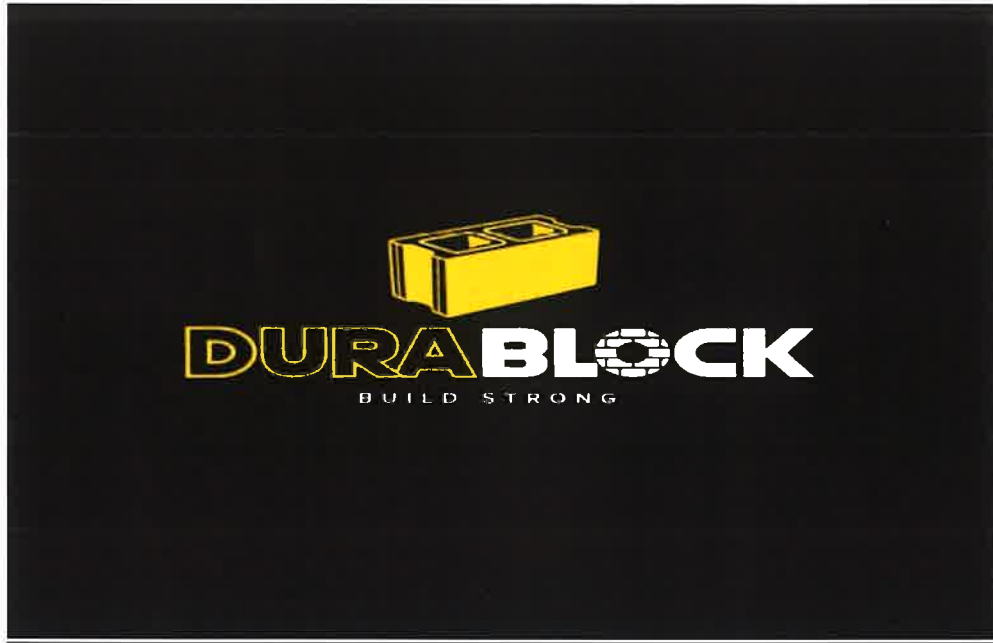


## **Project Summary- Block Making Facility**



Project Name: Dura Block

Location: Lot 5, Bushy Park, East Bank Essequibo

Developer: Vinash Chand

Developer Address: 154 Parika, East Bank Essequibo

Contact Number: (592) 658-7559

Date Prepared: May 11, 2025

A handwritten signature in black ink, appearing to read 'V. Chand', is located below the text. The signature is stylized and cursive.



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## **SITE DESCRIPTION**

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The facility, located at the rear of **Lot 5 in Bushy Park**, is a currently **operational site** engaged in industrial activities. It is equipped to handle machinery and material stockpiling while maintaining appropriate safety, environmental, and structural controls.

### **Site Orientation and Surrounding Features:**

- **To the North:** The site is bordered by the **Atlantic Ocean**, which serves as a natural boundary and provides open-air circulation.
- **To the South:** A **public access road** lies adjacent to the site, facilitating transportation and logistical access to the facility.
- **To the West:** The property shares a boundary with the **Beach View Hotel** and a Hussain Brothers Gas Station.
- **To the East:** Property used for **stockpiling of raw construction materials**, including **stones and sand**, which are stored in a designated, contained section of the site to prevent contamination and material spillage.

The facility is **fully operational** and adheres to relevant local regulations and industry best practices. Safety protocols, environmental control measures, and maintenance schedules are actively implemented to support continuous operations while minimizing impact on surrounding properties and ecosystems.





Caption #1: Showing a Google Satellite image of the Facility's location

## PROJECT DESIGN

### (SOURCE OF UTILITIES SERVICES)

The primary structure on-site is a **wooden shed measuring 40 feet by 80 feet**, which serves as the main housing for various types of **industrial machinery** used in daily operations. The shed provides adequate shelter for equipment, ensuring protection from the elements and maintaining the integrity of operations.

To minimize environmental impact, specifically airborne dust emissions generated during loading, unloading, or processing activities, the facility is fitted with a **dust control screen**. This screen stands **25 feet high and stretches 100 feet in length**, effectively containing dust within the work area and reducing the risk of dispersion beyond the site boundary.

