PROJECT DESCRIPTION FOR SCOPING (PDS)

1. BASIC PROJECT INFORMATION

1.1. Project Information

Republic Cement and Building Materials, Inc. (RCBM), (formerly Lafarge Republic, Inc.), is a CRH-Aboitiz company. CRH is a leading player in building materials which has an established presence in the Philippines through RCBM. RCBM and its associated companies market cement products, both in bags and bulk, under three (3) main brands namely: Republic, Fortune and Mindanao. RCBM owns and operates four (4) integrated cement plants in Luzon and a Cement Finish Mill Plant and Quarry Operation in Danao City, Cebu. RCBM's office is located at 18th Floor, Menarco Tower, Bonifacio Global City. RCBM was incorporated in May 1995 with the Securities and Exchange Commission (SEC) with Registration No. 9803 and its corporate term has been extended to May 3, 2055 by the SEC on February 3, 2005.

Driven by a customer focused approach, RCBM offers the construction industry and the general public innovative solutions bringing greater safety, comfort and quality to their everyday surroundings. In line with this, RCBM proposed to redesign the existing Cement Finish Mill Plant located in Barangay Dunggoan, Danao City, Cebu. RCBM intends to downgrade the full line cement manufacturing of the project to finish milling only.

The Cement Finish Mill Plant and Quarry Operation in Danao City was originated from the Lloyds Richfield Inc. Cement Manufacturing Complex (LRI CMC). On July 31, 2007, LRI was absorbed by RCBM by virtue of Certificate of Filing of the Articles and Plan of Merger. The Cement Finish Mill Plant and Quarry Operation was issued an Environmental Compliance Certificate (ECC) with reference number 931-07CE-051 by the EMB-Central Office on September 8, 1993 and was amended by ECC Reference No. 9906-014-105 on September 26, 2002.

<table>
<tr><td>Name of Project</td><td>Cement Finish Mill and Quarry Project</td></tr>
<tr><td>Location</td><td>Barangays Dunggoan and Sandayong Norte,</td></tr>
<tr><td>Nature of Project</td><td>Environmentally Critical Project (ECP) in a Non- Environmentally Critical Area (NECA)</td></tr>
<tr><td>Size/Scale</td><td>The Finish Mill Facility and Packhouse/Storage Area is 10 ha while the expanded Quarry Area is provided below:
<table>
<tr><th></th><th>Areas Covered</th><th>Area</th></tr>
<tr><td>Area 1</td><td>Dunggoan (Danao), Dawis Sur (Carmen)</td><td>195 has</td></tr>
<tr><td>Area 2</td><td>Sandayong Norte, Cagat, Cambanay, Binaliw (all in Danao)</td><td>710 has</td></tr>
<tr><td>Area 3</td><td>Triumpo, Hagnaya (all in Carmen)</td><td>450 has</td></tr>
</table>
The project capacity for cement production is 1,200,000 metric tons per year and the extraction/quarry capacity is 500,000 metric tons per year of limestone and 150,000 tons of shale and other siliceous materials</td></tr>
</table>

1.2. Proponent Profile

Proponent	**Republic Cement and Building Materials, Inc. (RCBM)**
Address	Brgy. Dunggoan, Danao City, Cebu
Contact Person	Mr. Fabian Baya, Plant Manager
Contact Number	Telephone No.: (032) 238 6596 **Email Address: fabian.baya@republiccement.com**
EIA Preparer	**Mediatrix Business Consultancy**
Address	L29 Joy-Nostalg Centre, 17 ADB Ave., Ortigas Centre, Pasig City
Contact Persons	Ms. Matilde R. Jimenez-Fernando, LL.B., EIA Team Leader
Contact Number	(+63) 917.506.4499

Email address	mediatrixconsultancy@gmail.com; mediatrixbusinessconsultancy@gmail.com; medi1425@yahoo.com

