EIS SUMMARY FOR THE PUBLIC (ESP)
LIMESTONE QUARRY PROJECT

A. Project Description

A.1. Project Type, Component, and Size

Holcim Mining and Development Corporation (HMDC) is a duly registered corporation primarily engaged in the supply of cement and aggregates (crushed stone, sand and gravel, limestone, and other minerals). The company has been in operation since 2014 and supplying Holcim Philippines Inc. with its raw material requirement of 8 to 10 million metric tons annually nationwide. The growing demand for cement requires additional limestone raw materials that the company is currently processing to maintain its operation and meet market demand.

For this reason, HMDC is proposing the Limestone Quarry Project within MPSA No. 274-2008-XI – Amended II - Parcel 4. The project is located at Barangay Tinoto with boundaries adjacent to Barangay Kamanga Maasim, Sarangani Province. The said project will be able to help the realization of the municipality and even the province's development initiatives by providing more employment opportunities to the local people; improve infrastructure and generate more tax revenues and fees. Also, the delivery of basic social services will be improved through the social development and management program of the company.

The details of the proposed project are presented below:

Project Name	:	Limestone Quarry Project
Nature of Project	:	Mining & Quarrying
Project Type		2.1.2. Extraction of non-metallic minerals
Project Location	:	Barangay Tinoto, Maasim, Sarangani
MPSA No.	:	MPSA No. 274-2008-XI – Amended II - Parcel 4
Total Project Area	:	425.1146 hectares
Annual Extraction Rate	:	2.1Million MT of Limestone

The components of the Limestone Quarrying Project are generic to all quarrying activities i.e., exploration, construction, quarrying and hauling. Figure 1–4 presents the site development plan and Table 1-4 reflects the list of major components. In addition, Table 1-5 enumerates the list of equipment to be utilized.

