Project summary

WELL BUILT CONSTRUCTION

December 2025
MERESA CYLVANE DECORA| 615 BLOCK XXIX, GARDEN OF EDEN,
EAST BANK DEMERARA

Contents

1.0 Background

Well-Built Construction Services has applied to the Environmental Protection Agency (EPA) for an Environmental Permit to establish and operate a Concrete Batching Plant that will supply ready-mix concrete and manufacture a range of cement-based products, including pavers, subgrade concrete, roller-compacted concrete, concrete blocks, cement tiles, and grout, thereby improving accessibility to quality cement products and reducing transportation time and costs for local contractors and developers in both commercial and residential projects while supporting infrastructural development in Georgetown and across Guyana. The facility will be located at 615 Block XXIX, Garden of Eden, East Bank Demerara, at coordinates 6°38'19.3" N and 58°11'52.4" W, accessible via the East Bank public road, within a mixed-use zone of agricultural, commercial, industrial, and residential activities.

Existing structures within the project site include a one-flat concrete apartment for security and a warehouse with machinery, with surrounding land uses comprising of a canal to the east, an empty lot to the south, Orange farm to the north and west. Operations will run six days per week from 08:00 to 17:00 hours, employing approximately 25 workers including engineers, skilled and semi-skilled laborers, Security guards, drivers, and support staff. Construction is scheduled to begin in February 2026, with operations expected to continue indefinitely to meet the growing demand for cement products, and approvals have been sought from the Caledonia/Good Success Neighbourhood Democratic Council (NDC) and the Central Housing and Planning Authority (CH &PA).

2.0 Project site

The Concrete Batching Plant for Well Built Concrete Services will be constructed on 1.286 acres of transported land within a project area of influence that includes industrial activities, orange farm, and one resident within the project area of influence. Existing onsite infrastructure comprises a one-flat concrete apartment for security accommodation and a warehouse with machinery, which will be modified to support the

Concrete Batching Plant. The facility will include a steel cement silo, storage bonds, an administrative building, security hut, kitchen and restroom facilities, designated areas for fuel, aggregates, and cement storage, equipment servicing and maintenance, as well as provisions for water storage, a fuel dispensing station, and a power generator.

Heavy-duty equipment and machinery essential for daily operations will also be housed within the facility. No sensitive receptors such as schools, daycare centers, or hospitals are in the immediate project area. The main receiving water bodies are canals situated along the eastern boundary. Wastewater and cement slurry will be directed through a concrete drainage system to an onsite sediment settling chamber and adjoining drainage network, ensuring treatment prior to discharge into the northern canal. Sewage will be managed via an onsite septic tank system, while a recycling reservoir will be constructed to recycle cement slurry water for reuse in the Concrete Mixing Station. Additionally, a network of concrete drains will be installed to effectively manage stormwater runoff.

3.0 Project Design

Plant Design

The Well-Built Cement Plant will be engineered for efficient installation. It will feature a user-friendly interface to support long-term operation while adhering to environmental protection standards. With precise measurement capabilities, the plant is ideally suited for major construction projects requiring large volumes of concrete.

Raw Material Sourcing and Storage

Major raw materials such as aggregates and water will be locally sourced and stored in designated areas within the project site. Cement production will be demand-driven, utilizing the station's accurate mixing system to minimize waste. Once mixed, concrete will be transported to construction sites via ready-mix trucks, while cement products will be stored in a dedicated silo for customer distribution.

Main Equipment

Aggregate Handling Equipment

1. **Feed Hoppers** – Store and feed coarse aggregates (gravel, crushed stone) and fine aggregates (sand).
2. **Conveyor Belts** – Transport aggregates from storage areas to mixing units.

Cement Storage and Transport

3. **Cement Silo** – Large storage structure designed to maintain cement quality and provide a steady supply.
4. **Bulk Cement Delivery Systems** – Pneumatic trucks or augers used to transport cement from external sources.

Batching Equipment

5. **Batching Weighers** – Automated devices that weigh and measure materials to ensure accurate mixing ratios.
6. **Control Systems** – Computer-controlled systems that manage production processes with precision in measurement and timing.

