

# Project Summary

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S GEN ONE STOP GAS STATION AND MINI MART

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PLOTS E-K, BEL AIR, WEST COAST BERBICE  
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## Contents

1.0	Company Background.....	3
2.0	Project Site Location and Land Use.....	3
3.0	Project Description.....	3
3.1	Construction Phase.....	4
3.2	Operation Phase.....	4
3.3	Auxiliary and Support Services.....	4
4.0	Potential Environmental Impacts and Management Measures.....	5
4.1	Construction Phase.....	5
4.2	Waste Generation and Management.....	5
4.3	Air Quality.....	6
4.4	Noise.....	6
4.5	Water Quality.....	7
4.6	Soil.....	8
4.7	Occupational Health and Safety.....	8
4.8	Emergency Preparedness and Response.....	9
5.0	Conclusion.....	10

## 1.0 Company Background

S GEN ONE STOP is a local registered company which was established by Jagdesh Suenarine and Waheeda Suenaine for the purpose of constructing and operating a Gas Station and Mini Mart. The Company's registered office is Plots P-S, Bel Air Village, West Coast Berbice.

The developers operate a sister company JS Engineering Services and Supplies which is involved in the construction sector over the past five years. They are also involved in large scale rice cultivation and cattle rearing over the past fifteen years. They currently own and operate a fleet of heavy equipment and vehicles which support both the construction and agricultural activities. Given the scale of their operations their monthly consumption of fuel is significant, amounting to approximately 60,000 litres (13,000 gallons). As a result, it was determined that it will be feasible to establish a gas station which will serve their construction and agriculture operations as well as retail fuel to the public, given the ever-increasing demand for fuel locally as a result of continuous economic growth and associated activities.

## 2.0 Project Site Location and Land Use

The proposed gas station and mini mart will be established on Plots P, Q, R and S Bel Air (No. 6 Village), West Coast Berbice. The location is shown on the map included as Annex A.

The site was utilised for other activities in the past, and is currently being utilised by the developer for the stockpiling of sand for use in construction projects.

The surrounding area is of mixed land use, as is shown on the Land Use Map included as Annex C. Immediate northwest and southeast of the site are lands owned by the developers. These lands are utilised for stockpiling of construction materials and parking of heavy equipment and vehicles. Further northwest of the site is an area utilised for stockpiling of sand by another individual, while further southeast is the residence of the developer. West of the site are vacant lands and a horse racing stable, followed by an area utilised for stockpiling of sand. East of the site is the public road, followed by a horse racing course and an industrial/commercial operation which includes a heavy machinery workshop and sales. Within the wider area is a mechanic workshop, a wash bay, a gas station and entertainment centre and a few residences. See Annex D for images of the project site and surrounding land uses.

## 3.0 Project Description

S GEN ONE STOP is pursuing the construction and operation of gas station which will service the developer's construction and agriculture operations as well as to serve the general public. The developers aim to provide a reliable supply of high-quality fuel diesel, gasoline and kerosene to satisfy the ever-increasing demand for petroleum products fuelled by the economic boom being experienced in the country.

A mini mart will be established within the main building to retail mainly beverages and snacks. A section of the main building will also be utilized to retail vehicle spares and accessories.

The project is expected to have a lifespan of at least 25 years.

### ***3.1 Construction Phase***

The project site is cleared and sand filled. Once construction commences the following steps will be undertaken:

- Preparation of building foundation
- Installation of fuel tanks. Three underground fuel tanks will be installed, with two of the tanks having a capacity of 68,000 litres (15,000 gallons), and one with a capacity of 40,000 litres (8,700 gallons) will be installed.
- Construction of the main building
- Installation of fuel transfer lines, pumps, fire response measures, spill contingency and response measures, and installation of generator, etc.
- Construction of a fence around the property and landscaping

The layout of the project site is shown on map included as Annex B. Approximately 10 workers will be involved in the construction of the facility and construction is expected to last for about six months.

### ***3.2 Operation Phase***

Fuel will be bought from suppliers and transported to the gas station by fuel tanker trucks owned by the developers. This will include gasoline, diesel and kerosene. The fuel will be stored in storage tanks for retail sales and to be utilized by the developer existing fleet of vehicles and machinery. From the tanks the fuel will be transferred to the pumps via installed pipelines. Six pumps will be installed. Three of the pumps will be utilized for gasoline, two for diesel and one for kerosene. It is expected that 120,000 litres (26,000 gallons) of diesel, 120,000 litres (26,000 gallons) of gasoline and 1,400 litres (300 gallons) of kerosene will be received, stored and retailed on a monthly basis.

