rate of 60 000 tonnes of ore per month, which is achieved in Year 10.

10 340 Mt of ore is expected to be mined over the Life of Mine (LOM), which is 14 years.

3. Locality

The project area is situated immediately adjacent to and west of the Harmony Gold Target Mine, approximately 11km northwest of Odendaalsrus, 2,5km west of Allanridge, and 22km east of Wesselsbron, in the Free State Province of South Africa. It lies within Ward 36 of the Matjhabeng Local Municipality, under the jurisdiction of the Lejweleputswa District Municipality. Please refer to Figure 6 for the Proposed Project local orientation.

Table 2: Summary of the Location of the Project Site

Province	Free State Province
Municipality	Matjhabeng Local Municipality
Ward Number	36
Nearest Town	Allanridge



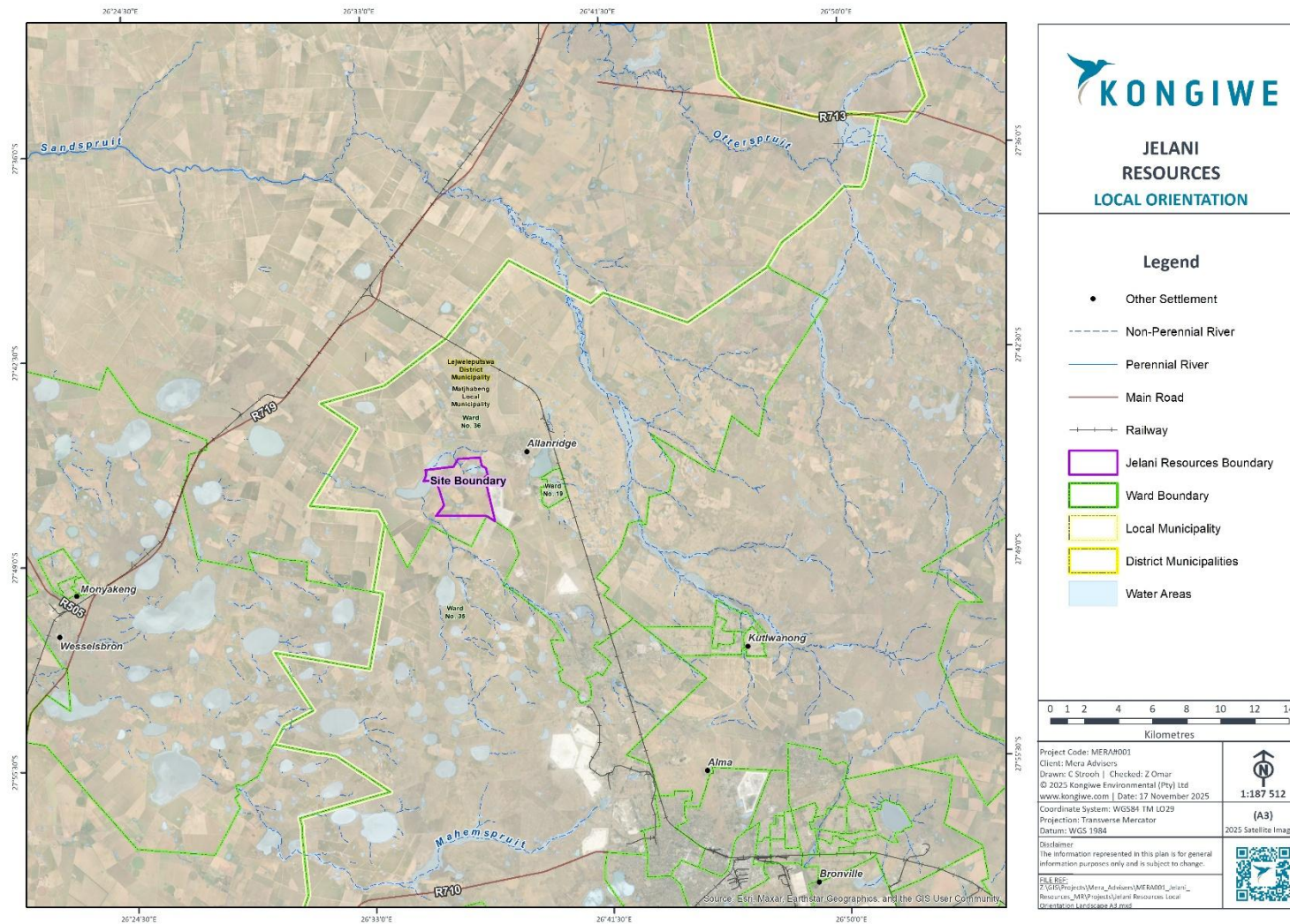


Figure 6: Local Orientation of the proposed JV Area Underground Mining Project

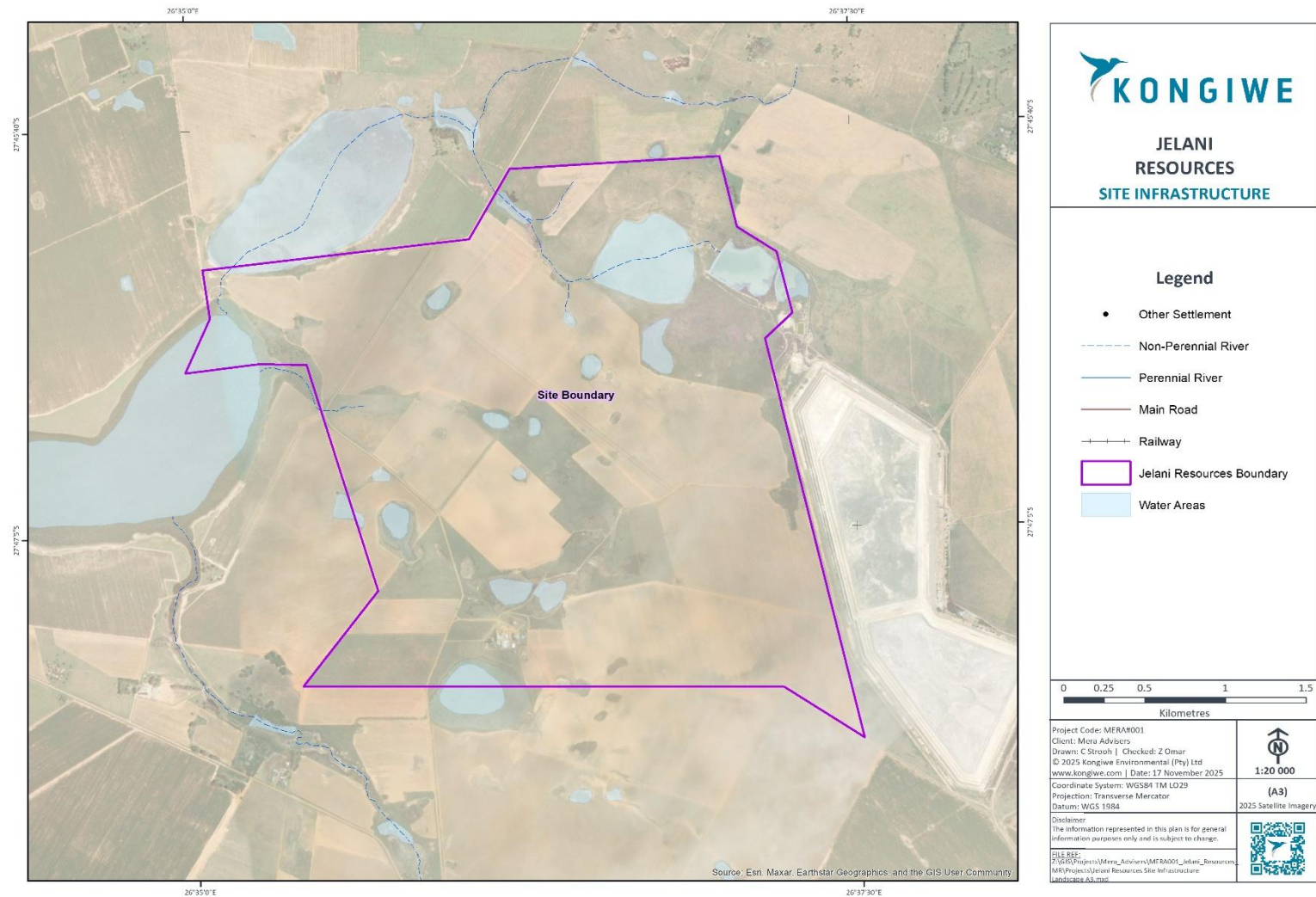


Figure 7: Jelani Underground Mining Project Infrastructure Map

4. Site Access, Access Control and Security

The Proposed Project is located within an area served by an established road network. Public routes in close proximity to the site include existing roads currently used for Harmony Target Mine operations as well as gravel roads used by the local farmers.