### Production Capacity

The plant is designed for efficient, high-volume output, with a daily production target of approximately **1,000 to 1,500 concrete blocks**, depending on operational conditions and demand. The



blocks produced will support both local construction needs and broader infrastructure development initiatives.

## **Raw Materials and Inputs**

The production process utilizes a combination of:

- **Sifted aggregates**
- **Cement**
- **Sand**
- **Water**, which is sustainably sourced through **rainwater harvesting** systems installed on-site

These materials are proportionally mixed and molded using modern machinery housed within the 40 ft × 80 ft wooden shed. The use of **rain-harvested water** not only reduces reliance on public utilities but also supports the project's environmentally conscious approach.

The transportation of finished products from the drying area to the storage bond is set to be facilitated through the use of a forklift. The drying area, an open-air 50ft x 100ft flat concrete space, is intended to accommodate the products produced from the plant, which will be packed on pallets and transported to the drying area.

Following the drying process, the finished products will be transported to the aforementioned storage bond. The drying area will also serve as a storage space for the essential raw materials required in the manufacturing process, including cement and steel rods, ensuring that they are readily accessible during the manufacturing process.

Smaller items, such as spares, will be kept in a secure, enclosed room located at the back of the bond. This decision was reached to ensure the safety and security of these items. Overall, the company has made pragmatic decisions to streamline the manufacturing and storage process.

## **Power Supply**

The facility is powered by a **120 kVA diesel generator**, ensuring continuous operations in areas where grid power may be unreliable or unavailable. To maintain autonomy and consistent energy supply, the generator is equipped with a **500-litre fuel storage tank**, which allows for extended runtime and reduces the need for frequent refuelling.

## **Site Infrastructure and Safety Features**

- **Dust screen:** 25 ft high × 100 ft long, installed to minimize dust emissions and maintain compliance with environmental standards
- **Two fire extinguishers** and a **fully stocked medical kit:** Strategically placed for quick access in emergencies.



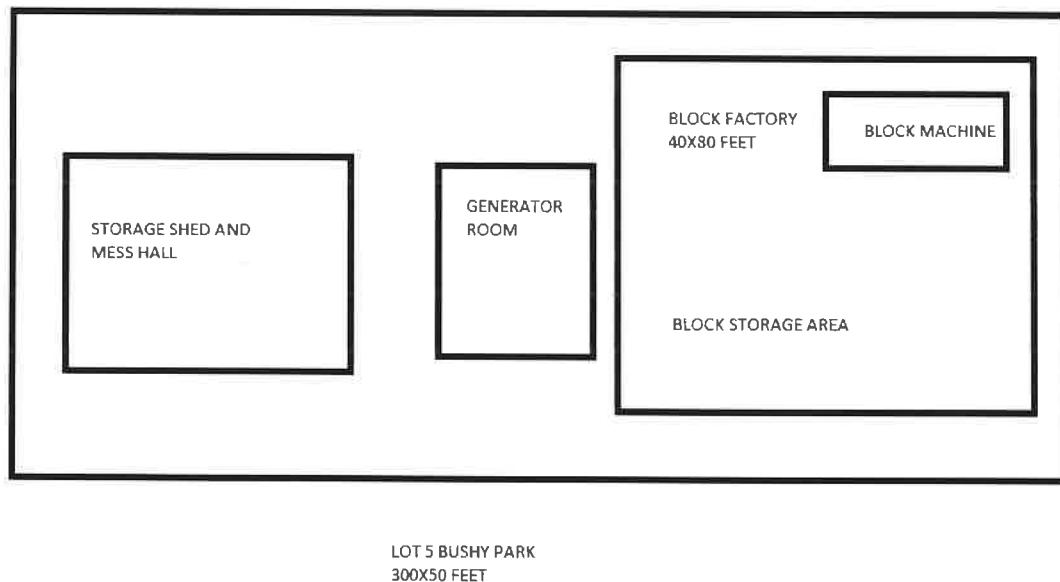
### **Water Storage:**

Two 500-gallon tanks will be installed to capture rainwater that comes off the roofs of the factory and storage bond. The collected water will be piped to the factory for use in the block-making process. A pressurized water treatment system will be used to clean and make the water portable for all intended uses.