Approximately 10 workers consisting of pump attendants (4), supervisor (1), office staff (1), security (2), mini mart (1) and parts store (1) will be employed during the operation phase. The gas station will be operational on a 24 hours basis.

### ***3.3 Auxiliary and Support Services***

Water for the facility will be provided by Guyana Water Inc. (GWI).

The facility is powered by Guyana Power and Light Inc. (GPL). However, one generator will be installed to provide back-up power. The power generator will be of a 45 kVA capacity.

## 4.0 Potential Environmental Impacts and Management Measures

This section summarises the potential impacts of the project and the mitigation and management measures being implemented.

### 4.1 Construction Phase

#### Impacts

The main adverse impacts during the construction phase of the project relate to noise and dust generation, waste management, workers health and safety, and management of hazardous materials (fuel). There are no immediate receptors to be affected by noise and dust generation (see Land Use Map attached as Annex C).

#### Mitigation

The following measures will be implemented during the construction phase to mitigate possible impacts to the environment:

- The construction works will be done based on construction best practices to ensure potential impacts are avoided or minimised.
- Noise levels will be kept within the recommended construction limit of 90 dB during the day. There will be no construction during the night. Workers operating noisy equipment will be required to utilize hearing protection.
- Dust generation will be mitigated by reducing the height of construction materials stockpiles and use of dust mask by construction workers. Wetting of the site will be done if required.
- Construction waste will be sorted. Those that can be salvaged for reuse such as form boards will be kept. The remaining waste will be transported to the RDC Landfill for disposal.
- All workers will be required to utilize Personal Protective Equipment relevant to their tasks, including dust masks, hearing protection, reflective vests, hard hats and safety boots. Workers are also trained in their respective tasks, and the associated health and safety requirements.

### 4.2 Waste Generation and Management

#### Impacts

There will be no process related solid waste or effluent to be generated. Garbage will be generated by routine activities and workers. Sewage will be generated from toilet facilities. Minor amount of hazardous waste in the form of waste oil and oily filters and rags will be generated from the servicing of the generator and cleaning up of any spill which may occur. Improper waste management can be unsightly and impact water quality.

## Mitigation

The following measures are being implemented to manage waste during the operation:

- Garbage including office waste and waste from small packaging, such as paper, cardboard and plastic and food waste such as boxes, wrappers, tins and bottles and residual food will be collected in bins provided at strategic locations around the facility. Waste disposal services provided by the Woodlands – Bel Air NDC will be utilised to disposed of garbage.
- For sewage waste a septic tank will be installed to receive and treat waste from the toilets.
- Waste oil from servicing of the generator and machinery will be collected in drip containers and then consolidated in 45-gallon drums.
- Good sanitation, hygienic and housekeeping practices will be maintained at all times.

### **4.3 Air Quality**

#### Impacts

The operation will not impact air quality. There may be dust generation during the construction phase from construction activities. However, this will be localized and there are no nearby receptors to be affected.

#### Mitigation

The following measures will be implemented to prevent impacts relating to dust generation:

- The construction site will be soaked with water if dust generation is resulting in a nuisance.
- Workers exposed to dust generation will be provided with the recommended Personal Protective Equipment such as dust masks.
- Trucks transporting materials for construction will be covered.
- Any complaint of a dust nuisance will be promptly addressed.

### **4.4 Noise**

#### Impacts

The only noise to be generated is from the back-up power generator, which will also not be significant since it would be of 45 kVA capacity. In addition, the generator will not be operational on a continuous basis. It should be noted that there are no nearby receptors to be affected. Both neighbouring lands are owned by the developers.

#### Mitigation

The following measures will be implemented to mitigate noise generation:

- The generator to be utilized will be equipped with built on enclosures and mufflers and will be housed in an enclosed room to further reduce the noise level.
- The generator will be sited away from the office and other work areas.
- Any complaint of a noise nuisance will be promptly addressed.

#### **4.5 Water Quality**

##### Impacts

Both surface and ground water contamination can occur as a result of any accidental release, leaks or spills of fuel. The improper management of liquid wastes such as discharging untreated wastewater from washrooms can also affect surface water quality.