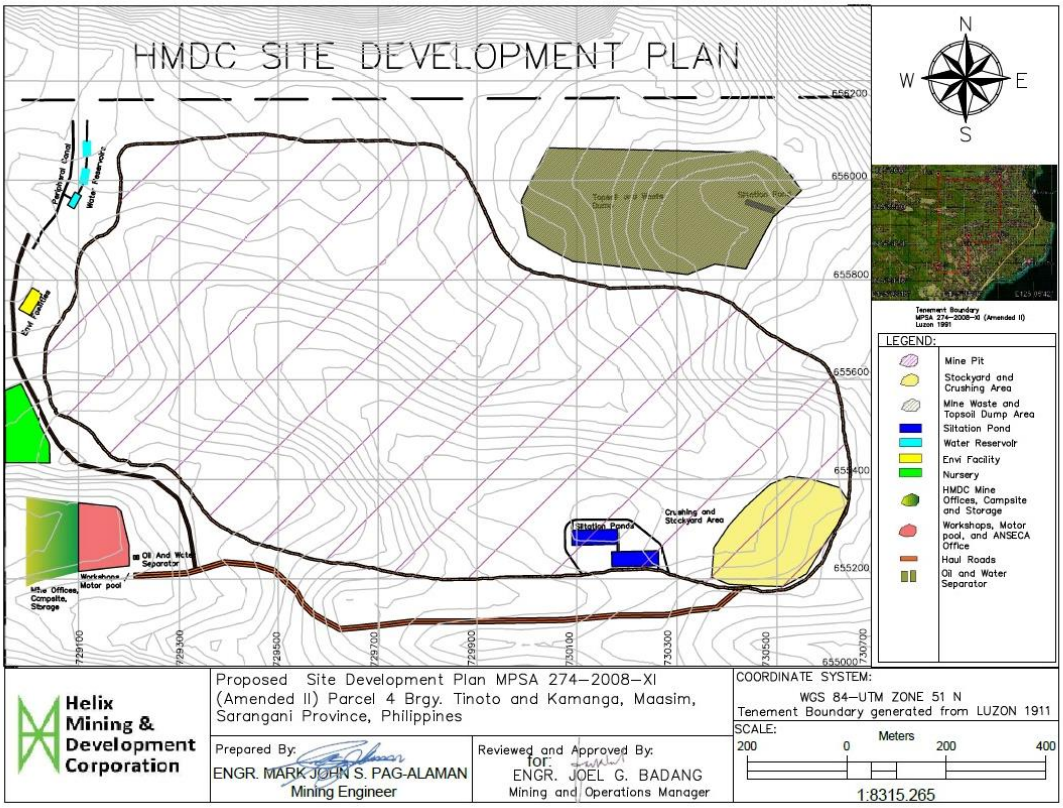

FIGURE 1-4. SITE DEVELOPMENT PLAN

TABLE 1-4. PROJECT COMPONENTS

Item	Facilities	No. of Units	Area (sq.m.)/ Capacity (cu.m.)
A.	**TEMPORARY FACILITIES**		2,695.00 sq.m.
1	Administrative Building	1	1,142.00 sq.m.
2	Staff house/Bunkhouse	1	456.00 sq.m.
3	Core House	1	228.00 sq.m.
4	Medical Clinic	1	46.00 sq.m.
5	Mine Environmental Protection and Enhancement Office	1	46.00 sq.m.
6	Safety Office	1	46.00 sq.m.
7	Cafeteria/Mess Hall	1	46.00 sq.m.
8	Warehouse and Fuel Depot	1	685.00 sq.m.
B.	**WORKSHOP**		5,500.00 sq.m.
1	Motor Pool	1	1,500.00 sq.m.
2	Contactor Facilities	1	3,000.00 sq.m.
3	Mechanical Shop	1	1,000.00 sq.m.
C.	**MINEYARD and WASTE DUMP AREAS**		147,540.00 sq.m.
1	Mine yard	1	35,000.00 sq.m.

2	Waste Dump and Topsoil Stockpile Area	1	112,540.00 sq.m.
D.	**Mobile Crusher**		5,000.00 sq.m.
E.	**NURSERY**		2,500.00 sq.m.
F.	**POLLUTION MITIGATING STRUCTURES**		21,500 .00 cu.m.
1	Water Reservoir #1 (WR-1)	1	1,371 .00 cu.m.
2	Water Reservoir #2 (WR-2)	1	1,371 .00 cu.m.
3	Water Reservoir #3 (WR-3)	1	1,371 .00 cu.m.
4	Siltation pond #1 (MSP-01)	1	7,213 .00 cu.m.
5	Siltation pond #2 (MSP-02)	1	7,213 .00 cu.m.
6	Waste Dump Siltation Pond #1 (WDSP-01)	1	1,468 .00 cu.m.

TABLE 1-5. MAJOR SUPPORT FACILITIES

No. of Units	Component	Area (m^2)	Capacity/ Specification/ Description
3	Water Reservoir `	480	1,371 m^3 per water reservoir; Length – 32 meters Width – 15 meters Depth – 3 meters Cross drains connecting the ponds Peripheral canals as collectors The ponds that serve as reservoirs will be laid with canvas sheets or impermeable layers to store runoff; The contained water will be used for dust suppression in the mine operation and other uses, e.g. environmental activities.
2	Siltation ponds	2,460	7,213 m^3 per Siltation pond; Length – 82 meters Width – 30 meters Depth – 3 meters Cross drains connecting the ponds Peripheral canals as collectors

			The pond can accommodate runoff with a sediment detention time of approximately 6 hours, allowing silts and other suspended solids to settle.
1	Siltation pond at Dump Site	520	1,468 m^3 per siltation pond; Length – 52 meters Width – 10 meters Depth – 3 meters The pond can accommodate runoff with a sediment detention time of approximately 6 hours, allowing silts and other suspended solids to settle.

A.2. Process/ Technology

The geology and mineralization within the area are shallow and suggests surface quarrying approach following technical and economic considerations. There is no other method considered given this type of deposit.

The area will be cleared of vegetation, followed by the stripping of the overburden and then the limestone is exposed and excavated through benching. The bench height is 3 meters with a bench angle of 60 degrees, while the berm width is 5 meters. The overburden is hauled to designated waste dump areas for progressive rehabilitation.

The company will adopt the contour method of surface quarrying using hydraulic excavators. Dump trucks will be used in hauling mined ores to stockpile area. The designed bench height will be about 3 meters to allow good grade control. The ore benches will be progressively mined by removing the overlying bench to allow movement to the lower bench until the bottom pit is reached. The benches are kept to at least 5 m wide panels. These panels are advanced along the contour. The trucks are loaded from beside or below the excavator depending on the detailed design of the pit and the condition of travelling surfaces.

The delivery of crushed ores will be shipped by cargo vessels/ barge to the mill plant located in Davao City of other proximate mill plants of HMDC. Alternatively, the crushed ores will be transported by land via haul trucks.