Additional Equipment Mixers, cement trucks, dump trucks, forklifts, loaders, and water trucks will support construction and operational activities.

4.0 Utilities

Electricity for the facility will be supplied primarily by Guyana Power and Light (GPL), meeting the energy needs of the batching operation, as well as the administrative and residential buildings. To ensure uninterrupted operations, a 100 KVA generator will serve as backup power, specifically supporting the continuous functioning of the cement plant. Potable water will be provided by Guyana Water Inc. (GWI), supplemented by onsite storage tanks designed to collect and store rainwater. A network of strategically installed pipes will distribute water efficiently across the site. Communication services, including

telephone and internet, will be delivered by a local telecommunications provider to ensure reliable connectivity for administrative and operational functions.

5.0 Waste Management

The facility will generate several categories of waste. Construction waste will include scrap metal, steel offcuts, packaging materials (wood, plastic, cardboard), empty cement bags, broken blocks, and general debris. Operational waste will consist of scrap steel and wood, cement bags and plastic packaging, broken pallets, additive containers, waste oil and lubricants, cement slurry, and dust/particulate matter. Solid waste from daily operations will include snack packaging, food waste, disposable cups and plates, office paper and stationery, washroom disposables, and organic kitchen waste. Sewage and grey water from toilets and sinks will be managed through appropriate onsite sanitation systems. Hazardous waste will include cement packaging and residues; absorbent pads used for fuel spills and used oils and lubricants from heavy-duty machinery and equipment.

6.0 non-technical explanation

Well Built Construction Services has applied to the Environmental Protection Agency (EPA) for approval to build and operate a Concrete Batching Plant at Garden of Eden, East Bank Demerara. The Plant will produce ready-mix concrete and cement products such as blocks, tiles, pavers, and grout, reducing transport costs and supporting construction across Georgetown and Guyana.

The facility will occupy 1.286 acres and include a cement silo, storage areas, offices, security accommodation, fuel and water storage, and a backup generator. Operations will run six days a week (8:00 a.m.–5:00 p.m.) with about 25 employees. Construction is scheduled to begin in February 2026 and last for approximately 3 months.

Environmental safeguards include wastewater treatment through a sedimentation chamber, sewage management via a septic tank, and a recycling reservoir to reuse slurry water. Stormwater will be managed through concrete drains. Electricity will be supplied by GPL with generator backup, water by GWI with rainwater storage, and communication by local providers.

Waste will be managed under national regulations and include construction debris, operational residues (cement bags, oils, slurry, dust), daily solid waste (food packaging, office disposables), sewage, and hazardous waste (used oils, absorbent pads).

The project will provide reliable cement products, create jobs, and support Guyana's infrastructure while implementing measures to protect the environment and community.

7.0 Duration of the Project

The operation of the project is expected to be sustained for an extended indefinite time period.

8.0 Potential Environmental and Social Impacts and Mitigation

8.1 Potential Environmental Impacts

Impact - Water quality

- Runoff carrying cement slurry from mixing or washing areas may enter drains or nearby water bodies, leading to pollution and sedimentation.
- Runoff containing oil, fuel, or other chemical contaminants from equipment maintenance or refuelling areas can seep into soil or reach surface and groundwater.
- Accidents during loading and offloading of materials (e.g., aggregates, cement, fuel) may result in spills, leaks, or injuries, posing risks to both the environment and worker safety.

Mitigation measures

- Install a drainage system to channel cement slurry into a sedimentation tank, where wastewater is treated and recycled for reuse in mixing operations.

- Store cement in enclosed silos to prevent exposure to wind and water, reducing contamination risks.
- Ensure safe storage of all materials, including cement and additives, in line with manufacturer specifications and environmental guidelines.
- Erect safety signage in high-risk areas such as loading/offloading zones and fuel storage areas to guide workers and reduce accidents.
- Employ trained and authorized personnel only for loading, offloading, and equipment handling to ensure safe and compliant practices.

