

**1. PROJECT DESCRIPTION****A. PROJECT FACT SHEET**

<b>Project Proponent</b>	Quarry Ventures Philippines, Inc.
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<b>Authorized Representative</b>	<b>Ester D. Rosca</b> <i>President</i>
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<b>Authorized Representative for ECC Application</b>	<b>Jose Leonilo A. Espineli</b> <i>President</i> Philkairos, Inc. JE Business Center, Pinesville Road corner Ortigas Avenue Extension, Taytay, Rizal 1920 Contact Number: (02) 706-4008 / (02) 727-9005 E-mail Address: admin@philkairso.com
<b>Project Name</b>	Proposed QVPI CEBU AGGREGATES Project (Quarry and Crushing Plant)
<b>Project Location</b>	Barangay Cogon, City of Naga and Barangay Camp 8, Municipality of Minglanilla, Province of Cebu
<b>Project Type</b>	Resource Extractive Industry (Mining Industry)
<b>MPSA Number</b>	111-98-VII with Amendment Order dated June 2016
<b>Project Area</b>	84 Hectares (Parcel 10)
<b>ECC Reference Number</b>	New Application
<b>Project Components</b>	<ul style="list-style-type: none"> <li>• Quarry Operating Area</li> <li>• Crushing Facility</li> <li>• Haul Road and Access Roads</li> <li>• Stockpile Area and Dumps</li> <li>• Support Facilities <ul style="list-style-type: none"> <li>- Admin Office Complex</li> <li>- Motor Pool Area</li> <li>- Truck Scale</li> <li>- Nursery and Seedling Bank</li> <li>- Siltation Pond / Settling Pond</li> <li>- Quarry Drainage</li> <li>- Generator Sets</li> </ul> </li> </ul>
<b>Extraction Capacity</b>	2,000,000 MT per annum

**B. PROJECT BACKGROUND**

In 1986, Teresa marble Corporation (TMC), sister company of Quarry Ventures Philippines, Inc. (QVPI), acquired a small-scale mining permit for an area in Sitio Gaway-gaway, Barangay Uling, Naga also known as the Rosatta Quarry. In the year 1994, TMC turned over its rights to QVPI. The latter then

applied for a Mineral Production Sharing Agreement (MPSA) in October 1997, which was denominated as APSA-096 (93) C. The application was approved by the DENR in May 1998 and denominated as MPSA 111-98-VII.

On November 2015, QVPI applied for expansion of the area under MPSA 111-98-VII by annexing the areas covered by its application for Exploration Permit denominated as EXPA-000102-VII-A and AXPA-000102-VII-B. Thereupon, QVPI also applied for expansion of the area under MPSA 111-98-VII covered by its application denominated as EXPA-000214-VII. On June 2016, MGB issued an order approving the application of QVPI for expansion of its MPSA 111-98-VII. By virtue of this order, the areas covered by EXPA 000120VII-B and EXPA-000214-VII were denominated as parcels VI, VII, VII and IX, while the area under EXPA-000102-VII-A in Barangay Lanang, City of Naga was denominated as Parcel X.

### C. PROJECT SIZE, LOCATION, AND AREA

The proposed quarry project of Quarry Venture Philippines, Inc. (QVPI) is located in Barangay Cogon, Naga City and Barangay Camp 8, Minglanilla in the Province of Cebu. It has a total land area of 84 hectares with an area distribution of approximately 60 hectares in Barangay Cogon, Naga City and 24 hectares in the side of Barangay Camp 8. The geographical coordinates showing the corners of Parcel 10 are shown in **Table 2.1**. The estimated volume of basalt deposit in Parcel 10 for Indicated Resource obtained is 218 million metric tons or 78 million cubic meters.

In terms of accessibility, the City of Naga is approximately 25 kilometer south of Cebu City, the capital of the province of Cebu. it is situated along the eastern coast on the southern half of the island of Cebu. The town at the northeastern part of Naga is Minglanilla while Toledo City is in the northwest. Parcel 10 can be accessed by a 4x4 vehicle from Cebu City to Naga (45 minutes drive) thru the South Reclamation Project Highway, then to Barangay Lanang, Naga via the Cebu Trans-Central Highway (15 minutes), and then by a barangay road to the western edge of the Parcel V-X block (40 minutes). Foot trails and dirt bike pathways crisscross the survey area.