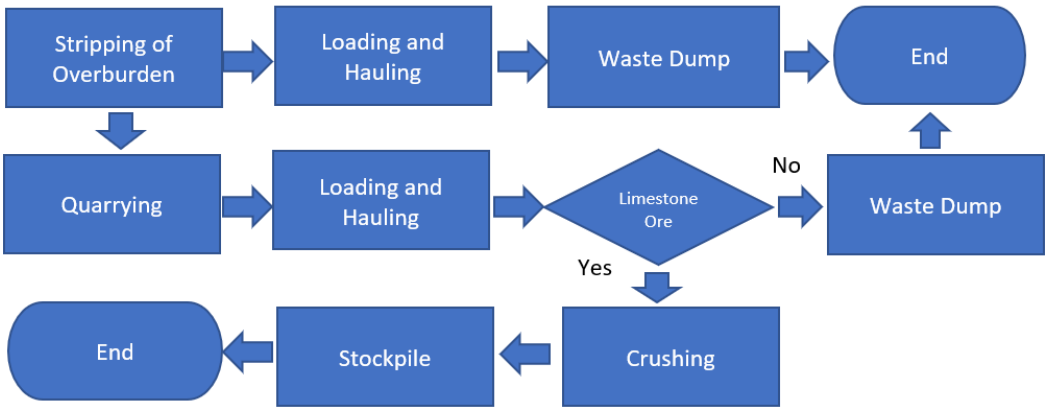

FIGURE 1-11. PROCESS FLOW DIAGRAM FROM EXTRACTION TO BENEFICIATION

A.3. Resource Utilization

Other site locations within the available areas in Mindanao like Municipality of Maitum, General Santos City were considered for the proposed project. However, there is no enough source of limestone in the said area, hence, other alternatives in terms of location are those areas with approved MPSA for limestone issued from Mines and Geosciences Bureau (MGB).

The proposed project in Barangay Tinoto, Maasim, Sarangani Province was selected based on the following criteria as the best option for the limestone extraction. Also, the project area has already an existing MPSA under the company, which means that the mineral reserves in the said site can be utilized responsibly.

TABLE 1-3. SUMMARY OF ALTERNATIVE/OPTIONS

Alternative Items	Options/Alternatives	
	Option 1 to be used during operation	**Alternative**
Siting	• The site has a substantial resource that is perfectly positioned to produce a large amount of limestone raw materials at a feasible cost • With issued MPSA	• Other areas with issued MPSA in Mindanao
Process/ Technology Selection/ methodology	• The project will be utilizing the surface quarrying method through benching.	• No other alternatives for this kind of project. Open pit and underground are not possible

Resource Utilization	• Water to be used for workers will come from ground water and rainwater. For drinking water, the same will be sourced out from nearest refilling station. • For Power to be used in Admin Building will be tapped with nearest Electric Cooperative • For spoils, will be used for rehabilitation; • For raw materials, from MPSA coverage only	• N/A. NO other source of alternatives in terms of water source. • Alternatives for power is the use of backup generators to be applied for PTO • No alternative for spoils since the only way is to use it for rehabilitation per MGB guidelines • For raw materials, no other alternatives since the materials should and must come from MPSA area only	

The local distribution utility, South Cotabato Electric Cooperative II (SOCOTECO II) will supply the electricity that will power all of the project's facilities and support infrastructures. The aforementioned electric cooperative presently serves all municipalities in the Province of Sarangani and the City of General Santos. However, to maintain a consistent supply of power for the limestone quarrying project, a stand-by generator with adequate capacity to supply the project will serve as a backup power source in situations of a power outage. The back-up power requires a closed type mobile generator set with a diesel engine and a capacity of 175 kVA to supply all key equipment and facilities such as lighting and power for safety purposes.

During the dry months, water impounded in the quarrying pit and siltation ponds will replace the majority of the water required for road watering. Water for equipment washing, on the other hand, comes from nearby freshwater sources in Barangay Tinoto particularly Siguel River. The existing communal water supply from spring sources at the site will be rehabilitated and maintained.

B. Proposed Location / Vicinity Map

The planned HMDC Limestone Quarry Project is a limestone extraction project located on a 425.1146-hectare MPSA area (MPSA No. 274-2008-XI –Amended II - Parcel 4) within Barangay Tinoto, Municipality of Maasim. The proposed project has a total annual production capacity of 2.1 million metric tons of limestone consistent with the results of Final Exploration Report (FER).

The proposed project is estimated to have a distance of around 90 kilometers from Mount Matutum Protected Landscape, more or less 7 kilometers from costal

resources and to Sarangani Bay Protected Seascape, and there are no dam structures near the project site.