##### Mitigation

The following measures will be implemented to prevent any impacts to water quality:

- Liquid waste from the toilets will be treated by a septic tank which is equipped with a filter bed. The septic tank will be constructed based on Guyana National Bureau of Standards guidelines.
- Septic tanks will be well maintained to ensure optimum functionality.
- The facility is designed and will be constructed to include measures to prevent and contain any fuel spills.
- Each underground tank will be contained within an impervious area with a concrete slab base and concrete walls. The area around the tanks will be sand filled.
- The surface of the operational area will be impervious.
- Runoff from operational areas will be collected by concreted drains to be installed. The discharge from the drains will pass through oil-water separators to be installed prior to the exit into the community drainage.
- Each pump will be equipped with a spill collection sump.
- Workers will be trained in the proper handling practices for fuel to avoid spillages, such as preventing overflow of tanks.
- Industry best practices will also be employed, such as nozzles with automatic shut off and indicators.
- A leak detection mechanism will be installed for the underground storage tanks such as alarms to prevent overflows from storage tanks, dipstick measurements or a gauging system.
- Secondary containment such as drip pans will be utilised at possible overflow points.
- Tanks fill level will be maintained at 90% to prevent overflowing.
- Underground fuel storage tanks will be double walled.
- Protective coating (such as cathodic protection) will be applied to the external walls of the tanks to prevent corrosion.

- Spills response kits will be kept onsite to contain and clean up any spill that may occur. The kits will be comprised of relevant material to contain and clean up hydrocarbon spills.
- Workers will be trained to respond to spills through mock spill exercises.
- Regular inspections will be done on tanks, the piping network, hoses and fittings to ensure there is no leakage and integrity is maintained.
- A routine maintenance programme will be implemented to ensure all components are functioning efficiently.

#### **4.6 Soil**

##### Impacts

No impact to soil is envisaged from the construction of the facility since the site was already disturbed and is being utilised. During the operation phase soil contamination can occur from leaks and spills.

##### Mitigation

The following measures will be implemented to mitigate any potential impacts to the soil at the project site:

- The project site will be compacted and capped in most areas with concrete.
- Adequate drainage was installed to drain the site.
- Measures outlined above to prevent water contamination will also contribute to the prevention of soil contamination.

#### **4.7 Occupational Health and Safety**

##### Impacts

Due to the nature of the operation, there are possibilities for negative health and safety impacts which can affect workers.

##### Mitigation

Given the workplace risk, the following measures will be implemented to ensure that employees have a safe, healthy and secure workplace:

- A key member of staff will be designated the responsibility of overseeing health and safety.
- Employees will be orientated to the environmental, safety and health practices.
- All employees will be provided with Personal Protective Equipment relevant to their job.

- Hazardous materials (diesel, gasoline and kerosene) will be appropriately and safely handled and stored.
- Warning Signs and Notices will be installed around the site including “Highly Flammable” and “No Smoking” signs.
- Training for selected employees will be provided on the best practices for handling of fuel.
- An area is designated for use by workers for meals and relaxation.

#### ***4.8 Emergency Preparedness and Response***

##### Impacts

Due to the nature of the operation, there are possibilities for emergencies to occur, including fuel spills and fires.

##### Mitigation

Given these risks, the following measures will be implemented as part of a system to adequately prepared and respond to emergencies:

##### General

- A key member of staff will be assigned the responsibility of taking charge in the event of an emergency.
- Contact information for key institutions to be contacted in the event of an emergency including for the Guyana Fire Service, nearby health facilities, the Environmental Protection Agency, etc. will be posted in the office and other strategic areas.
- Material Safety Data Sheets for diesel, gasoline and kerosene will be kept onsite for use, if necessary.
- A “Muster Point” will be designated where employees should assemble in the event of a fire or any other emergency.
- All staff will be made aware of the evacuation procedures through periodic drills and awareness sessions.
- Communication will be provided in the form of telephone and internet.
- A vehicle will be available at the operation to provide transportation in the event of an emergency.

##### Fire

- The recommendations provided by the Guyana Fire Service will be implemented.
- Tanks will be installed underground on strong foundation and equipped with vent pipes.
- Smoke detectors will be provided in the main building.
- A fire alarm system capable of giving sufficient audible warning throughout the facility will be installed.

- Dry chemical fire extinguishers will be provided within the main building and around the facility.
- Fire points will be clearly identified, and numbered.
- An automatic sprinkler system supplied by an independent water source will be installed.
- Fire drills will be conducted periodically.
- Training for selected employees will be provided on the proper use of fire extinguishers.
- Exits within the building will be clearly marked.
- A two meters concrete fence will be constructed around the facility.
- Fuel dispenser will be located in open air and away from ignition risks.

#### Spills and Leaks

- A well-equipped spill containment and clean-up kit will be kept onsite.
- Dispensers will be equipped with a sump to collect any spilled material.
- Workers will be trained in containing and cleaning up of spills through mock spills exercise.

#### Medical Emergency

- A First Aid Kit will be provided on-site with the requisite drugs, materials and equipment to cater to emergencies.
- At least one key staff will be trained in the rendering of First Aid.