**Table 2.1: Geographical Coordinates of Parcel 10**

CORNER	LATITUDE	LONGITUDE
1	10° 17' 30"	123° 44' 00"
2	10° 18' 00"	123° 44' 00"
3	10° 18' 00"	123° 44' 00"
4	10° 17' 30"	123° 44' 00"

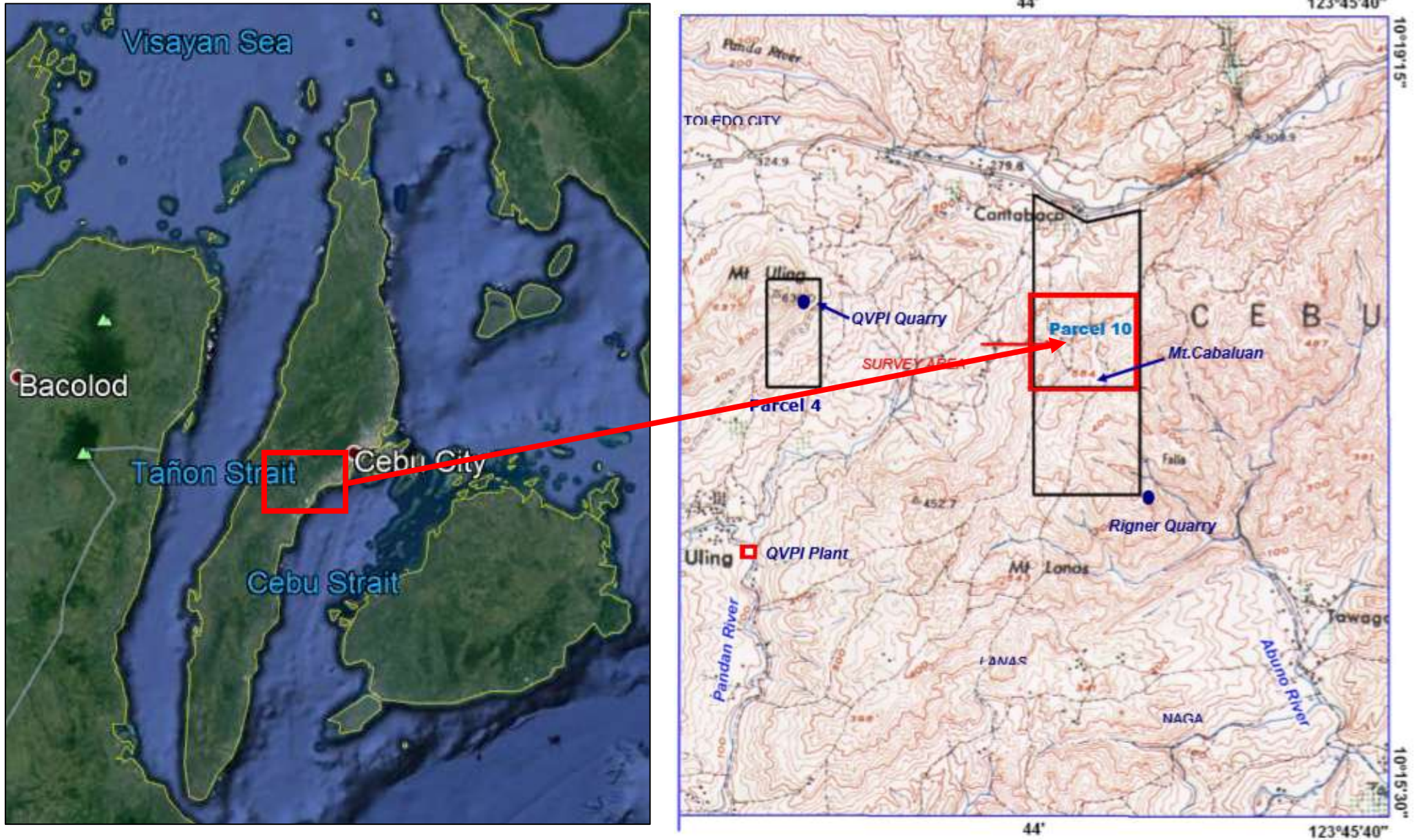


Figure 1: Location Map of the Project Site

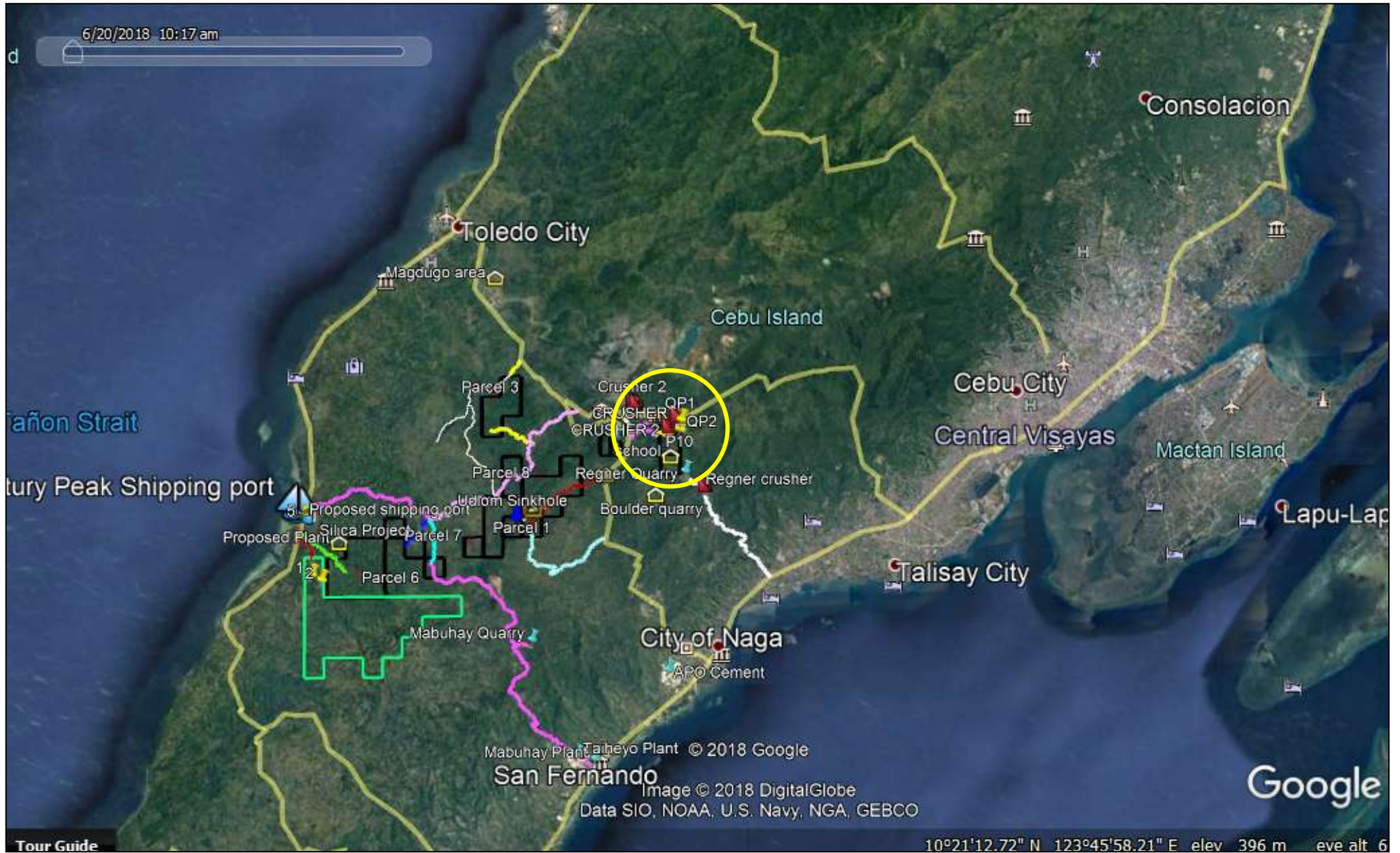


Figure 2. Vicinity Map of the Project Site



**Figure 2a: Aerial Photos of the Project Site**



**Figure 2b: Aerial Photos of the Project Site**



**Figure 2c: Aerial Photos of the Project Site**



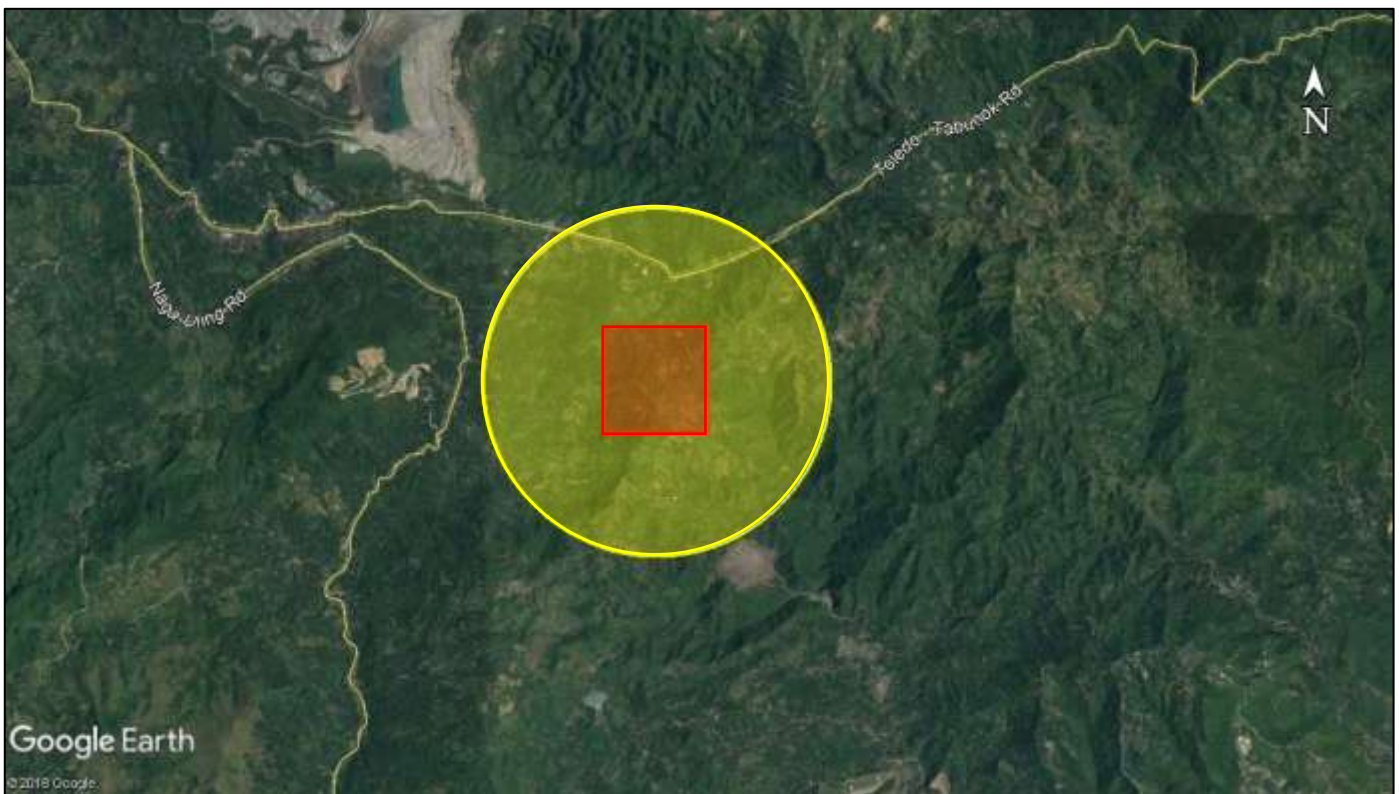
**Figure 2d: Aerial Photos of the Project Site**

**D. DIRECT AND INDIRECT IMPACT AREAS**

In accordance with Annex 2-2 of the Revised Procedural Manual (RPM), Sec 3.a, the Direct Impact Area (DIA) is defined as “the area where ALL project facilities are proposed to be constructed/situated and where all operations are proposed to be undertaken”. Based on the definition cited, the DIA is the 84-hectare project area where the proposed quarry project will commence.

On the other hand, Indirect Impact Areas (IIA) are areas located immediately outside the coverage of the project facilities, operations and activities. Specifically, these are the communities / barangays outside the project area that will be affected by the project. These impacts can be assumed or determined using secondary data, maps, and information from key informant interviews. The secondary impact areas are those which may experience and affected by the residual effect of the quarrying operation, such as but not limited to dust pollution and intolerable sound due to operation inside the project site, heavy equipment and machineries.