2. PROJECT DESCRIPTION

2.1. Project Location and Area

The Cement Finish Mill Plant and current Quarry Operation of RCBM is located at Barangay Dunggoan, Danao City, Cebu. The Cement Finish Mill Plant is located approximately 200 meters from the Quarry Area. The 30 ha lot where the Cement Finish Mill Plant is currently situated, is privately owned by RCBM and covered by the Transfer Certificate of Title (TCT) No. T-397 and 910. On the other hand, the current Quarry Area with a total area of 24.6218 ha (more or less) is under the Mineral Production Sharing Agreement (MPSA) No. 132-99-VII covering a total area of 2,551 ha. MPSA No. 132-99-VII was entered into by and between the Government and RCBM on May 20, 1999 covering portion of the areas of Barangays Dunggoan, Cagat, Sandayong Norte, Binaliw, Malapoc, and Quisol in Danao City; and Barangays Triumpo, Hagnaya, Dawis Sur, Dawis Norte, Baring, Ipil, and Corte in Carmen Municipality.

Barangay Dunggoan is located in the northeastern part of Danao City, Cebu facing the Camotes Islands. It lies in the eastern coast between the municipalities of Compostela and Carmen, bounded on the west by the municipalities of Balamban, Asturias and Tuburan. It is 8.20 kilometers from Carmen to the north; 96.0 kilometers from Balamban (via Toledo City); 92.14 kilometers from Asturias (via Lugo); 7.80 kilometers from Compostela to the south; and 33.1 kilometers from Cebu City.

The project site is accessible to all types of vehicles. It can be access through the airport at Mactan Cebu International Airport, which services regular flights to and from Manila as well as to other islands of Mindanao and abroad. Other mode of access to the plant is through an existing pier of Republic Drydock, Danao City port and port of Carmen town, Cebu and vessels from other ports of Cebu City.

Table 1.1.1 presents the technical description and the geographical location of the project site, while Figure 1.1.1, Figure 1.1.2 and Figure 1.1.3 show the location of the project site.

Table 1.1.1: Geographical Coordinates of the Project Site

Point	**Coordinates**	
	Latitude	**Longitude**
Cement Finish Mill Plant Site		
1	10°33’36.38” N	124°1’17.45” E
2	10°33’33.32” N	124°1’10.12” E
3	10°33’24.76” N	124°1’12.95” E
4	10°33’20.80” N	124°1’19.44” E
Quarry Area / MPSA Area: MPSA-132-99-VII		
Point	**Latitude**	**Longitude**
1	10° 32’ 00.00”	123° 58’ 30.00”
2	10° 34’ 30.00”	123° 58’ 30.00”
3	10° 34’ 30.00”	123° 59’ 30.00”
4	10° 35’ 30.00”	123° 59’ 30.00”
5	10° 35’ 30.00”	124° 00’ 00.00”
6	10° 36’ 00.00”	124° 00’ 00.00”
7	10° 36’ 00.00”	124° 00’ 30.00”
8	10° 36’ 30.00”	124° 00’ 30.00”
9	10° 36’ 30.00”	124° 01’ 00.00”
10	10° 34’ 00.00”	124° 01’ 00.00”
11	10° 34’ 00.00”	124° 01’ 18.09”
12	10° 33’ 30.00”	124° 01’ 19.40”

13	10° 33' 30.00"	124° 01' 00.00"
14	10° 33' 00.00"	124° 01' 00.00"
15	10° 33' 30.00"	124° 00' 30.00"
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18	10° 34' 00.00"	124° 00' 30.00"
19	10° 33' 30.00"	124° 00' 30.00"
20	10° 33' 00.00"	124° 01' 00.00"
21	10° 33' 00.00"	124° 00' 30.00"
22	10° 32' 30.00"	124° 00' 30.00"
23	10° 32' 30.00"	124° 00' 00.00"
24	10° 32' 00.00"	124° 00' 00.00"