Impact - Air and dust emissions

- Dust emissions from the concrete mixing station during material handling and mixing may affect local air quality.
- Vehicle emissions from trucks transporting raw materials and finished products contribute to localized air pollution.
- Dust and particulate matter may be generated during construction and operation of the storage bond.
- Fugitive dust emissions can arise from sand and aggregate storage, especially in dry and windy conditions.
- Exhaust emissions from heavy-duty machinery and equipment (e.g., loaders, excavators, generators) may contribute to air pollution and greenhouse gas emissions.

Mitigation measures

- Construct the Concrete Mixing Station with high-efficiency, low-dust design, and strictly follow raw material measurement and equipment maintenance procedures.
- Use covered conveyors to minimize airborne dust during material transport.
- Apply wet suppression methods (e.g., water spraying) on exposed surfaces, storage piles, and during loading/unloading activities.

- Operate with appropriate machinery and conduct regular maintenance to ensure efficient, low-emission performance.
- Implement dust suppression techniques such as misting and enclosing dust-generating activities, particularly during dry or windy conditions.

Impact - Soil contamination

- Spillage of aggregates or cement during loading, transport, or mixing may contaminate surrounding soil and nearby water bodies.
- Groundwater quality could be degraded by infiltration of fine cement particles or chemical residues if not properly contained.

Mitigation Measures

- Store all materials on impermeable concrete surfaces to prevent seepage into soil and reduce contamination risks.
- Install sediment control systems (e.g., settling chambers or traps) within the drainage network to capture and treat runoff before discharge.
- Ensure proper site grading and effective drainage design to prevent pooling, flooding, and uncontrolled runoff into soil or water bodies.

Impact - Noise and vibration

- Construction activities, vehicular movement, and operation of heavy-duty equipment (e.g., mixers, trucks, excavators) may generate noise and vibration that negatively affect workers, nearby residents, and livestock.
- Prolonged exposure can lead to hearing problems, stress, and disturbance to surrounding land users.

Mitigation Measures

- Apply sound attenuation measures such as acoustic barriers, silencers, or enclosures for high-noise equipment and activities.

- Comply with Guyana National Bureau of Standards (GNBS) guidelines on acceptable noise levels for industrial operations.
- Provide Personal Protective Equipment (PPE) such as earplugs or earmuffs to workers in noisy areas.

Impact - Oil spills

- Leakage or accidental discharge from vehicles, generators, or machinery can contaminate soil and enter nearby drainage systems or water bodies.
- Improper refuelling or servicing of vehicles and generators may cause localized pollution and health hazards.
- Servicing generators on unprotected surfaces increases the risk of oil and fuel residues seeping into the ground, affecting soil quality and groundwater.

Mitigation Measures

- Establish Standard Operating Procedures (SOPs) for transportation, refuelling, and maintenance to minimize spill risks.
- Equip the fuel service station with a containment wall capable of holding 110% of maximum fuel volume.
- Construct a designated vehicle servicing area with spill containment features to safely manage accidental discharges.
- Implement spill clean-up procedures and install multilingual safety signage
- Display emergency contact information prominently across the site
- Maintain spill response equipment (spill trays, dispersant sprays, sorbent pads) for immediate use in case of spills.

Impact - Improper waste Management

- Improper disposal of construction and operational waste can lead to environmental pollution.
- Inadequate handling of hazardous and non-hazardous waste may pose health and safety risks.
- Littering within the facility can create unsanitary conditions and visual impacts.

Mitigation Measures

- Comply with national regulations, including the Environmental Protection (Litter Enforcement) Regulations 2013 and the Hazardous Waste Management Regulations 2000.
- Install covered waste receptacles at strategic points to prevent littering and exposure.
- Maintain good hygiene and sanitation practices across the facility.
- Engage an approved waste disposal service provider for regular collection and safe disposal of all waste streams.
- Provide employee training on effective waste management and environmental best practices.

Impact - Fire and explosion

- Smoking by employees or patrons may create health and safety risks.
- Improper storage of products could lead to spoilage, contamination, or fire hazards.

Mitigation Measures

- Install no-smoking signage in designated areas and enforce compliance with smoking regulations.
- Acquire and strategically place firefighting equipment (sand buckets, fire extinguishers) throughout the facility, in line with Guyana Fire Service guidance.