TABLE 1-1. GEOGRAPHIC COORDINATES OF PROJECT BOUNDARIES

CORNER	LATITUDE	LONGITUDE
1	5° 54' 26.76"	125° 04' 34.93"
2	5° 54' 26.76"	125° 04' 04.93"
3	5° 55' 56.73"	125° 04' 04.93"
4	5° 53' 56.73"	125° 05' 34.93"
5	5° 54' 56.73"	125° 05' 34.93"
6	5° 54' 56.73"	125° 04' 34.93"
7	5° 54' 26.76"	125° 04' 34.93"
8	5° 54' 26.76"	125° 04' 04.93"

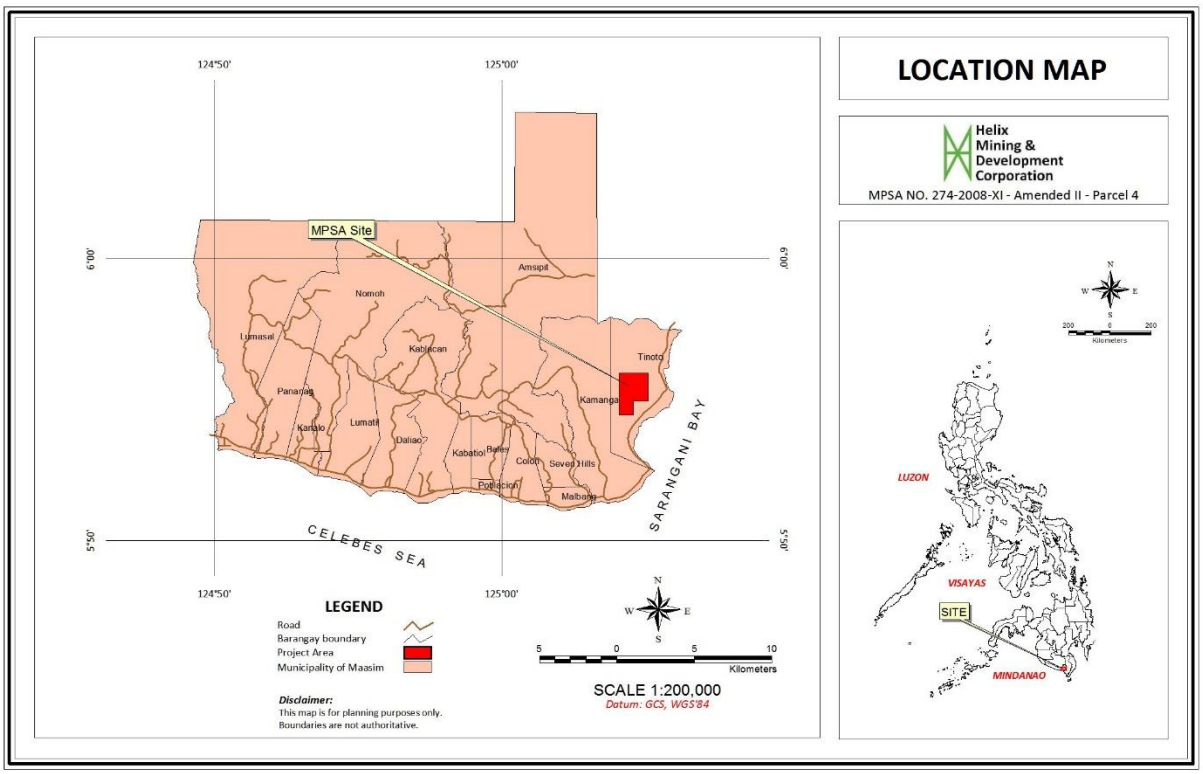

FIGURE 1-1. LOCATION MAP OF THE MPSA AREA

C. Project Proponent

Project Name	:	Limestone Quarry Project
Project Proponent	:	Helix Mining and Development Corporation
Address		Helix Mining and Development Corporation, Bo. Ilang, Bunawan District, Davao City
Contact Person	:	Joel G. Badang Mining and Operations Head +639175779594

D. Project Timeline

The project's pre-implementation phase is expected to start in the fourth quarter of 2023, and the development phase will begin in 2024. This limestone quarry operation project could last up to 165 years based on its reserves with an annual extraction rate of 2.1 million metric tons. Thus, the proponent is expected to maximize the allowable mine life of 25 years from the date of execution and possibly renew for another term not exceeding 25 years following provisions under RA 7942 or the Philippine Mining Act of 1995 and other governing laws and regulations of the country.