Only the development of gravel access tracks to facilitate the monitoring of potential mining-induced seismicity and boundary interactions is anticipated at the project site.

Vehicle access to the shaft site is via the R30 public road, connecting to the existing mine access roads, that will continue to be used. No additional refurbishments are required on these roads other than possibly cutting back the overhanging branches of the two rows of trees that run along the entire length of the road.

The shaft site perimeter is already fenced and assumed to be according to the Harmony Standard, as no other security measures or devices were observed. Access to the shaft complex is controlled through the main access security gate. Provision has been made to refurbish the system.

5. The period required for Environmental Authorisation

The Environmental Authorisation (EA) is required for 14 years. Subsequent amendments can be lodged as the operational structures change accordingly.

6. Project Alternatives

6.1 The Property on which or Location where it is Proposed to undertake the Activity

Jelani intends to initiate an underground mining operation within the JV area to extract various minerals, primarily Gold, along with Silver, Uranium, and associated minerals. White Rivers Exploration (WRE), the joint-venture partner, holds the Prospecting Rights for these minerals in this area. The Proposed Project follows the completion of the Prospecting Phase, which confirmed the viability of developing an underground mining operation and identified significant potential mineral resources to support such development. Additionally, the project development intent to utilise available spare capacity within Harmony's existing infrastructure at the Target Mine, which is located adjacent to the JV area. As the potential mineral resources were confirmed within specific properties and the required supporting infrastructure already exists within Harmony's Target Mine mining right area, the activity is constrained to these locations. **Therefore, no alternative sites are feasible.**

6.2 The Type of Activity to be undertaken

One option has been identified to be assessed as part of the Proposed Project to extract the mineral resource deposit within the project area: **Underground Mining Operation.**

Jelani intends to initiate underground mining operations within the project area. The Proposed Project initially will target shallower mineral resource deposits at the project site, estimated at approximately 1,200 meters below surface (mbs). As mine development progresses, new mining areas will be developed which will allow for the production rate to be steadily increased to the targeted full production rate of 60 000 tonnes of mined ore per month.

Two mining methods have been identified as the most practical for exploiting the mineral resources: conventional breast mining and shrinkage stoping. Selection between these methods will be based primarily on the dip of the mineralised reef.

The development plan is phased:

- Phase 1: Access to the underground mine will occur via the existing Target 3 Shaft, with mining activities undertaken between 57 Level and 48 Level.
- Phase 2: Access will occur via the existing Target 2 Shaft, with mining activities taking place above 48 Level and below 57 Level.

Existing underground access (shafts and level access) will be refurbished and re-equipped. Target No 2 and Target No 3 shafts will, over the course of the mines life, be used for the movement of men, material and rock depending on which phase the mine is in. All ore produced from the underground mining operation will be transported to the existing Target 1 metallurgical plant for processing.

Table 3: The advantages and disadvantages of underground mining activities.

Option	Advantage	Disadvantage
Underground mining activities	• Minimises need for new shaft sinking. • Refurbishing and re-equipping the existing infrastructure significantly limits new construction requirements and speeds up project initiation. • Making use of the existing Target 1 metallurgical plant, remove the need for a new processing plant. • Reduces extensive surface excavation and avoids the creation of large open pits, while enabling access to deeper mineralised reef deposits. • Allows other surface land uses. • Minimises risk of relocation or displacement of local communities.	• Potential profits rely on substantial volumes of material that need to be mined and on the fluctuating price of commodities (e.g., the fluctuating price of gold). • Potential negative environmental effects during the operational phase of the project. • Potential lowering of groundwater levels due to dewatering needs. • Deep mining increases geotechnical risks (heat, rock stress, seismicity). • Potential for long-term subsidence over mined-out areas. • Labour-intensive. • Increased demand for ventilation and support systems for safe

	• Positive economic benefits. • Lower chance of attracting illegal miners compared to open pits.	operations. • High-risk working environment for underground personnel. • Potential community concern.
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6.3 The Type of Activity to be undertaken