- Ensure all employees and visitors are informed of emergency procedures, including muster points and exit routes.
- Erect muster point signage in English, Spanish, and Chinese to accommodate the primary languages spoken by workers.

.2 Potential Social Impacts

The project is expected to benefit both the people and the Government of Guyana by creating direct employment opportunities and contributing to significant improvements in infrastructural development. However, since the facility will be located within a mixed-use zone, potential social impacts have been identified, along with corresponding mitigation measures outlined below.

Impact - Disturbance to surrounding communities

- Facility operations may cause noise, dust, increased traffic, and road deterioration, leading to potential complaints from nearby residents.

Mitigation Measures

- Restrict operations to daytime hours to minimize evening and nighttime disturbances.
- Maintain regular engagement with nearby communities to foster open communication and address concerns proactively.
- Establish a grievance redress mechanism to provide residents with a clear and accessible process for reporting issues and resolving complaints.

Impact - Occupational Safety and Health risk

- Workers and visitors may face injury risks from heavy machinery operation or falling objects.

- Vehicular accidents could occur within or near the facility site.

Mitigation Measures

- Enforce the use of Personal Protective Equipment (PPE) such as helmets, boots, and masks for all workers.
- Conduct regular safety briefings and training sessions to raise awareness of hazards and safe practices.
- Implement strict safety protocols for heavy machinery operation, supported by regular equipment maintenance and operator training.

Impact – Reduced Aesthetic quality

- The facility may appear unsightly if not properly maintained and managed, affecting the visual appeal of the surrounding area.

Mitigation Measures

- Erect fencing and plant trees to provide visual screening; trees have already been planted along the southern boundary.
- Incorporate decorative and food plants within the facility grounds to enhance aesthetics and provide benefits to workers.
- Ensure the site is regularly maintained, organized, and cleaned to prevent untidiness.
- Implement proper waste disposal practices to keep the facility clean and visually appealing.

9.0 Appendices

Appendix 1: Map of surrounding land use

Image 1: site map

Appendix 2: Site Plan

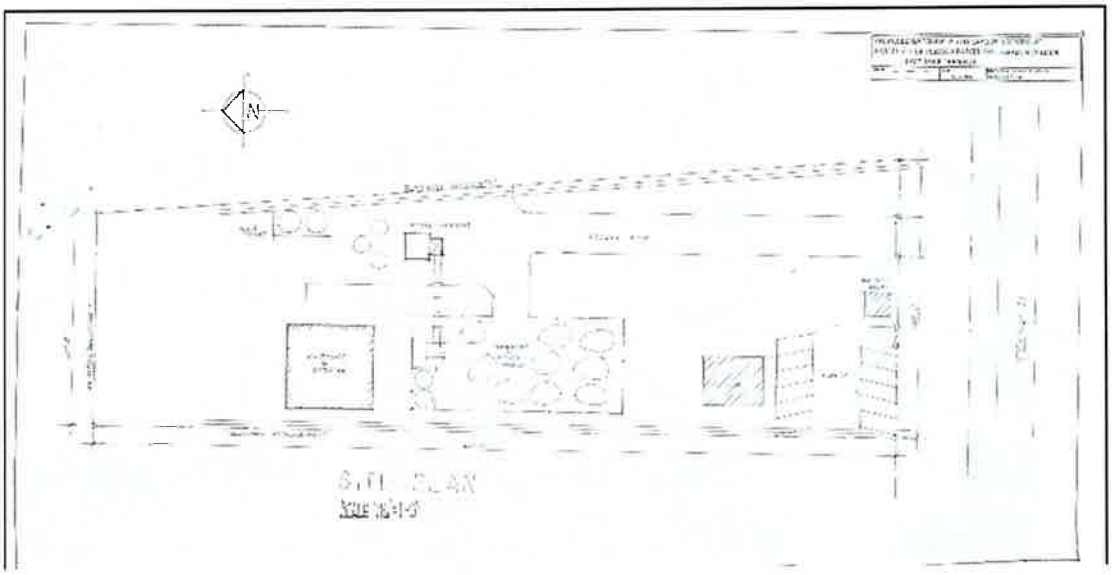

Image 2: Site Plan