Source: RCBM

Source: Google Earth

Scope: MPSA-132-99-VII

Point	Latitude	Longitude
1	10° 32' 00.00"	123° 58' 30.00"
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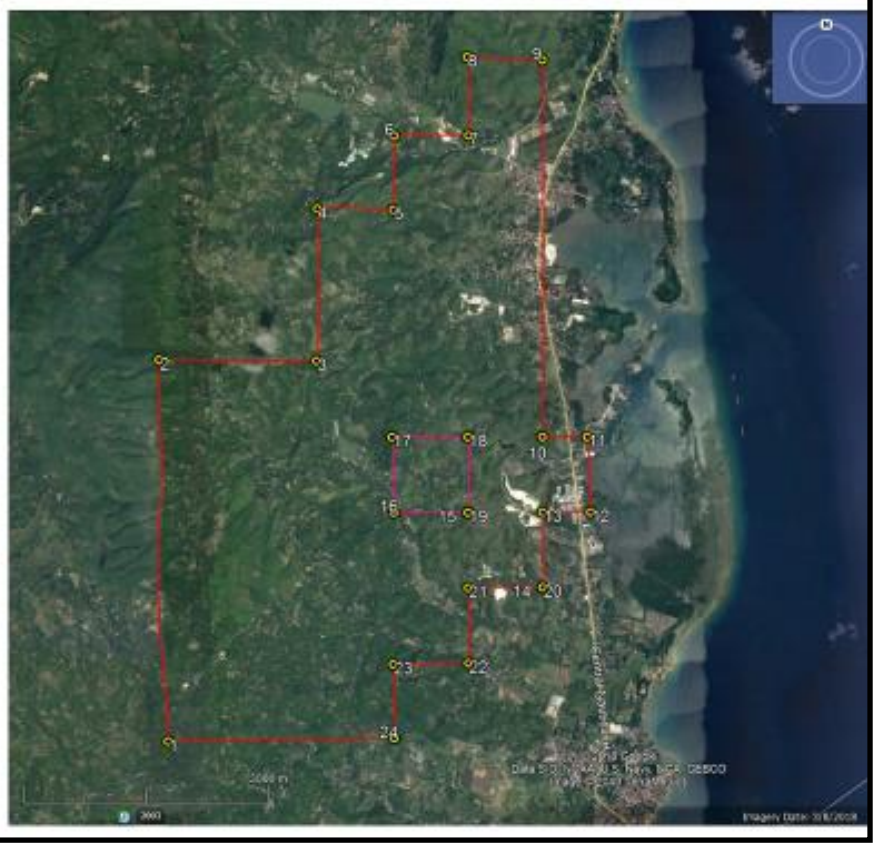


Figure 1.1.1: Map of the MPSA Area

Figure 1.1.2: Plant Location Map

Figure 1.1.2: Plant Location Map

1.1.2 Impact Areas

The direct impact area (DIA) cover the 64.6305 ha project site and the posible air receptor within 1 km due to the expected air emissions from finish mill and quarry operations. On the other hand, the indirect impact area (IIA) cover the hauling route during construction and operation phase (National Highway) of the project. The DIA and IIA of the project is shown in **Figure 1.1.4**.

Source: RCBM

Figure 1.1.4: Project Location

2.2 Project Rationale

RCBM intends to redesign the implementation of the existing Cement Finish Mill Plant and expand the quarry operations to include other areas of the MPSA due to the following reasons:

- Focus or limit the project on Limestone Quarrying, Material Storage, Cement Milling, Silos, and Packing;
- Meet the increasing market demand in general especially the demand for cement by the Philippine Government for its Build-Build-Build Projects; and
- Specifically, support and meet the fast growing demand of urbanization in Cebu province that will also contribute to increased local employment and increased tax revenue for the host LGU.

2.3 Project Components

The plant will be redesigned to be more efficient. Unlike a complete full scale cement operation which produces clinker using a kiln and require producing heat up to 1,500°C; the project of RCBM will only be operated as a cement grinding 'finish milling' facility. The main raw material, clinker that will be mixed with other pozzolanic materials during grinding process will be outsourced. **Table 1.4.1** presents the major component, support facilities, and pollution control devices of the project.

