The LY Sand Pit Project

Plantation Elizabeth, Demerara River

PROJECT SUMMARY

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March 2026

Table of Contents

1.0 NON-TECHNICAL PROJECT OVERVIEW 2
2.0 PROJECT LOCATION AND SITE DESCRIPTION 3
3.0 PROJECT DESCRIPTION AND COMPONENTS 5
4.0 RESOURCE ESTIMATE AND PRODUCTION 7
5.0 BASELINE ENVIRONMENTAL CONDITIONS 8
6.0 POTENTIAL ENVIRONMENTAL IMPACTS 9
7.0 MITIGATION MEASURES 10
8.0 REHABILITATION AND CLOSURE 11
9.0 PROJECT SCHEDULE 12
10.0 PROJECT COST SUMMARY 12
11.0 PROJECT DETAILS SUMMARY TABLE 13

1.0 NON-TECHNICAL PROJECT OVERVIEW

The LY Sand Pit Project is a proposed sand mining development to be undertaken within a defined 250-acre lease area situated on Parcel 328, Block XLII, Plantation Elizabeth, along the eastern bank of the Demerara River in Guyana. The project area forms part of a larger 1,000-acre property owned by LY International (Guyana) Inc., from which the mining rights have been granted to Mr. Chen Ming under a long-term lease agreement.

The primary objective of the project is the extraction and supply of construction-grade silica sand to support ongoing infrastructure and development activities within Guyana. The material is intended for use in concrete production, general construction, and land development, sectors that continue to experience sustained demand due to national growth.

The project targets a laterally extensive deposit of unconsolidated sand associated with the Berbice White Sand Formation. This deposit is characterized by its relatively uniform grain size, low clay content, and near-surface occurrence, making it suitable for extraction using simple open-pit mining methods.

Mining will be conducted using conventional earthmoving equipment, including hydraulic excavators, dump trucks, bulldozers, and loaders. The operation will not involve drilling, blasting, or chemical processing, and will therefore be limited to mechanical excavation and transport.

Initial production is planned at approximately 100,000 tonnes per annum, with the first five years of mining focused within a defined area referred to as Pit 1, covering approximately 18 to 20 acres. This phased approach ensures that the environmental footprint of the project is controlled and that rehabilitation can be carried out progressively.

The project has been designed with a strong emphasis on environmental management, including erosion control, water management, and progressive rehabilitation. At the end of the project life, the site will be restored to a stable condition through regrading, topsoil replacement, and revegetation.

2.0 PROJECT LOCATION AND SITE DESCRIPTION

The project is located within the Plantation Elizabeth area along the eastern bank of the Demerara River, within the Demerara-Mahaica administrative region (Region 4) of Guyana. The site lies within the coastal plain, characterized by relatively flat terrain and sedimentary deposits.

The total project area comprises approximately 250 acres, which has been delineated within a larger 1,000-acre property owned by LY International (Guyana) Inc. The site is strategically positioned adjacent to the Demerara River, which serves as the primary transportation route for both the mobilization of equipment and the export of sand materials.

Access to the project site will be achieved primarily via river transport, with barges used to deliver equipment and transport extracted sand to downstream markets, including Georgetown. Secondary access will be established through internal road networks within the site, which will be constructed and maintained to support operational activities.

The surrounding area consists of a mix of vegetated land and previously disturbed areas, with no significant urban development in the immediate vicinity. The location is considered suitable for sand mining due to its proximity to transportation routes and the presence of a well-defined sand deposit.

Map 1: Location of Project Site

3.0 PROJECT DESCRIPTION AND COMPONENTS

The LY Sand Pit Project will consist of a series of activities associated with the extraction, handling, and transport of sand material. These activities will be carried out in a phased and controlled manner to minimize environmental impact.