TABLE 1-11. PROJECT TIME FRAME

Phase	Q4 2023	2024	2025	2026	2189	2199	2200
Pre-implementation							
Development and Construction Phase							
Operational Phase							
Abandonment Phase							
Close out							

The estimated cost for this project is around Php 600,000,000.00. covering direct and indirect expenditures.

E. CONCISE INTEGRATED SUMMARY OF THE MAJOR IMPACTS

The summary of impacts, mitigating/enhancement measures and the monitoring plan are summarized in Table ES-8.

Table ES-8. Concise Integrated Summary of Main Impacts and Residual Effect after applying mitigation

Project Activity	Potential Impact	Proposed Mitigating Measures
Construction Phase		
• Site Clearing, Removal of vegetative cover, Excavation • Project Construction • Construction of support facilities	<u>Terrestrial Ecology:</u> • Loss of vegetation, Movement and/or loss of wildlife species aggravated by the loss of habitat and food for survival. • Hindrance to wildlife access	• Establish nursery to receive viable removed vegetation, for later transplanting, the same will be operated during operational phase. These may serve as mother stock for replacement planting 4 materials. The advance nursery establishment will provide time for the project to stabilize before out-planting and give earlier regreening of project area. • Revegetation utilizing native/indigenous species and buffer zone enhancement within the project area. • Construction/installation of culverts at specific mine access points to allow ground vertebrates to migrate and cross. • Development of buffer zone in vegetated areas close to the project site at least 20 meters from the project boundary. • To ensure that the diversion would not negatively impact other productive regions, geoengineering techniques must be implemented, if necessary, in coordination with concerned government agencies or from Academe;
	• Soil/Land Contamination due to generation toxic and hazardous waste materials	• The hazardous wastes that will be generated by the Project during site preparation include waste engine oils, waste lubricants from heavy equipment maintenance, spent equipment, alkali and cell batteries, spent rubber tires, damaged and replaced equipment and vehicle parts which may be coated with oil will be stored in a temporary storage area and properly stored, according to category • Installation of a bund wall and oil-water separator at a hazardous waste storage facility. Oil to be collected will be treated only by accredited TSD • Provision of an oil spill kit and fire extinguisher in the event of an unexpected leak or fire. • Inventory monitoring of created hazardous wastes • Collection, transportation, and treatment of hazardous waste by a DENR-accredited transporter and treatment, storage, and disposal (TSD) facility. • Daily visual monitoring and condition inspection, and monthly inventory of hazardous wastes created

Water Quality: • Degradation of surface water quality during rainy days and from domestic wastewater	• Sediment traps will be installed along ditches to help slow runoff velocities and allow suspended sediments to settle; These will be placed along paths of runoff along the road and towards the banks of streams and creeks. • Redirect flow paths to strategically located silt traps and temporary siltation ponds to store silted water until it is clear enough of TSS before releasing it into the natural environment. • Provide slope stability measures to prevent or minimize slope failure: Cutting of slopes to lessen steepness • Benching of slopes to provide stability • Provide signages warning of potential instability • Provide buffer zones to provide distance from temporarily unstable slopes • Drainage canals will be installed to channel sediment-laden water to siltation ponds; • Installation of a temporary silt pond to prevent direct discharge of runoff water into water bodies. • Provide 3-chamber septic tanks with stabilization pond cum biofilters for domestic wastewater • Provision of a drainage system capable of handling peak runoff connected to temporary siltation pond. • Regular desilting of temporary siltation pond when the silt level reaches 50 percent of their capacity.
Land: • Generation of Solid Wastes	• Provide storage space for construction debris for the support facilities prior to collection. • Implementation of an ecological system for managing solid waste • Sorting and labeling trash based on its properties and classifications. • Provision of separate garbage cans for solid wastes. Three waste bins are separated into biodegradable, non-biodegradable, and recyclable categories. • Orientation for all new hires; community-wide IEC on solid waste management. • Regular waste disposal and collection. The waste must be collected and separated based on its classification. At the MRF, recyclables such as plastic bottles will be collected and stored.