Table 1.4.1: Project Components

Components/ Facilities	Original		Proposed Downgrade/Upgrade	
	No. of Units	Specification	No. of Units	Specification
Major Components				
Cement Finish Mill Plant				
Material Storage 1	1	73,000 T	Same	Same
Material Storage 2	1	39,000 T	Same	Same
Overhead Crane	1	3.2 T	Same	Same
Clinker Weighfeeder	1	10-100 TPH	Same	Same
Gypsum Weighfeeder	1	1-10 TPH	Same	Same
Pozzolan Weighfeeder	1	3.5-35 TPH	Same	Same
Limestone Weighfeeder	1	2-20 TPH	Same	Same
Hot Gas Generator	1	$350x10^4$ kcal/H	Same	Same
Compressors:				
GA45	2	160 kW	Same	Same
GA75	1	75 kW	Same	Same
ZE160	1	45 kW	Same	Same
ZE4	1	45 kW	Same	Same
Ball Mill	1	80 TPH	Same	Same
Mill Discharge Airslide	2	150 TPH per unit	Same	Same
Mill Bucket Elevators 1 and 2	2	150 TPH per unit	Same	Same
Fly Ash Silo	2	200 Tons per unit	Same	Same
Air Separator	1	80-150 TPH	Same	Same
Product Airslide	1	150 TPH	Same	Same
Packhouse			Same	Same
Rotopacker	1	2,400 BPH (8 spouts)	Same	Same
Palletizing System	4	5T per unit	Same	Same
Cement Silo	4	1,250 T each	Same	Same
Silo Drag Chain	2	120 TPH per unit	Same	Same
Packhouse Bucket Elevators	2	120 TPH per unit	Same	Same
Vibrating Screens	2	2,400 bags/h	Same	Same
Bulk Loading Facility	1	80 TPH		
Quarry ECC Existing				
Limestone – Binaliw	1	121 hectares	-	-
Limestone -Carcar	1	30 hectares	-	-
Shale - Triumpo	1	81 hectares	-	-
Shale – Sandayong	1	30 hectares	-	-
Quarry proposed expansion for Limestone, Shale & Other Siliceous Materials				
Dunggoan and Dawis Sur	-	-	1	195 hectares
Triumpo and Hagnaya	-	-	1	450 hectares
Sandayong Norte, Cagat,Cambanay, and Binaliw	-	-	1	710 hectares
Powerplant	7	1 hectare / 10MW	-	-
Kiln Line	1	2.5 MMTPY	-	-
Support Facilities				
Genset	1	800 kVA	Same	Same

Components/ Facilities	Original		Proposed Downgrade/Upgrade	
	No. of Units	Specification	No. of Units	Specification
Jetty (Wharf)	1	1.4MMT bulk cement / 0.7 MMT bag cement shipments	-	-
Fire Protection System	1	plantwide	Same	Same
Safety Devices	1	plantwide	Same	Same
Cement Warehouse 1	1	1,700 tons	Same	Same
Cement Warehouse 2	1	2,000 tins	Same	Same
Pollution Control Devices				
Cement Mill Separator Dust Collector (Jet Pulse)	1	165,000 m^3/h	Same	Same
Cement Mill Main Dust Collector (Jet Pulse)	1	60,000 m^3/h	Same	Same
Weigh Feeder Dust Collector (Jet Pulse)	1	18,000 m^3/h	Same	Same
Packhouse Dust Collector (Jet Pulse)	2	20,000 m^3/h	Same	Same
Cement Silo Dust Collector (Jet Pulse)	2	9,600 m^3/h	Same	Same
Flyash Silo Dust Collector (Jet Pulse)	2	20 m^2 filter area	Same	Same
Bulk Loading Dust Collector (Jet Pulse)	1	2,300 m^3/h	Same	Same
Rotopacker Dust Collector (Jet Pulse)	1	18,000 m^3/h	Same	Same
Hazardous Waste Storage Facility	1	4mx6m estimated	1	14.5m x 9.6m
Material Recovery Facility	1	3mx5m estimated	1	4.5mx9.6m
Oil-water separator	1	90 m^3	1	90 m^3

2.4 Project Phases, Key Environmental Aspects, Wastes, Issues, Built-in Measures

2.4.1 Pre-Construction Phase

This phase is not applicable.

2.4.2 Construction Phase

This phase is not applicable because the Cement Finish Mill Plant facilities are already existing. Only upgrade and improvement of the facilities will be undertaken.

2.4.3 Operation Phase

The project will produce cement at 1,200,000 metric tons per year within an area of 10 ha and 150,000 metric tons per year for Quarry within the MPSA area. The cement grinding will operate 365 days per year for 24 hours with maintenance shutdown allowance of 15 days per year.