Area Classification	Area Coverage
Direct Impact Areas	<b>In terms of biophysical impact:</b> <ul style="list-style-type: none"> <li>The 84 - hectare project area</li> </ul>
	<b>In terms of socio-cultural impact:</b> <ul style="list-style-type: none"> <li>Brgy. Camp 8, Minglanilla and Brgy. Cogon, Naga primary beneficiaries of the Social Development and Management Programs (SDMP).</li> </ul>
Indirect Impact Areas / Secondary Impact Areas	<b>In terms of biophysical impact:</b> <ul style="list-style-type: none"> <li>The adjacent barangays within the 1KM radius outside the direct impact area.</li> </ul>
	<b>In terms of socio-cultural impact:</b> <ul style="list-style-type: none"> <li>Adjacent barangays other than the primary beneficiaries of the SDMP that will benefit at a provincial and regional level from potential revenues and taxes of the project.</li> </ul>



**Figure 3: Direct Impact Area (Red) and Indirect Impact Areas (Yellow)**

## E. PROJECT RATIONALE

Quarrying is linked to many other industries and other sectors in the economy, including transportation, construction, and environmental management. The proposed project site was a good source of basalt. This will have a significant impact to the National Government and Local Government Unit that will benefit through government taxes, fees, and duties. This could also play a huge role in the economic growth of the country by generating revenues and promote employment. The proponent engaged the project, not just for profit but also for the development of the host communities. The key beneficiaries will include the local workforce and businesses allied to the quarrying operations. Education and development of new enterprises in the host communities will create employment and new skills.

Substantial earnings could be derived from direct employment while potential additional earning could be derived from entrepreneurship. Health and sanitation would be improved as support from the company in form of available medical team could be relied upon. Improvement of infrastructure will provide better services to the community. This will develop them into future better students and obtain good employment.

Skills acquired through training and as a result of employment and technology transfer is useful for other opportunities. That might come along. Revenues in form of taxes and other valuable monetary support could also be realized.

## F. PROJECT ALTERNATIVES

Since quarry operations are site specific because mineral extraction can only be undertaken where economic deposits occur, the proponent has not considered any alternative project site. Initial feasibility reveals that extraction of resource in the area is best suitability done through surface mining method. In terms of deposits, the exploration activities show that there is a sufficient amount of basalt deposit which makes the project economically viable.

Safety of the community and employees would also be considered due to the nature of the quarry method. Proper measures like wearing of PPEs and informing the community of blast schedules, will be observed.

In consideration of the facility siting, power source to the project site will be supplied by the Visayan Electric Company (VECO). In case of power interruption or failures, generator sets will be installed on standby. The major environmental impact that will be brought about by the project is dust generation, influence of environmental fluctuation such as earthquake/rain-induced landslides and flooding. In terms of community and social aspects this could alter the existing land use, availability of land for purchase or lease, opportunity for local, regional and national benefits and impact on local communities.

## G. PROJECT COMPONENTS

**Table 5.1: Summary of Major Components**

<b>Project Components</b>	<b>Capacity / Description</b>
Quarry Area	2,000,000 MT / annum
Crushing Facility	2,000,000 MT / annum
Settling Pond	To be determined/assessed
Haul roads and Access Roads	To be determined once the barangay roads are finalized in coordination with barangays.
Stockpile Area	The proposed height of the stockpile will depend on the angle-of-repose of the material.
Support Facilities <ul style="list-style-type: none"> <li>Admin Office Complex</li> </ul>	Size currently being finalized



Project Components	Capacity / Description
<ul style="list-style-type: none"> <li>• Motorpool Area</li> <li>• Truck Scale</li> <li>• Nursery</li> <li>• Seedling bank</li> <li>• Generator sets</li> </ul>	

a. Quarry Operating Area – has a maximum allowable quarry area of 84 hectares confined within the boundaries of Parcel 10.

b. Crushing Facility – this will be constructed.

c. Haul Road and Access Roads – these shall be ballasted with waste rock extracted from the quarry area to provide stability.

d. Stockpile and Dumps – all good materials will be hauled from the quarry site to the stockpile area. Quarry wastes will be stockpiled in the waste dump area.

e. Support Facilities

- Admin Office Complex – the office building shall be the headquarters of the Project Managers and other departments.
- Motorpool Area – this shall be established for the care and maintenance of all necessary equipment in relation to the project operation.
- Truck Scale – this will be established to monitor and determine the weight of the load.
- Nursery – a nursery area will be established to serve as the main source of seedlings for the quarry project.
- Seedling Bank – a seedling bank shall be constructed to support the revegetation and rehabilitation activities of the project.
- Generator set – will be installed in case of power failures.