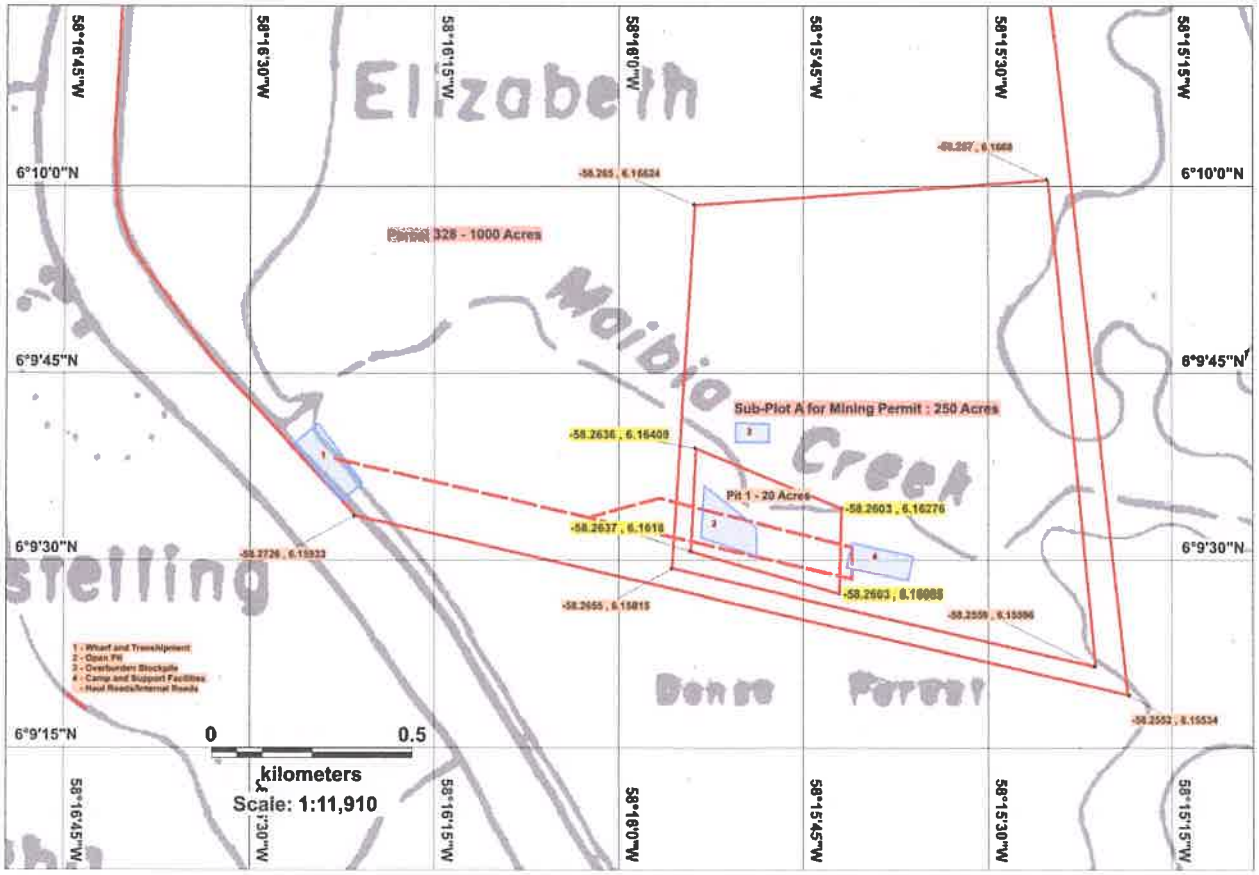
The development of the project will begin with site preparation, including the clearing of vegetation within the designated mining area and the establishment of access routes and operational zones. Overburden, consisting primarily of topsoil and organic material, will be removed and stockpiled for later use in rehabilitation.

Excavation of sand will be carried out using hydraulic excavators operating at the pit face. The material will be loaded into dump trucks and transported to stockpile areas or directly to a loading facility for transfer onto barges.

A loading facility, including a wharf structure, will be constructed along the riverbank to facilitate the efficient transfer of material to barges. This infrastructure will be designed to minimize disturbance to the riverbank and to ensure safe and efficient operations.

Mining activities will initially be concentrated within Pit 1, which has been designed to supply the first five years of production. This approach allows for controlled development and facilitates progressive rehabilitation of completed areas.

Map 2: Project Layout



4.0 RESOURCE ESTIMATE AND PRODUCTION

The sand deposit within the project area has been estimated using a volumetric approach based on the total area of the mining permit and the average thickness of the deposit.

The total area of 250 acres corresponds to approximately 1.01 million square metres. Assuming an average sand thickness of 5 metres, the total in-situ volume is estimated at approximately 5.06 million cubic metres.

Using a bulk density of 1.6 tonnes per cubic metre, this corresponds to an estimated resource of approximately 8.1 million tonnes. A conservative working estimate of approximately 7.7 million tonnes has been adopted to account for variability and operational losses.

Initial production is planned at approximately 100,000 tonnes per annum, with a total of approximately 600,000 tonnes expected to be extracted during the first five years of operation.