	Air Quality: • Potential Impacts to Air Quality due to dust emissions	• Before going on public roads, truck dust emissions must be controlled by covering the vehicles. • At least twice every day, saturate roadways, and dust-generating areas with water. • Enforce speed limits to reduce vehicular traffic's contribution to airborne fugitive dust. • Implement tree-planting compensation to offset the carbon and carbon dioxide released by project vehicles and heavy equipment in coordination with concerned DENR Office; • Only vegetation with permit to cut from DENR will be cut.
	Noise: • Possible increase of noise level	• Provide mufflers and silencers to reduce noise. • Construction work should only be performed during the day. • Maintenance of the equipment and vehicles as required.
	People: • Displacement and loss of livelihood • Fear of non-employment due to possibility of hiring non-local laborers • Fear of decrease of water supply due to degradation of watershed • Fear of their health and safety	• Develop and implement IEC to change the mind-set of host communities toward the project • Hiring of locally qualified labor. • Involve the community in the design, formulation, and implementation SDMP • Conduct skill and inventory assessment of local workforce • Develop appropriate livelihood program for the host community especially women, OSY, IPs, and PWDs.
Operation Phase		
Limestone Quarrying	Air:	• Implement Road Watering Plan. Twice in the morning and twice in the afternoon. The truck to be used are two trucks that will travel the entire length of the road but

	• Fugitive particulate pollution from quarry site and haul roads	none during rainy days. The rivers as mentioned in the water module will be the source of water. The possible source that will be considered is the water collected in the siltation ponds if possible. • Trucks loaded with limestone will be covered with tarpaulin • Proper operation and maintenance of appropriate air pollution control devices in heavy equipment and vehicles • Provide adequate and appropriate PPEs for workers free of charge • Optimize active extraction areas at the quarry • Control options for stockpile wind erosion o – 50% reduction from water sprays o – 30% reduction from wind breaks and rock armor o 40% reduction from vegetation (exposed surfaces) • Vehicle restrictions that limit the speed, weight, or number of vehicles on the road. • Surface improvement by (a) paving or (b) adding gravel or other surfacing materials • Implement appropriate maintenance program for quarry equipment and vehicles, including emissions testing
	• Contribution to climate change due to CO_2 gas emissions from fuel combustion in quarry equipment and motor vehicles	• implementation of greening program and reforestation to serve as carbon sink, primarily to help offset the impact of greenhouse gas emissions from the operations of vehicle • Use cleaner fuels such as low sulfur, low NOx • Remind machine operators to have sufficient engine warm-up before work operation. • Cause proper machinery maintenance • Ensure compliance with vehicle emission standards and have vehicles/heavy equipment undergo actual emission testing for annual vehicle registration renewal. • Project Pollution Control Officer is instructed to verify and cause the enforcement of individual fossil-fueled machinery compliance to vehicle emission standards; and • Log /record the Project consumption of petroleum fuels, by the PCO. Actual fuel consumption shall be the basis for the project reforestation program to be

	implemented. The purpose of reforestation is to neutralize or absorb greenhouse gases produced from the use of petroleum fuels.
Noise: • Generation of noise from quarrying equipment and activities	• Incorporate noise criteria in the specifications and selection of equipment • Regularly maintain quarry vehicles and equipment; • Provide free hearing PPE's (ear plugs, mufflers) to workers as appropriate; and • Plant appropriate vegetation as noise buffer at least 20 meters from the project boundary. • Transport the extracted materials during day time. Strictly no transport of materials during night time. • The operation of noisy equipment will be limited between 7:00 am and 6:00 pm when noise monitoring in residential areas without passing haul trucks exceed the noise standard. • As part of regular environmental compliance monitoring, noise readings will be made along project haul roads, and Proponent will exert effort to comply with the noise standard along the haul roads; • As necessary, information dissemination and community education activities to share the effects of long-term exposure to excessive noise, and ways of noise abatement. General procedures for truck noise abatement are: (a) identification of vehicle noise sources, (b) repair or replacement of noise-generating parts, (c) installation or improvement of noise muffler, (d) repair or sound technical provision of rubber sheet vehicle hood noise insulator, and (e) provision of rubber bushings or noise absorber-sheets to line the engine cavity where feasible, among others.
Water • Siltation from increased erosion, surface runoff and down slope sedimentation • Decline in river productivity due to siltation	• Provision of erosion control structures, such as 2 units of siltation ponds with max silt depth for a 3-meter depth pond will be 1.5 meters from the crest of the ponds. • Hauling & stockpiling of overburden soil away from nearby surface water bodies • Provision of temporary bunds around the overburden stockpiles & provision of drainage systems thereon to convey the surface water runoff to siltation ponds. • Maintenance & management of overburden stockpiles below their angle of repose • Provision of additional siltation ponds, if needed, for each extraction site • Properly installed and maintained erosion/ sedimentation controls: • Rainwater and runoff collecting systems at the toe of work areas;