Figure 4: Indicative Project Components Layout

## **H. PROCESS / TECHNOLOGY**

### *Mining Method*

Surface Mining Method, particularly, quarrying will be employed for the whole project operation. The quarry operation will be divided into two stages: the quarry development and production stage. Development phase is the stage in quarry where preparation for full blast operation will be carried out and it will involve removal and grubbing of vegetative covers, stripping of overburden and establishment of production benches, drainage canals, settling ponds and access roads to the deposit.

The extraction of production stage is the actual removal of the deposit from the cleared benches. The major activities in this stage are drilling and simply ripping and dozing on soft and medium ground while drilling, cutting, and blasting for hard rock area followed by loading and hauling of quarry materials.

Basalt materials from the bench will be loaded by either a wheel loader or backhoe (excavator) shovel into a 25-ton truck and will be transported to the crusher. The cycle of drilling for quality control, blasting, excavation, loading and hauling continues until all programmed benches have been subjected for production and resource exhaustion.

The basalt will have a production benches of five to ten meters high (depending on the reach of the loading unit to be utilized) with a 70° bench slope during development and production stage. Development work will generally start from the uppermost portion of the permit area and progresses downward. A portion of the area will be developed until a production bench with a slope of 70° and a loading area of 30 meters, will be formed enough to sustain the safe movement of quarry equipment. Once a bench is formed, a new working level will be worked out to form another set of benches. Should safety and economy warrant, the cycle of creating a new working level (benches) at lower elevation will continue until desired target is reached.

## **I. PROJECT PHASES**

### *Pre-Construction Phase*

The phase involves the hiring of skilled local employees in preparation for project development. During this phase, all permits mandated by the government shall be acquired by the company prior to the construction phase. The Information Education and Communication (IEC) Campaign shall be continuously implemented to update the stakeholders on the current and future development of the project.

### *Construction Phase*

This phase will require hiring of additional manpower to support the construction activities of the project. Local hiring of skilled individual will be prioritized/implemented by the company. Construction of haul roads and access roads shall be the first activity during this phase. The construction of these facilities shall be conducted in a manner wherein minimal disturbance will be created.

Temporary settling pond shall be developed within the construction area to cater the mitigation of possible siltation and water contamination. If the constructed ponds will no longer be usable during the operation phase, such facility shall be dewatered, backfilled and revegetated.

Construction of support facilities such as the offices shall conform to the Building Code of the Philippines to ensure safety and stability. Clearing, grubbing, and compaction will be done at the region wherein construction will be conducted. The said activity shall be limited to the area wherein the facilities will be erected to minimize the expanse of disturbance.

### *Operation Phase*

Upon the completion of all the support facilities and other project components, operation phase will be initiated. Surface mining method shall be utilized, quarry operations will be started from clearing and

grubbing of the identified quarry area, stripping of overburden materials followed by the development of production benches, bench sampling, actual quarrying and hauling of basalt.

The topsoil or overburden will be transported to waste dump area or in a previously excavated or designated topsoil stockpile area to be used in the progressive rehabilitation activity. Water impounded in the settling pond shall be utilized as the source of water for the sprinkling of haul roads and access roads. Environmental management and monitoring shall be regularly implemented during this phase.

#### *Abandonment Phase*

Consistency with the basic policy of the state to assure the availability, sustainability and equitable distribution of the country's natural resources, the Philippine Government adopts the policy that mining activities shall be managed in a technically, financially, socially, culturally, and environmentally responsible manner to promote the general welfare of the county. One of the objectives of this policy is the establishment of a functional post-disturbance land use capability.

Moreover, remediation and rehabilitation of abandoned mines shall be accorded top priority to address the negative impacts of past mining activities. This is through protection and conservation of environment by identification of appropriate rehabilitation and mitigating measures per project component to inhibit and/or prevent any possible risks or adverse impacts that could endanger human and its environment.

#### **J. MANPOWER REQUIREMENTS**

The Project is estimated to employ at least 75 personnel from management to rand and file form all project phases. Qualified personnel and some technical staff will also be needed for the project for supervisory and monitoring functions.

#### **K. PROJECT COST**

The indicative project cost for the proposed quarry project is 60 Million pesos.