2.4.3.1 Finish Mill

As stated above, the project involves finish mill only which includes the following activities:

- Gypsum, pozzolan, flyash, limestone and other cementitious materials are added to the clinker and then fed to the finish grinding mills. Gypsum serves as a retarder in the too rapid setting or hardening of cement.
- Blended cement is pulverized in a closed circuit system in the finish mills to the desired fineness.
- Cement is transported to cement silos.
- Cement is packed into bags by inline packers or loaded as bulk and bags are distributed either by land using forwarder trucks and bulk trucks or by sea using barges or bulk ships

The source of clinker is other RCBM Cement Plants and other third party sources.

2.4.3.2 Quarry Operation

Material Sourcing/Quarrying

Two (2) types of materials are necessary for the production of cement: one rich in calcium or calcareous materials such as limestone, chalk, etc., and one that is rich in silica or argillaceous materials such as diorite/andesite, greywacke and clay. All of these raw materials/rocks are either scraped or blasted from the quarry and then transported to the crusher.

Stripping of the Overburden

Stripping involves the removal of the top soil to expose the target rock/commodity. Dozers pushes the topsoil to designated loading areas and excavators load it to off road dump trucks. Stripping of the overburden is done until the target rock/commodity is exposed. Weathered rocks are transported to the cement plant while fresh varieties are drilled and blasted. The overburden stockpile is located within the disturbed mined out area of the quarry. The overburden thickness varies from 1-2 meters.

Excavation and Loading

The materials are extracted and loaded into trucks by backhoe excavators for transport to the crusher.

Hauling

Upon loading of the materials to the dump trucks, it will be transported to crusher traversing a 220 meters inner road.

The crushing plant is equipped with an apron feeder, a jaw crusher, belt conveyors, two cone crushers, a scalping screen, two sizing screens, a sand classifier, silt traps and water reservoirs with pumps.

2.4.4 Abandonment Phase

Progressive rehabilitation will be implemented during the Environmental Protection and Enhancement Program (EPEP) period of the project. The decommissioning of this Project will abide by good environmental practices and principles, especially the management of wastes resulting from the dismantling process. The separate and detailed Abandonment Plan will be integrated with the FMRDP for the manufacturing plant itself and submitted to all the government regulatory agencies concerned.

By the nature of the project, there are no anticipated residual soil, water and air contamination with hazardous substances in event of project abandonment.

The proposed final land form for each project component are the following:

Table 1.7.1: Proposed Final Land Form of the Project

Component	Proposed Final Land Form
Cement Finish Mill Plant	
Major Component	
Finish Grinding Clinker Bin, Ball Mill	Stable and revegetated area. The structures will be removed.
Packing and Distribution Packhouse	Stable and revegetated area. The structures will be removed.
Support Facilities	
Office Buildings	Retained for other productive use.
Warehouse	Retained for other productive use.
Laboratory	Structure retained for other productive use. Laboratory equipment transferred to other projects or sold.
Truck Scale	Stable and revegetated area. The truck scale will remove for transfer to another project or will be sold.
Hardstands/parking areas	Retained as hardstands/parking area.
Powerhouse	Structure retained for other productive use.
Motorpool Area	Structure retained for other productive use.
Guard Houses/Gate	Structure retained to provide security for other productive use of the area.
Canteen/Cooperative	Structure retained for other productive use.
Chapel	Retained as chapel.
Project Personnel Housing	Retained as housing/subdivision.
Silt traps/ponds, drainage system	Silt traps/ponds backfilled and revegetated. Main siltation pond retained as recreation area for the housing/ subdivision. Drainage system retrofitted to conform to proposed final land use.
Nursery	Retained to support the care and maintenance after the FMRDP implementation.
Quarry Area	
Active Quarry Slopes	Stable and revegetated area
Quarry Pit Bottom Area	Stable and revegetated area
Haul roads (within the quarry area)	Stable and revegetated area
Topsoil stockpile area (within the quarry area)	Stable and revegetated area
Settling Pond (within the pit bottom)	Stable and revegetated area

2.5 Project Cost

The total estimated/indicative investment cost is Four Hundred Fourteen Million and Three Hundred Thousand Pesos (PhP414.3 Million).