	• Lowering of groundwater table • Siltation and organic loading of streams from erosion of exposed soil and overburden materials; • Increased susceptibility to contaminated water and water borne diseases • Decrease water quality due to washing of equipment and leakage and spills from carried by runoff to the water resources.	• "Vengineering" (i.e., planting of vegetation with high rainfall intercepting capacity and high transpiration rates); • Drainage systems in access roads with silt traps in every 50 meters both sides of the road; • Strengthened water monitoring system (i.e. install water meters at source points; keeping a daily record of water extraction and consumption). • Development of rainwater impoundment facilities • Implement sediment and erosion control plan • Regular maintenance of drainage systems along access roads to contain and limit downstream runoffs from quarries and roads • Proper piling and management of quarry overburden; • Implement progressive rehabilitation and reforestation of mined out areas to lessen the impacts of soil erosion; revegetate exposed plots and areas • Regular monitoring of water quality in water quality monitoring stations;
	<u>Terrestrial Ecology:</u> • Loss of vegetation, Movement and/or loss of wildlife species aggravated by the loss of habitat and food for survival.	• Establish nursery to receive viable removed vegetation, for later transplanting, the same will be operated during operational phase. These may serve as mother stock for replacement planting materials. The advance nursery establishment will provide time for the project to stabilize before out-planting and give earlier regreening of project area. • Revegetation utilizing native/indigenous species and buffer zone enhancement within the project area. • Construction/installation of culverts at specific mine access points to allow ground vertebrates to migrate and cross. • Development of buffer zone. Buffer zone will be formed in vegetated areas close to the project site at least 20 meters from the project boundary. • To ensure that the diversion would not negatively impact other productive regions, geoengineering techniques must be implemented, if necessary, in coordination with concerned government agencies or from Academe; • Carefully set aside all topsoil with organic materials for revegetation/regreening;

		• Preservation and protection of topsoil with organic debris. Transfer these to stockpile and provide at least 3 layers of tightly laid sandbag ring barrier around toe of topsoil stockpile. • For work efficiency and less carbon footprint in transport, the topsoil stockpile must be located near the northeastern section of the property, where slope benches will be topped with enriched soil for revegetation. • Preferably use indigenous flora species in area regreening key result area for the Project effort in environmental management will be to showcase the sustainable, harmonious coexistence of a sound and vibrant environment and the industry within the Project premises, evidenced by high biodiversity in the project site, over time. The abundant avian population observed at present, will be a good indicator of control of particulate emissions, as birds are sensitive to changes in air quality and changes in availability of food in the event of negative impact on plant photosynthesis due to dust blanketing of leaves. Work on ecosystem preservation is recommended to commence at the pre-construction stage through proper planning and to be implemented. • Within the project grounds, trees that may not be directly under the extraction and footprint of buildings or the main vehicle pathways should be spared, with the provision of earth easements five (5) meters radius from excavation. If the potentially affected trees are in a lower natural elevation, coarse gravel of 1 to 3 cm diameter should be loosely laid around them up to the target elevation, and held in place by a temporary casing, such as fixed cyclone wire or bamboo matting, to hold the gravel in place while the backfilling work for land development is being undertaken. The coarse gravel filled in a three-meter radius will allow better rainfall infiltration for the tree to survive and grow. Over time, the tree will grow and adapt to the change provided water supply at root zone is not suddenly cut-off. • It is expected that disturbance during site preparation (movements, noise, and vibrations) may drive wildlife to the open, and cause temporary or permanent migration to nearby areas where disturbance is less. The proponent and Contractor shall be required to give orientation on Republic Act 9147 – Wildlife Resources Conservation and Protection and institute regulation among workers not to harm wildlife. The site will be disturbed during construction, thus wildlife that comes out in the open will be unharmed and shall be assisted to find cover in