The proposed layout for the Proposed Project is illustrated in Figure 7 above. The layout is influenced by the potential mineral resource deposits identified during the exploration phase, as well as the availability of existing infrastructure situated within the Harmony Target Mine mining right area, to support the mining project. No new operational infrastructure is planned within the project area. **No alternative design and layout option considered.**

6.4 The Technology to be used in the Activity

Industry best practice underground mining methods will be employed. Two mining methods have been identified as the most practical for exploiting the mineral resources: conventional breast mining and shrinkage stoping. The selection of each method is primarily based on the dip of the mineralised reef, with the shrinkage stoping being used for the steeper slopes (3% of the total stope tonnage). Where the orebody dips below 55°, conventional breast mining will be used.

Ore will be transported to the shaft ore pass system using conveyor system loaded by a fleet of 30-tonne dump trucks which are loaded by 10-tonne loaders (LHD). Subsequently, the broken rock will be loaded into hoisting bins and will be hoisted to surface, where the rock will either be sent to the processing plant or to the waste rock dump.

Table 4: The advantages and disadvantages of the technology to be used in the activity

Option	Advantage	Disadvantage
Conventional breast mining	• Highly suited for the majority of the orebody (<55° dip). • All ore produced in the stopes will be scraped into the ore passes. • Lower waste-rock generation because the method supports selective mining and improving ore waste separation. • Labour-intensive method supports local employment, skills transfer, and job creation.	• Higher direct worker exposure to blasting. • Handheld drilling and high-frequency blasting. • Larger stope voids may require additional support materials. • Delayed operations due to economic factors. • Stealing of project equipment and disruption of activities.
Shrinkage stoping	• Broken ore acts as a working platform. • Reduce worker exposure inside the stope, as personnel mainly	• Ore must remain in the stope until final drawdown and may delay revenue generation as well as impacting early production schedules

	operate from raises, travelling ways, or drawpoints rather than unsupported voids. - Improves extraction of narrow or irregular steep reef zones. - Limited machinery requirements inside the stope during active stoping.	and plant feed. - Ground stability risk during final drawdown. - Higher blasting intensity. - Delayed operations due to economic factors. - Stealing of project equipment and disruption of activities.
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6.5 The Operational Aspect of the Activity

The project involves underground mining, targeting initial mineral resources located approximately 1,200 m below surface. As mine development progresses, new mining areas will be developed which will allow for the production rate to be steadily increased to the targeted full production rate of 60 000 tonnes of mined ore per month. Conventional breast mining and shrinkage stoping mining methods have been identified as the most practical, with the selection determined by the dip of the mineralised reef.

Ore will be transported to the shaft ore pass system using a conveyor system loaded by a fleet of 30-tonne dump trucks which are loaded by 10-tonne loaders (LHD). Subsequently, the broken rock will be loaded into hoisting bins and will be hoisted to surface, where the rock will either be sent to the processing plant or to the waste rock dump. All ore will be processed at the existing Target 1 metallurgical plant.

The project's development includes utilising the available spare capacity within Harmony's existing infrastructure at the Target Mine. This includes the Target No. 3 and No. 2 shafts, the Target No. 1 Processing Plant, and associated surface infrastructure. All operational mining infrastructure required for the Proposed Project will be located within the existing Harmony Target Mine mining right area. No new operational mining infrastructure is planned within the project area. Existing shafts and level access will be refurbished and re-equipped as required, and throughout the life of mine Targets 2 and 3 Shafts will facilitate the movement of personnel, materials, and rock.

Table 5: The advantages and disadvantages of the operational alternative considered

Option	Advantage	Disadvantage
Underground mining operation	Utilising the available spare capacity within Harmony's existing infrastructure at the Target Mine, including the Target No. 3 and No. 2 shafts, the Target No. 1 Processing Plant, and the associated surface infrastructure significantly reduces the need for new construction and limits additional operational mining infrastructure development.	- Limits flexibility in mine layout optimisation due to fixed infrastructure positions. - Potential profits rely on substantial volumes of material that need to be mined and on the fluctuating price of commodities (e.g., the fluctuating price of gold). - Potential negative environmental effects during the operational