The stripping ratio for the project is estimated at approximately 0.10:1, indicating that minimal overburden removal is required relative to the volume of recoverable material.

5.0 BASELINE ENVIRONMENTAL CONDITIONS

The project area is located within a low-lying coastal plain environment characterized by sandy soils, moderate vegetation cover, and a shallow water table. The natural drainage of the area is influenced by proximity to the Demerara River.

Vegetation within the project area consists primarily of secondary growth, shrubs, and scattered trees typical of disturbed or semi-natural environments. No significant primary forest or ecologically sensitive habitats have been identified within the immediate project footprint.

Surface water conditions are dominated by the nearby river, while groundwater levels are expected to be relatively shallow due to the permeable nature of the sandy soils.

The site does not contain any known protected areas, cultural heritage sites, or significant ecological features that would preclude development. However, standard environmental management practices will be implemented to ensure that impacts are minimized.

6.0 POTENTIAL ENVIRONMENTAL IMPACTS

The primary environmental impacts associated with the project are related to land disturbance, water management, and operational activities.

Land clearing and excavation will result in the removal of vegetation and alteration of the natural land surface. This may lead to increased susceptibility to erosion if not properly managed.

Dust generation may occur during excavation and haulage operations, particularly during dry conditions. Noise will be generated by the operation of machinery and equipment.

There is also the potential for impacts on surface water and groundwater due to sedimentation or contamination if appropriate controls are not implemented.

The operation of machinery and storage of fuel introduce the risk of spills or leaks, which must be managed through proper handling and containment measures.

7.0 MITIGATION MEASURES

A range of mitigation measures will be implemented to manage the identified environmental impacts.

Land disturbance will be minimized through phased development and progressive rehabilitation. Areas will be cleared only as required for mining, and rehabilitation will be carried out as soon as practicable.

Erosion control measures will include the establishment of drainage systems, the stabilization of slopes, and the use of vegetation to protect soil surfaces.

Dust generation will be controlled through the application of water where necessary, and by maintaining appropriate operating practices.

Fuel and hazardous materials will be stored in designated areas with appropriate containment measures to prevent spills. Regular inspections and maintenance of equipment will be carried out to reduce the risk of leaks.

Noise impacts will be minimized through proper equipment maintenance and the scheduling of operations to reduce disturbance.

8.0 REHABILITATION AND CLOSURE

Rehabilitation will be conducted progressively throughout the life of the project. Disturbed areas will be regraded, topsoil will be replaced, and vegetation will be re-established using natural regeneration and, where necessary, assisted planting.

At the end of the project, all equipment and infrastructure will be removed, and the site will be restored to a stable landform. Drainage patterns will be re-established, and vegetation will be allowed to develop to achieve long-term stability.

Closure costs are estimated at approximately USD $30,000, reflecting the relatively low-impact nature of the operation.

Post-closure monitoring will be conducted to ensure that vegetation is successfully established, slopes remain stable, and water quality is maintained.

9.0 PROJECT SCHEDULE

The project will be developed in phases, beginning with site preparation and infrastructure development over an initial period of approximately three months.

Mining operations will commence thereafter, with the first five years focused on the Pit 1 area. Progressive rehabilitation will occur concurrently with mining activities.

Following the completion of mining, final closure and monitoring activities will be undertaken.

10.0 PROJECT COST SUMMARY

The total capital cost of the project is estimated at approximately USD $1.2 million, including equipment, infrastructure, and site development.

Annual operating costs are estimated at approximately USD $730,000.

Closure costs are estimated at approximately USD $30,000.

11.0 PROJECT DETAILS SUMMARY TABLE

Parameter	Details
Project Name	LY Sand Pit Project
Developer	Mr. Chen Ming
Land Owner	LY International (Guyana) Inc.
Location	Plantation Elizabeth, Demerara River
Region	Demerara-Mahaica (Region 4)
Project Area	250 acres
Deposit Type	Silica Sand
Formation	Berbice White Sand Formation
Mining Method	Open Pit (3.5–5 m depth)
Production Rate	100,000 tonnes/year
5-Year Production	600,000 tonnes
Estimated Resource	~7.7 million tonnes
Stripping Ratio	~0.10 : 1
Workforce	~14 persons
Access	River (primary), internal roads
Transport	Barge
CAPEX	~USD $1.2M
OPEX	~USD $730K/year
Closure Cost	~USD $30K
Rehabilitation	Progressive
Monitoring	Vegetation, water, slopes