

PROJECT SUMMARY
Passram Building and Electrical Supply



Name of Developers: Rikhnauth Passram and Deokumarie Passram

Contact Details: 620-7478 / 657-4524

Prepared By: Rikhinauth Passram

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Description of the proposed project

Passram Building & Electrical Supply is located at Lot 25, Number 59, Village in the reef lands, which is away from residential areas. This project aims to manufacture and sell top-quality blocks to persons desirous. Its cordial directions include residents approximately 500 feet from the north boundary, vacant lands for Agricultural purposes on the southern, eastern, and western boundaries, some of which are owned by me. The closest town to the proposed location is Corriverton, which is approximately 9.5 miles away. There are no creeks or rivers within proximity. However, there are side drains approximately 25 feet from the operation site. There is no alternative site for the operation.

Existing Baseline Information

Landscape

- **Topography:** The village lies on Guyana's coastal plain, which is flat and low-lying, prone to flooding without proper drainage.
 - **Hydrology:** It is bordered by drainage canals and irrigation systems that connect to the Corentyne River and the Atlantic Ocean.
 - **Vegetation:** Historically dominated by mangroves, rice fields, and pasture lands, though much of the land is now cleared for housing and infrastructure.
 - **Soil Type** - Clay Rich Soil
 - **Wind Direction:** North-eastern trade winds
 - **Natural Resource Used**
 - ❖ Sand: Formed from weathered rock and mineral particles, it is a naturally occurring material. In Guyana, sand is widely used in construction and manufacturing.
 - ❖ Stones (aggregates): They are extracted from riverbeds, quarries, and coastal deposits, serving as essential raw materials for manufacturing, road building, concrete production, and housing projects.
 - **Ecological (Flora and Fauna)**
 - ❖ **Rice fields & pasture grasses:** Dominant vegetation inland, reflecting the agricultural base of Berbice.
 - ❖ **Domestic animals:** Poultry, cattle, and goats are raised by villagers, contributing to livelihoods.
 - ❖ **Aquatic species:** Freshwater fishes are found in rivers and drainage canals.
- There are no environmental impacts of flora and fauna within the area from the operation.

- **Social Environment:** The social environment of Number 59 Village, Corentyne Berbice, reflects both its traditional rural character and the rapid changes brought by new housing and infrastructure projects. Villagers maintain strong kinship ties and community networks, often centered around religious institutions (Hindu temples, mosques, and churches). There are no social impacts on the community from the operation
- **Project size**
 - ❖ Capital Investment -58.5 million Guyana Dollars
 - ❖ Number of Employees projected - Land preparation phase (3 employees), construction of a shed (10 employees), operation phase (8 employees)
 - ❖ Rate of Production - 7000 blocks per 8-hour shift
 - ❖ Transportation - the block will either be delivered to the customers via truck or can be picked up by the customers.

Developmental Stages for the operation

- **Land Preparation** - The land was cleared of vegetation; the vegetation was used as land filling for the area. This phase was completed within two weeks by three employees
- **Foundation:** The foundation was completed using cement, sand, stones, and steel. This phase was completed within three weeks by 10 employees.
- **Construction of an enclosed building** - A metal shed of dimensions 20' x 70' was procured and is expected to arrive in Guyana in June. Upon arrival, the shed would be assembled within three weeks.
- **Operation** - Passram Building & Electrical Supply will be operated by eight employees for 5 days per week from 7:00 am to 4:00 pm. Different sizes and shapes will be manufactured using a QT4-18 Automatic Block making machine. An average of 7000 blocks will be manufactured per day. An average of 100 tons of sand, 50 tons of stones, and 1000 sacks of cement will be stored within the building to support the manufacturing process. The manufactured block will either be delivered to the customers or can be picked up by the customers.

Source of Utility

- Water will be supplied by Guyana Incorporated (GWI)

- Electricity will be provided by Guyana Power and Light and an 80KW generator
- Communication will be provided by One Communication

Waste Production

Types of waste: solid waste, liquid waste, hazardous waste

Solid Waste

- **Broken or rejected blocks:** Defective products from improper curing, cracks, or poor mix ratios.
- **Concrete slurry and hardened residues:** Leftover mix that sets in mixers, molds, or on floors.
- **Packaging waste:** Bags from cement, plastic wrapping, and pallets used for transport.