	• Minimises need for new shaft sinking. • Reduces extensive surface excavation and avoids the creation of large open pits, while enabling access to deeper mineralised reef deposits. • Allows other surface land uses. • Minimises risk of relocation or displacement of local communities. • Positive economic benefits. • Lower chance of attracting illegal miners compared to open pits.	phase of the project. • Potential lowering of groundwater levels due to dewatering needs. • Deep mining increases geotechnical risks (heat, rock stress, seismicity). • Potential for long-term subsidence over mined-out areas. • Labour-intensive. • Increased demand for ventilation and support systems for safe operations. • High-risk working environment for underground personnel. • Potential community concern.
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6.6 The “No-Go” Option

The option of the project not proceeding would mean that the environmental and social status would remain the same as current. This means that both the potential negative and positive impacts associated with the project would not occur. As a result, negative impacts on water resources and other environmental aspects would be avoided. However, positive impacts such as economic development, employment creation, skills development, and poverty alleviation would also not materialise.

Negative impacts that would be avoided include, but are not limited to, the dewatering of the deep aquifer and various socio-economic effects, such as potential community conflict and increases in certain social challenges (e.g., in-migration and potential increases in crime).

Potential positive impacts associated with the project include future employment opportunities, which may help reduce unemployment and support improved livelihoods within local communities. In addition, the project could stimulate the local economy, potentially contributing to further development and community empowerment.

Should the proposed Project not proceed, the aforementioned positive economic and social impacts would not be realised. Furthermore, the mineral reserves in the project area would remain unmined. The benefits associated with the proposed underground mining project will be lost, and the current socio-economic conditions, particularly those affecting surrounding communities would remain unchanged.

7. Environmental Authorisation Process

In terms of the environmental legislation, Jelani is required to undertake a Scoping and Environmental Impact Assessment (S&EIA) process which evaluates the environmental impacts associated with the Proposed Project as part of an Environmental Authorisation (EA). The S&EIA and specialist studies are being undertaken for the applications for the required approvals.

The following application will be made to the Department of Mineral and Petroleum Resources (DMPR) for the Proposed Project:

- **EA application** for listed activities triggered in Listing Notices GN R983, GN R984 and GN R985 published pursuant to the EIA Regulations 2014 (as amended), promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).

In addition, the following application will be made to the relevant Competent Authority:

- **An Integrated Water Use Licence Application (IWULA)** in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA) will be submitted to the Department of Water and Sanitation (DWS) for any potential impact to water resources by the Proposed Project.

Table 6 below contains the listed activities identified in terms of NEMA EIA Regulations of 2014 (GN R982 of December 2014, as amended by GNR 326 of April 2017, and GNR 517 of 11 June 2021) and Listing Notices 1, 2 and 3 (GN R983, GN R984 and GN R985 of December 2014, as amended by GNR 327, GNR 325, and GNR 324 of April 2017, respectively, and GN R517 of 11 June 2021) which may be triggered by the Proposed Project, and for which an application for EA has been submitted. The table also includes a description of those project activities which relate to the applicable listed activities.

Table 6: Listed Activities Triggered by the Proposed Project

Name of Activity	Aerial Extent of the Activity (ha) ¹ Ha or m ²	Applicable Listing Notice GNR 983, 984 and 985 as amended by GNR 327, GNR 325 or GNR 324	Listed Activity	Water Use License Authorisation ²
Underground Mining Operation	956,76 Hectares	GNR 325 - Activity 17	Any activity including the operation of that activity which requires a mining right in terms of section 22 of the	Section 21 (c) and (i)

¹ The total area of the reclamation and associated areas is approximately 956,76 hectares.

² Water use licences in terms of Section 21 of that National Water Act, 1998, will be required for various of the Listed Activities.