### **Waste Water Treatment System & Solid Waste Management:**

A ground-based water treatment system shall be installed on-site. The system boasts a superior capacity to treat up to 1000 gallons of wastewater at any given time.

All solid waste shall be deposited into a rented skip, subsequently removed at intervals by a reputable waste disposal company such as Puran Disposal Company.



**Image 1: Illustrating the Site layout**

## **Potential impacts associated with block-making**

### **AIR AND NOISE POLLUTION**

There is the potential for air and noise emissions from the operation phases of this project.

### **Operation**



The utilization of block-making equipment has the potential to impact the air quality in the vicinity, primarily due to the storage and stockpiling of materials required for the production process.

The movement and transfer of sand and aggregate, mixer loading, and blowing of sand and aggregate from the stockpiles can generate air pollution.

In addition, the operation of the plant and generator, as well as the movement of vehicles required to support the project activities, can produce noise. Furthermore, there is a possibility of carbon monoxide release from the generator.

### **MITIGATION MEASURES**

Mitigation measures proposed by Dura Blocks to aid in the reduction of Air emissions during the operational phase:

1. A shed to house several block-making equipment;
2. A storage bond to house all dried finished products and cement. A forklift will be used to transport finished products from the drying area to the storage bond. The drying area will be on a flat concrete 50ft by 100 ft in the open air. Products produced from the plant will be packed on pallets and transported to the drying area and then to the storage bond. Main raw materials such as cement and steel rods will also be stored within this area.
3. The company plans to ensure that all trucks are fitted with tray pull-over screens such that sand being transported is covered during transportation to control dust pollution.
4. In addition, dust screens will be installed around the plant to mitigate the dust from this process.
5. Stockpiles of sand and stone in the open yard will be covered with tarpaulin to ensure dust is contained.
6. The company plans to install dust suppression systems, the implementation of windbreaks, and regularly watering the site dust suppression systems, windbreaks, and regular watering of the site to minimize the release of particulate matter.

### **NOISE & VIBRATION**

The site is susceptible to noise pollution due to the operation of heavy machinery utilized. These machines produce a range of sounds, such as engine noise, beeping sounds, and the sounds of heavy objects being moved. The noise generated from these sources can be a nuisance to workers and can cause hearing damage if proper precautions are not taken.

The following mitigation measures will be implemented to reduce operational phase impacts on baseline noise levels:



1. A concrete base will be constructed at the project site, including entry from the road. This will help to dampen vibrations caused by the operation of the plant and the movement of heavy-duty vehicles.
2. Noise-generating equipment or machinery will be used with the necessary muffling apparatus to reduce operational noise to acceptable levels.
3. Routine equipment inspection to ensure proper functionality of noise and vibration suppression devices.
4. Vehicles and machinery will be turned off when not in use.
5. All engine covers will remain closed while the equipment is operating.
6. Warning signs will be posted in areas of high noise levels, instructing employees to wear ear protection.
7. Use of appropriate PPE by workers near heavy-duty machinery and plants.
8. The generator within a noise-resistant enclosure. It will be placed within the generator room which is constructed with hollow blocks and a 20 ft. muffler silencer affixed to the building.

### **Water Pollution and Spills**

Water is produced during the facility's wash-down process. To reduce the environmental impact, there is a collection sump in place that captures all wastewater. The sediments from the collection sump are regularly removed and then recycled through landfilling.

Liquid cement, fuel, admixture, or other substances may accidentally spill and contaminate the environment. To prevent this from happening, spill pallets have been installed in the facility to capture any potential spills. Additionally, spill kits are available on-site in case of an emergency. Drip pans are also in place to collect any drips that may result from admixture collection.

### **Waste Management**

**Non-hazardous waste**, such as empty cement bags and food boxes, is disposed of in a designated bin located in a secure area. The bin is enclosed by concrete walls and a gate. Puran Brothers Disposal Inc. collects the waste once a week, or more frequently if necessary.

**Hazardous waste**, specifically waste oil generated by the facility, is temporarily stored in metal drums in a designated holding area. Interested individuals can collect the waste oil regularly, as it is made available for collection.

### **Additional information to be noted:**

- Puran Bros. Disposal Inc. collects all domestic waste.



- The facility generates the following types of waste and emissions:

Noise during the production/mixing process.

Solids (cement tonne sacks from the process).