Liquid Waste

- **Wastewater:** From washing mixers, molds, and equipment. Often contains cement slurry, sand, and fine aggregates.
- **Runoff:** Rainwater mixed with cement dust or aggregates can contaminate nearby drains and soils.

Hazardous Waste

- Waste oil from servicing heavy-duty equipment and the generator.

The duration of the proposed project has not yet been determined. The developer intends to continue operating the business for as long as they are physically capable of doing so. In addition, a decommissioning plan is yet to be developed

Waste Management and Disposal

- **Solid waste** - Broken and Defective Blocks and hardened residues will be reused as landfills where appropriate. If reuse is not feasible the waste will be disposed of the Neighbourhood Democratic Council. Cement Bags and Packaging Waste will also be disposed of by the Neighbourhood Democratic Council.
- **Liquid Waste** – Waste water (run-off) will be channelled into a sediment pond. Waste water from the wash room facility will be channelled into a septic tank

- **Hazardous waste** – waste oil generated will be stored within a sealed container and reused as lubricant.

Potential Impacts and Mitigation Measures

A block-making operation can generate a range of environmental impacts throughout its lifecycle, from land preparation and construction to operation and eventual decommissioning. The significance of these impacts depends on the scale of the operation, location, and management practices employed.

Phase, Probability and Duration	Impacts Identified	Mitigation Measures
Land Preparation There is a high probability that the impact will occur. The identified impacts are expected to persist for a duration of approximately two weeks.	Soil Disturbance • Soil erosion from clearing and grading activities. • Soil compaction due to heavy equipment movement. • Alteration of natural drainage patterns.	Mitigation Measures • Limit earthworks during periods of heavy rainfall. • Implement proper site drainage measures. • Minimize heavy equipment use on non-operational areas.
	Air Quality • Dust generation from land clearing, excavation, and vehicle movement. • Exhaust emissions from construction equipment.	Mitigation Measures • Regularly wet exposed surfaces and access roads. • Cover trucks transporting loose materials. • Limit vehicle speeds on-site. • Maintain vegetation buffers where possible. • Maintain machinery in good working condition. • Avoid unnecessary engine idling.
	Water Quality	Mitigation Measures

	• Increased sediment runoff into nearby drains. • Potential contamination from fuel, oil, and lubricant spills.	• Store fuels in designated containment areas. • Maintain spill kits on-site. • Train workers in spill response procedures.
	Noise and Vibration • Noise from bulldozers, excavators, and trucks. • Temporary disturbance to nearby residents and businesses.	Mitigation Measures • Restrict activities to approved working hours. • Maintain equipment properly. • Notify nearby residents of major construction activities.
	Traffic • Increased movement of construction vehicles.	Mitigation Measures • Schedule deliveries during off-peak hours where feasible. • Install appropriate warning signs.
Construction There is a high probability that the impact will occur. The identified impacts are expected to persist for a duration of approximately three weeks.	Dust Emissions • Dust from handling sand, aggregates, cement, and excavation materials. • Windblown dust from exposed surfaces.	Mitigation measures • Water stockpiles and exposed surfaces regularly. • Cover cement and fine materials during storage and transport.
	Water Quality - Wastewater Generation • Concrete wash water from equipment cleaning. • Increased sediment-laden runoff. • Fuel and oil leaks from machinery.	Mitigation measures • Prevent the discharge of untreated wastewater into waterways. • Reuse water where practical. • Maintain drainage systems.

	Noise Nuisance from Construction Activities and the use of • Blocks making machine. • Generators. • Power tools. • Delivery trucks.	Mitigation Measures • Use equipment fitted with silencers and mufflers. • Restrict noisy activities to daytime hours. • Provide hearing protection for workers.
	Traffic • Increased movement of construction vehicles.	Mitigation Measures • Schedule deliveries during off-peak hours where feasible. • Install appropriate warning signs.
Operation There is a high probability that these impacts will occur. The identified impacts are expected to persist during the lifetime of the project but will be mitigated.	Gases and Dust Emissions from • The block-making facility - Mixing operations • Cement unloading and storage. • Sand and aggregate handling. • Vehicles/equipment	Mitigation Measures • Maintain caution when ripping cement bags • Wet stockpiles during dry conditions. • Cover stockpiles where practical. • Minimize drop heights during loading and unloading. • Minimize idling. • Regular maintenance
	Noise Nuisance from the following sources • Block making machine • Generators. • Front-end loaders. • Trucks.	Mitigation Measures • Install noise suppressors and silencers. • Maintain operation hours (7:00 am to 4:00 pm) • Maintain equipment regularly. • Locate noisy equipment away from sensitive receptors where possible.