Name of Activity	Aerial Extent of the Activity (ha) ¹ Ha or m ²	Applicable Listing Notice GNR 983, 984 and 985 as amended by GNR 327, GNR 325 or GNR 324	Listed Activity	Water Use License Authorisation ²
			Mineral and Petroleum Resources Development Act, as well as any other applicable activity as contained in this Listing Notice, in Listing Notice 1 of 2014 or Listing Notice 3 of 2014, required to exercise the mining right	
Development of gravel access tracks To monitor potential mining-induced seismicity and boundary interactions with the adjacent Harmony Gold operations, four seismographic monitoring stations will be installed, spread equally along the shared boundary. Each station will include a small sensor pad/housing (approximately 5–10 m²), basic power/comms setup, 6 m of perimeter fencing per station (total 24 m), and short gravel access tracks (total approx. 1 km across all stations, 4 m wide).	Gravel access tracks approximately 1 km across all stations, with a width of 4 m wide	GNR 985 – Activity 4	The development of a road wider than 4 metres with a reserve less than 13,5 metres. (b) Free State (i) Outside urban areas: (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;	Section 21 (c) and (i)

Name of Activity	Aerial Extent of the Activity (ha) ¹ Ha or m ²	Applicable Listing Notice GNR 983, 984 and 985 as amended by GNR 327, GNR 325 or GNR 324	Listed Activity	Water Use License Authorisation ²
Installation of the seismographic monitoring stations. To monitor potential mining-induced seismicity and boundary interactions with the adjacent Harmony Gold operations, four seismographic monitoring stations will be installed, spread equally along the shared boundary. Each station will include a small sensor pad/housing (approximately 5–10 m²), basic power/comms setup, 6 m of perimeter fencing per station (total 24 m), and short gravel access tracks (total approx. 1 km across all stations, 4 m wide).	40 m ²	GNR 985 - Activity 14	The development of (ii) infrastructure or structures with a physical footprint of 10 square metres or more; where such development occurs (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 meters of a watercourse, measured from the edge of a watercourse; (b) Free State (i) Outside urban areas: (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic biodiversity plans	Section 21 (c) and (i)

Name of Activity	Aerial Extent of the Activity (ha) ¹ Ha or m ²	Applicable Listing Notice GNR 983, 984 and 985 as amended by GNR 327, GNR 325 or GNR 324	Listed Activity	Water Use License Authorisation ²
			adopted by the competent authority or in bioregional plans;	

8. Key Findings of the Scoping Report

The report provides a scoping-level identification of potential environmental impacts (physical, biological and social) associated with the Proposed Project, as well as a strategy for how these impacts will be investigated and assessed further in the EIA Phase. The baseline environmental information provided in this DSR was compiled as a high-level desktop investigation, and the project information is sourced from existing background information relevant to the Proposed Project. The preliminary environmental impacts identified in Table 7 will be further refined, calculated and assessed for all the feasible alternatives identified.

Mitigation and management measures will also be suggested by the specialists for all impacts identified. The potential positive and negative impacts which may arise because of the Proposed Project have also been summarised in the Table 7 overleaf.

Table 7: Potential Impacts Associated with the Proposed Project

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
Physical Environment (non-living)	Surface water	Potential hydrocarbon spills during the construction of the seismographic monitoring stations and the development of the gravel access tracks.	- Biodiversity, Freshwater, including a Risk Assessment Matrix (RAM). - Hydrological Assessment
	Groundwater	- Dewatering of deep aquifer causing groundwater level decline. - Lowering of the water table in the shallow aquifer. - Groundwater flow alteration. - Potential seepage of mine water to the groundwater system may contaminate groundwater resources.	Hydrogeological Assessment

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
	Soil and geology	- Potential soil contamination from hydrocarbon spills during the construction of the seismographic monitoring stations and the development of the gravel access tracks - Subsidence risk above mined-out areas. - Seismicity risk from deep-level blasting.	- Biodiversity, Freshwater, including a Risk Assessment Matrix (RAM,) Soils and Agricultural Potential. - Hydrogeological Assessment. - Blasting and Vibrations.
	Air quality	- Dust emissions during the installation of the seismographic monitoring stations and the development of the gravel access tracks. - Dust emissions from ore handling. - Diesel exhaust emissions.	- Air Quality Impact Assessment - Climate Change Impact Assessment
Biological Environment	Fauna and Flora	Vegetation clearance required for the installation of the seismographic monitoring stations and the development of the gravel access tracks may result in the loss of habitat for local flora and fauna, potentially disrupting ecological communities and reducing biodiversity in the affected area.	Biodiversity, Freshwater, including a Risk Assessment Matrix (RAM,) Soils and Agricultural Potential.
Social and Economic Environment	Socio-Economic	- Potential employment opportunities and job security. - Potential investment in local economy. - Influx of people seeking employment. - Potential community conflict and increases in certain social challenges (e.g., in-migration and potential increases in crime). - Impact on economic and social infrastructure in the local area. - Impact on local resource use (energy, water).	Social Impact Assessment.