		existing vegetation. Any injured wildlife should be protected and nurtured to health at the site if feasible, be included in the Self-Monitoring Report and Compliance Monitoring Report to EMB or turned over to MENRO for caretaking/ treatment and release to the wild. The proponent and Contractor will need to remind workers of the penalties under R.A. 9147 as wildlife such as birds, bats, snakes, and monitor lizards are among the traditional food materials in the locality.
	• Generation of Hazardous wastes • Contamination with oil and grease from hydrocarbon leaks, spills from vehicles, heavy equipment, fuel and oil storage, motor pool -	• Provision of a Hazardous Waste Area with proper labeling, segregation, and storage of wastes; • Provision of secondary containment or bund walls for oil storage tanks with a holder volume of at least 110% of the total volume of oil to be stored • Collection & storage of leaked/ spilled oil/used oil in the 60-m^2 HWSF equipped with secondary containment • Directing all surface water runoff into the 6-m^2 OWS • Strict implementation of oil/used oil management programs, including oil/used oil spill contingency plan. • Proper storage provisions for fuel oil, used oil and other oily wastes; provide fuel oil storage tanks with appropriate bunding with concrete/impervious flooring • Motor pool, fuel and oil storage and maintenance areas are provided with oil and water separator facility. • Transport & disposal of used oil by DENR-registered transporter &/or treater only
	• Oil leaks and spills	• Stable and secure fuel and lubricants depot, using DOE-approved tanks, which are laid on flattish land, protected from the elements, with concrete flooring with at least .5m concrete perimeter wall. The fuel storage facility and lubricant containers and closures should be able to resist damage/opening from falling due to ground shaking • Label the fuel storage facilities in accordance with guidelines under DAO 1992-29, Implementing Rules and Regulations of Republic Act 6969, An Act to Control Toxic Substances and Hazardous Wastes. • Fuel transfer area should be provided with concrete flooring, with perimeter lip and spilled oil collection channel, and only allow the transfer of fuel or oil on area with concrete flooring.

		• Consider an audit system for material utilization, verifying the fuel/oil volume loaded in their respective equipment is commensurate with the number of hours worked. When more fuel or oil is given out than the work performed + amount in vehicle tanks, chances are these were transferred in areas outside of the permitted area. Transfer of fuel or oil outside of permitted area bears the risk of fuel or oil spill on soil, and soil contamination. • Carefully handle used oil complying with the guidelines under DAO 1992-29. Haul-out used oil through accredited hazardous waste transport, storage, and disposal agents. • Use moderately fine loose earth or pulverized limestone to mop-up accidental oil spills. The saturated earth should be promptly removed and deposited in a separate concrete-lined pit, constructed for the bacterial decomposition of oil in saturated earth. Earth is preferred over sand or sawdust as it can better support bacteria to break-down oil than sand and is not flammable as sawdust. The use of sawdust, coir, or other organic material is not considered to avoid generating flammable waste due to possible sources of incidental sparks in the Plant, which may start a fire. • The oily compost pit will be maintained in a similar manner as the common compost-pit, regularly aerated by regular turning and light watering to maintain bacterial health. Materials unsuitable for adding to compost should not be added to the pit. The decomposed product may be periodically harvested and mixed with regular compost to be used as a soil conditioner for vegetation maintenance. • Oil pollution control will be implemented through the operation; • A Material Recovery Facility will be constructed during Construction Phase, to house properly contained used oil.
	<u>Land</u>: • Solid wastes generation from the operation and other facilities.	• Segregation of solid wastes. Practice waste minimization/proper disposal. Recyclable materials shall be sold to recycling facilities • Construction and operation of Material Recovery Facility (MRF) and practice good housekeeping through segregation of waters and hauling by LGU
	<u>Water:</u>	• Provision of 3-chamber septic tanks with stabilization cum biofilters

	• Degradation of surface water	• Provision of grease trap
Abandonment Phase		
• Rehabilitation of mined-out areas • Dismantling of structures	• Restoration of vegetative cover in the mined-out area in accordance with Mt. Busa Conservation Complex Plan • Restoration of wildlife habitat • Return of fauna and increase in population of small animals in accordance with Mt. Busa Conservation Complex Plan • Reduction and eventual termination of employment • Termination of revenues from taxes, permits and royalties	• Use endemic species • Restore habitat by improving vegetation based on the Mt. Busa Conservation Complex Plan • Promote alternative livelihood • Conduct IEC for decommissioning • Provide counselling

F. IDENTIFIED STAKEHOLDERS

Impacts	Direct Impact Area (DIA)
Air Quality	Barangay Tinoto and Kamanga, Maasim
Water Quality and Quantity	Barangay Tinoto and Kamanga, Maasim
Land	Barangay Tinoto, Maasim
People	Communities residing Sitio Sinalang & Tampat of Barangay Tinoto; Communities in Sitio Lamlangil and Libas of Barangay Tinoto, Maasim

G. ADDITIONAL INFORMATION

For further information, you may call EMB Central Office through this landline number **285394378** or email at **recordsco@emb.gov.ph**

Also, you may contact the EIS preparer using the details below:

Land Vector Surveying & Consulting Firm (LVSCF)
EIS Preparer
Email: landvector20@gmail.com
Contact No.09153682211 / 09489821672