



Environmental Impacts Screening Decision

Project Name: Lakeram Singh Harridat-Essequibo Quarry

Type of Operation: Stone Quarry

Reference NO.: 20210922-EQLSH

Location: H-1040/MP/000/2020- Confluence of the Essequibo River and Hurikabra Creek, Region 7

Maps

Figure 1



Ganges St., Sophia, Georgetown, GUYANA.

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Point A, located at geographical coordinates of longitude **58°34'36"W** and latitude **6°15'49.331"N**, thence at true bearing of **270.49°**, for a distance of approximately **1 Mile 734.285 yards**, to **Point B**, located at geographical coordinates of longitude **58°35'50".622** and latitude **6°15'49.964"N**, thence at true bearing of **0.04°**, for a distance of approximately **953.377 yards**, to **Point C**, located at geographical coordinates of longitude **58°35'50.604"W** and latitude **6°16'18.188"N**, thence at true bearing of **89.34°**, for a distance of approximately **1 Mile 415.669 yards**, to **Point D**, located at geographical coordinates of longitude **58°31'25"W** and latitude **5°36'34"N**, thence at true bearing of **91°**, for a distance of approximately **854 yards**, to **Point E**, located at geographical coordinates of longitude **58°34'45"W** and latitude **6°16'18.926"N**, thence at true bearing of **180°**, for a distance of approximately **1 mile 1023 yards**, to **Point F**, located at geographical coordinates of longitude **58°31'0"W** and latitude **5°35'11"N**, thence at true bearing of **162.357°**, for a distance of approximately **1049.07 yards**, to the point of commencement at **Point A**.

Key Considerations

1. The proposed block is within the Mazaruni Mining District 3 (according the Guyana Geology Mines Commission zoning). The proposed project will disrupt approximately 471 Of acres of land; however, the project intends to utilise 12.5 % (58 acres) of the allotted area for clearance and extraction of aggregate, establishment of mining pits, buildings and internal roads for the operation.
2. There are no communities located in the immediate Project environment. Bartica and Sherima Crossing are located approximately 16.82 km and 15.27 km respectively from the proposed project location. Immediate to the Northern and Western direction of the block are secondary forest and immediately to the Southern direction of the block there is one residence (water front section of the bock) and immediately to the Eastern direction is the Essequibo River.
3. Site Drainage - The quarry site is hilly and as such water would drain from the high areas to lower areas i.e., from the Hurikabra Creek which is approximately 2.5 km north of the Essequibo River.

• Ancillary Services

1. A Miller 4 KW Generator will be used to supply electricity to the facility and non-essential aspects of the Quarry such as Buildings, Camps and Guard Huts. Additionally, a CAT 1000 KVA Generator will be used to supply electricity to the Crushers for stone production.
2. Buildings will be constructed for accommodation and planning, organizing, coordinating and controlling activities on site. The materials that would be used for the construction of

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the various buildings will be sourced externally of the proposed location and would be transported by boat for installation.

3. A separate storage area will be constructed for explosives and hazardous materials Safety Data Sheets (SDS) will be kept on site. The location of the storage area for the explosives will be guided by the requirements of the Guyana Police Force and other regulatory bodies.

Environmental impact screening

The EPA's screening concludes that there are no identifiable potential significant environmental impacts likely to be generated from this Project nor is the project or the intended location of the project is deemed to be environmentally sensitive. Impacts arising from the construction and operational phases of the project are considered to be minor, localized, and acceptable, and an Environmental Social and Management Plan (ESMP) will be prepared providing measures to avoid, prevent and mitigate impacts during the construction and operation of the Quarry.

1. From the assessment conducted the communities of Bartica and Sherima are located approximately 16.82 km and 15.27 km respectively from the proposed project location and will not be directly affected by any proposed activities that is likely to occur at the Project site. Further, there are other quarries slated earmarked for the zone this project is currently located in. Apart from the fact other quarries are earmarked for the area, St Mary's Quarry is operating in the Southern direction and approximately 1.8 km from the proposed Project Site and no report has been received from members of communities (Bartica and Sherima) of them being affected by that Project.
2. It is anticipated that surface water quality may be affected, but negligibly by sediment load coming from loose soil and rock sediments in storm runoff holding to the fact that the area is undulating. It is also anticipated that there will be no direct discharge of effluent into the Essequibo River or any Creek or waterway that is located in the Project environment. Water management system will allow rainfall and surface run-off to enter drains, quarry sump and finally into a sedimentation pond. The water would then be reuse or discharge via a spillway into the Seribikabra Creek. The implementation of grease traps, soakaway and containment berms will be utilised to mitigate impacts to ground and surface water.
3. Air quality may be affected from combustion gases, dust, and particulates. However, this impact would be within the immediate project environment and may be as a result of transportation and loading of quarriable materials. These impacts would be short term and localized to the Project Site. With the implementation of control measures, such as wet suppression and the establishment of a buffer strip, these impacts can be mitigated. Air quality impacts will be mitigated by employing, appropriate speed limits, spray bars

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installed at several points on crushing equipment and maintaining construction equipment according to manufacturer's specifications.

4. Noise and vibration within the immediate project environment will occur due to blasting, loading and extraction of aggregates. However, these impacts would be short term and localised to the Project Site. With the implementation of control measures, such as buffers, these impacts can be mitigated. Noise level impacts will be mitigated by installing sound suppression equipment on vehicles (mufflers) and ensuring vehicles are maintained according to manufacturer's specification. Blasting will be conducted in accordance with Mining regulations and GGMC Code of Practice for Mining. The decibel limits outlined in the GNBS Noise Emission Standard will also be implemented.
5. Soil degradation/contamination due to removal of vegetation and compaction by heavy duty machinery. The project site requires excavation of soils and/or gravel. These impacts are short term and reversible.
6. Loss of biodiversity and habitats may occur as a result of vegetation removal and forest fragmentation. Clearing of vegetation in stages and extraction of aggregate in stages will allow for more effective management and control of impacts and reduce habitat destruction. There are no threatened or endangered species nor critical habitats in the area or sensitive species of flora or fauna. Minimizing the Project's footprint and initiating restoration as soon as practicable in temporary work areas will mitigate the impacts to soil and habitats. Monitoring biodiversity, minimizing the number and longitudinal extent of streams to be relocated and control of invasive species would mitigate any residual impacts to biodiversity.
7. A requirement is the preparation of a pre-construction, construction and operational ESMP to manage environmental impacts arising from the project along with a corresponding schedule and monitoring of mitigation measures to ensure potential impacts are maintained at insignificant levels. It also includes the institutional arrangements for implementing the ESMP to ensure its effectiveness.

Conclusion and recommendations

The EPA concludes that there are no identifiable potential significant impacts likely to be generated from the Project. Residual impacts arising from the construction and operational phases of the project are minor, localized, acceptable and mitigable. The implementation of environmental management practices in-keeping with international standards, best practices of the Mining industry will be required to provide safeguards in relation to potential impacts identified. An ESMP will be required to provide the set of measures to avoid, prevent, mitigate any impacts and also include monitoring of the environment.

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