Environmental Component	Component Type	Potential Impact (positive or negative)	Specialist Study Planned for EIA
	Vibration	- Vibration from shaft hoisting operations and ore handling. - Vibration from underground blasting and drilling. - Vibration impacts from blasting potentially affecting nearby structures.	Blasting and Vibrations.

9. Overall Conclusion

Although mining activities often generate positive social and economic benefits, they may also result in notable negative environmental impacts. Prioritising environmental stewardship, complying with relevant environmental legislation and implementing specialist recommendations and sustainable operational practices will be required to minimise its environmental footprint and reduce ecological impacts as far as possible while balancing the economic and social benefits.

At this stage, the findings of this DSR indicate that no environmental fatal flaws have been identified for the Proposed Project. While some limitations do exist, it is anticipated that the implementation of appropriate mitigation measures would assist in reducing the significance of such impacts to acceptable levels. Impacts associated with the Proposed Project need to be considered further during the EIA Phase according to the Way Forward and the Plan of Study contained in this report.

10. Way Forward

This DSR has been undertaken with the aim of identifying potential positive and negative impacts on the environment and gathering comments on concerns and queries from stakeholders. It documents the process followed, the findings and recommendations of the Scoping Phase study, and the proposed Plan of Study for the EIA Phase to follow. The overarching objectives of the EIA process will be to:

- Prepare integrated sensitivity maps for the study area based on the findings of specialist assessments as input into the project design process;
- Identify and assess the significance of potential impacts associated with the project activities; and
- Recommend mitigation and enhancement measures to ensure that the development is undertaken in such a way as to promote the positive impacts and to minimise the negative impacts.

The procedure for this study going forward is as follows:

- Submit the finalised Scoping Report to the DMPR for permission to undertake the EIA Phase of the project;
- Upon the decision to grant or refuse the final Scoping Report, all stakeholders will be notified. If granted, stakeholders will also be notified of the conditions of the DMPR for proceeding with the EIA Phase of the project;
- In the case of approval of the final scoping, execute the Plan of Study for the Impact Assessment during the EIA Phase of the project;
- Incorporate and address comments and issues raised during the consultation period on the Scoping Report into the EIA, and make changes to the report where relevant;
- Make the EIA Report and Environmental Management Programme report (EMPr) available to the public, stakeholders and authorities;
- Finalise the EIA Report and submit the final EIA Report to the DMPR; and
- DMPR review period and decision-making for 107 calendar days.

11. Way Forward

Various specialist studies are being undertaken as part of the S&EIA process to assess the potential impacts associated with the Proposed Project. Specialist studies being undertaken include:

Table 8: Details of the Specialist Assessment

Specialist Study	Specialist Company
Biodiversity, Freshwater, including a Risk Assessment Matrix (RAM,) Soils and Agricultural Potential.	SAS Environmental
Heritage and Palaeontology	PGS Heritage
Air Quality Impact Quality Assessment	Rayten Engineering
Noise Impact Assessment	Rayten Engineering
Mine Closure Plan	CRPM
Hydrological Assessment	Kongiwe
Hydrogeological Assessment	Arjan van 't Zelfde
Climate Change	Rayten Engineering
Blasting and Vibrations	Blast Management and Consulting
Socio-Economic Impact Assessment	Kongiwe

12. Glossary

Environmental Assessment Practitioner (EAP): An EAP is someone who co-ordinates, manages and integrates the various components of environmental assessment throughout the planning process; has received an appropriate interdisciplinary training covering both the natural and human environment; has experience in environmental management, environmental assessment and related studies; and demonstrates core competencies that are considered essential to the environmental assessment profession.

Environmental Impact Assessment (EIA): EIA is a tool used to assess the significant effects of a project or development proposal on the environment. EIAs make sure that project decision makers think about the likely effects on the environment at the earliest possible time and aim to avoid, reduce or offset those effects. This ensures that proposals are understood properly before decisions are made.

Environmental Management Programme (EMPr): The EMPr is a detailed plan for the implementation of the mitigation measures to minimise negative environmental impacts during the project life cycle.

Scoping Report: The Scoping Report describes the proposed project and identifies the possible impacts of the proposed development.