3. ANNEXES

Annex 3.1 Collage of photos of proposed project site

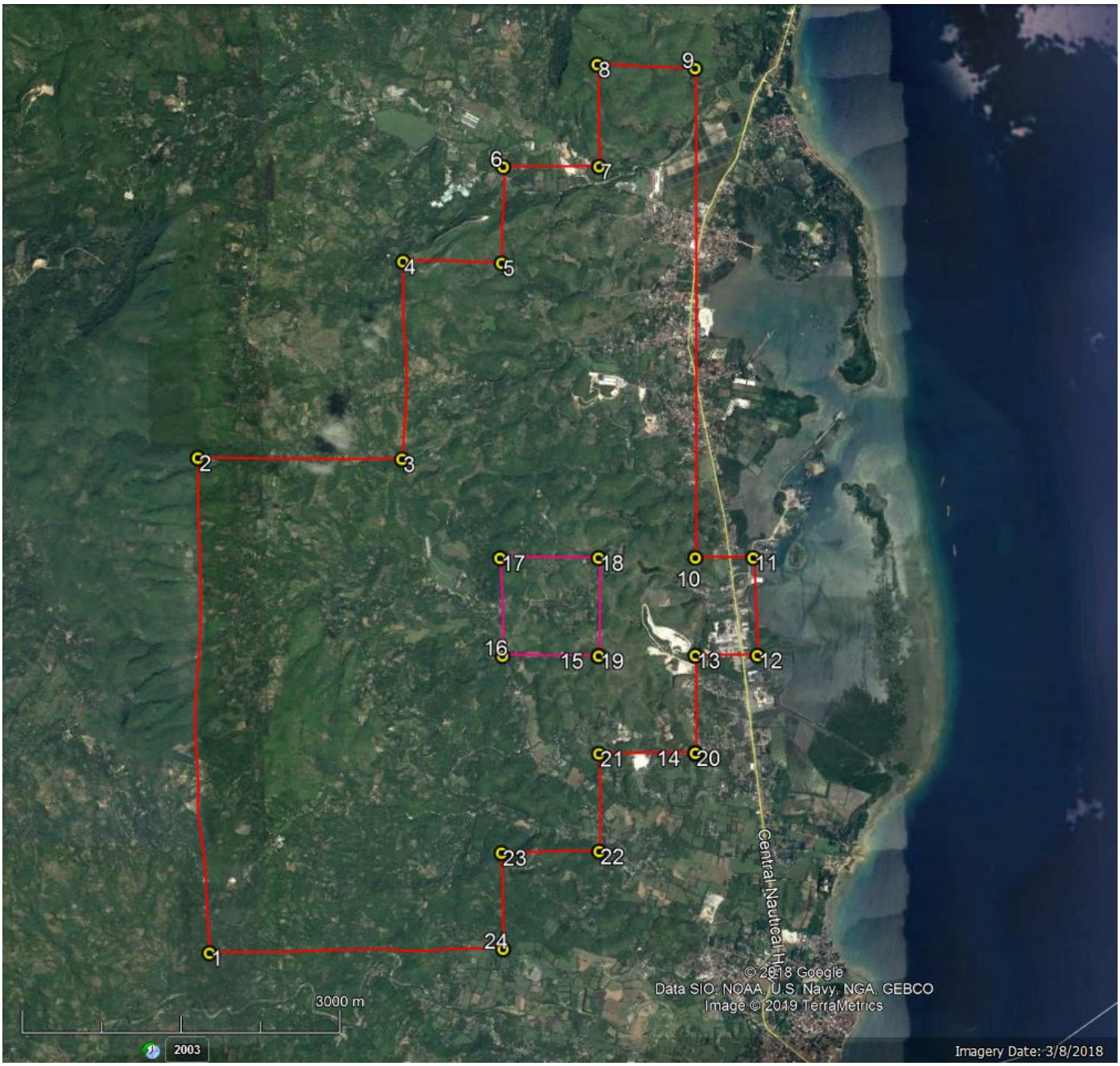
Plate 3.1.1: Existing Cement Finish Mill Plant