		• Sound making devise will be placed on a concrete foundation to reduce noise and vibrations • Establish vegetative or physical noise barriers.
	Water Quality • Wastewater Generation from Equipment washing, Mixer cleaning, and the washroom facility.	Mitigation measures • Collect wash water in settling pits. • Prevent the discharge of untreated wastewater into waterways. • Reuse water where practical. • Maintain drainage systems. • Construct a holding/septic tank
	Traffic • Increased movement of construction vehicles.	Mitigation Measures • Schedule deliveries during off-peak hours where feasible. • Install appropriate warning signs.
	Occupational Health and Safety Risks	• Provide appropriate PPE. • Conduct safety training. • Implement safe work procedures. • Maintain first-aid facilities on-site.
Magnitude	The magnitude of environmental impacts from a block-making activity located in a is generally considered low to moderate, depending on the scale of the operation, duration of activities, and proximity to sensitive environmental receptors such as residences, watercourses, schools, or agricultural lands.	
Transfrontier Nature of the impacts	The proposed block-making operation is not expected to result in any transfrontier environmental impacts. The anticipated impacts, including dust emissions, noise generation, wastewater, and solid waste generation, are localized in nature and confined to the project site and its immediate surroundings. Given the scale of the operation and	

	the limited extent of the impacts, no adverse effects are anticipated beyond the project area, region, or national boundaries.
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Cumulative Impacts

There are no other activities being conducted within the surrounding land use. Hence, there will be no cumulative impacts.

Public Consultation

Residents within the village became aware of the proposed operation through informal verbal communication. No concerns or objections were raised regarding the establishment of the block-making facility. Community members expressed support for the project, citing its potential to create employment opportunities within the area. However, no formal public consultation or documented consultation report was conducted or prepared.

Assumptions

The assessment of the proposed block-making operation is based on several assumptions. It is assumed that the project will be developed and operated in accordance with the information provided in the project summary, including the use of the QT4-18 Automatic Block Making Machine and the projected production rate of approximately 7,000 blocks per day. It is further assumed that all proposed mitigation measures, including dust suppression, noise control, wastewater management, and waste disposal practices, will be fully implemented and maintained throughout the life of the project.

Uncertainties

There are several uncertainties and gaps in knowledge associated with the proposed block-making operation. The operational lifespan of the project remains uncertain, as the developer has indicated that the business will continue for as long as they are physically capable of operating it. Additionally, future production levels may fluctuate depending on market demand, the availability of raw materials, and economic conditions. The effectiveness of the proposed mitigation measures for controlling dust emissions, noise levels, and wastewater impacts has not been verified through environmental monitoring data. Furthermore, potential future changes in surrounding land use may introduce additional sensitive receptors that could be affected by the operation.

Gaps In Knowledge

Several gaps in knowledge were also identified during the review of the project information. No baseline air quality or noise monitoring data were provided to establish existing environmental conditions and facilitate a quantitative assessment of potential impacts. Detailed engineering specifications for septic system and drainage infrastructure were not included in the project summary. In addition, the project summary further indicates that a decommissioning plan has not yet been developed. Finally, while residents were informed of the project through verbal communication and expressed support for the development, no formal public consultation process or consultation report was undertaken.

Non-Technical Explanation

A block-making activity involves the production of 7000 concrete blocks per day using a block-making machine (QT4-18 Automatic Block making machine) combines cement, sand, aggregate, and water in predetermined proportions to create a uniform concrete mixture. The mixture is fed into the machine, where it is compacted and molded into blocks of specific sizes and shapes through vibration and compression. Once formed, the blocks are removed from the machine and placed in a designated curing area, where they are kept moist and allowed to harden over a specified period to achieve the required strength and durability. The operation may also include the storage and handling of raw materials, equipment maintenance, and the transportation of finished blocks for sale