Plate 3.1.2: Existing Packhouse

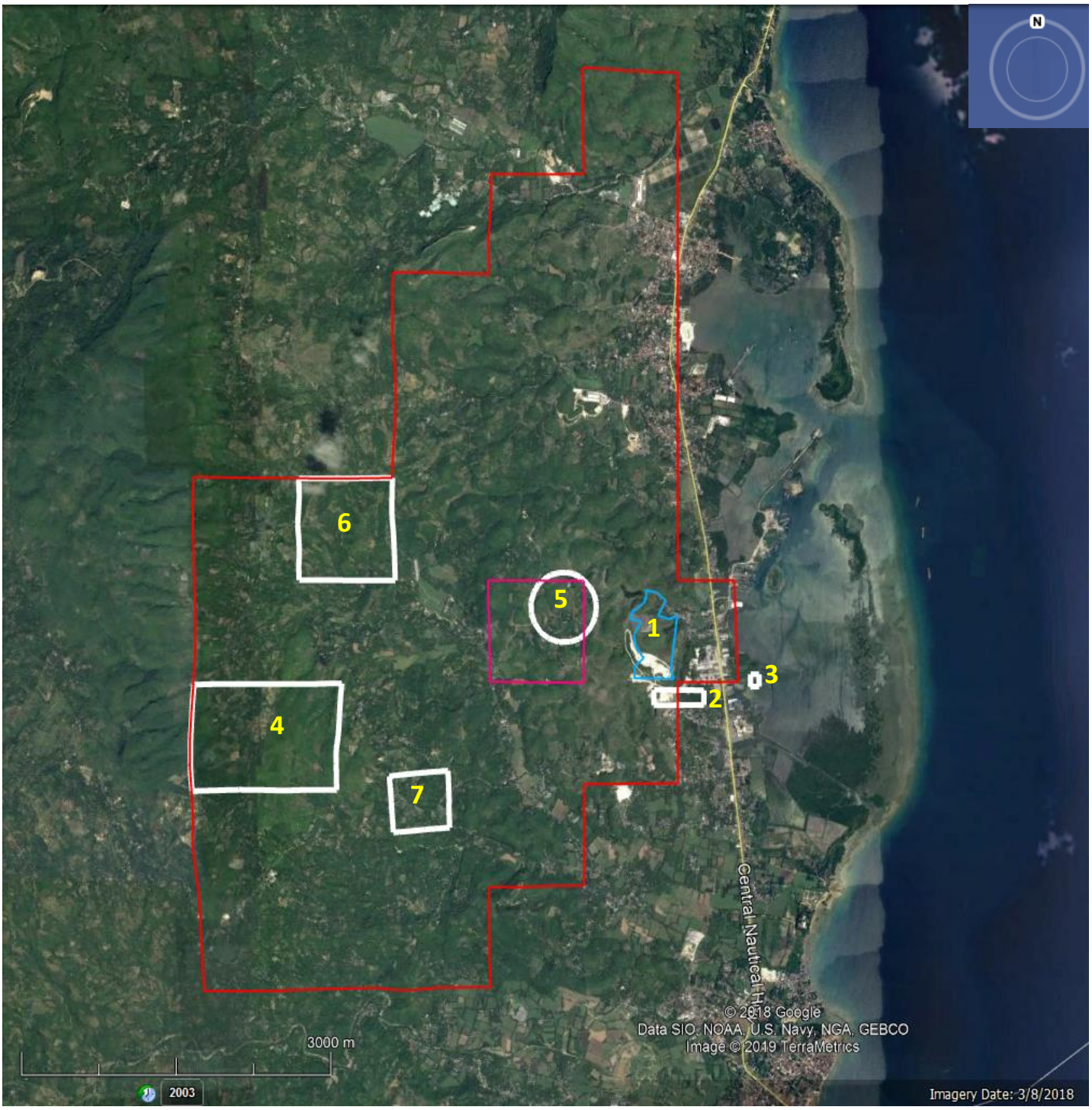
Plate 3.1.3: Photographs of the Active Quarry Area

Plate 3.1.3: Photographs of the Proposed Quarry Expansion Area

Annex 3.2 Map of MPS Area



Annex 3.3: Map of Existing Quarry Area based on ECC



Annex 3.4: Quarry Expansion Area