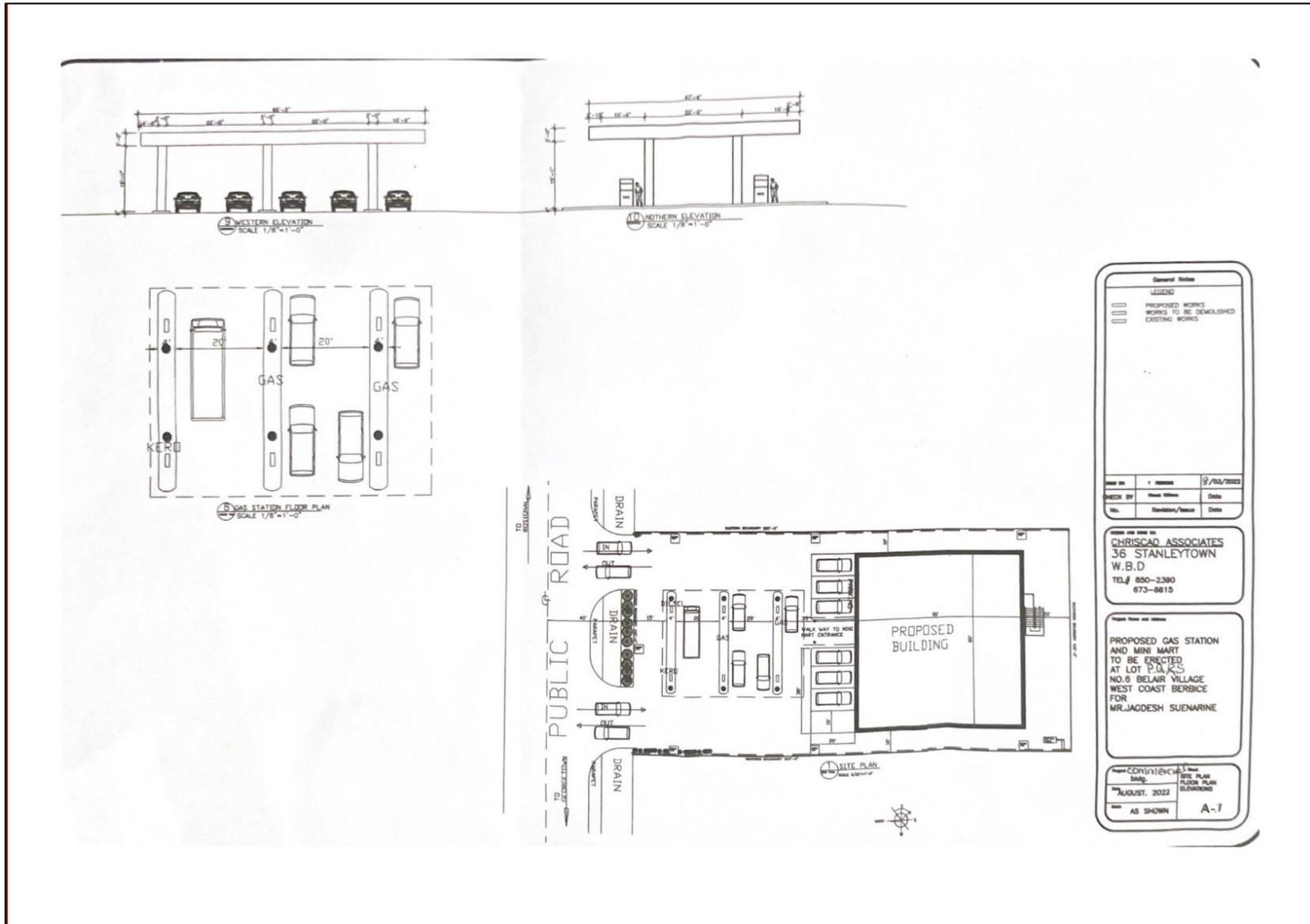
## **5.0 Conclusion**

The project will store and retail petroleum products. Approvals were already granted by the NDC, CHPA and the Guyana Fire Service. State of the art technology and the industry best practices will be employed to ensure that the construction and operation of the gas station do not impact negatively on the environment and people. In addition, the required emergency preparedness and response measures will be in place to ensure adequate and efficient response to any unplanned event, including the provision of emergency response equipment and training of personnel in response measures. The operation will be monitored to ensure effectiveness of the mitigation and management measures and training of personnel will be done to ensure they are aware of their roles and responsibilities and that they are equipped to conduct their tasks in a safe and environmentally acceptable manner.

### Annex A- Location of the Proposed Gas Station



## Annex B- Layout of the Operation



### Annex C - Land Use surrounding the Project Site



**Annex D – Images of Project Site Land Use Surrounding the Site**

**Project Site**



**Vacant Lands to the North of the Site which are owned by the Developers and are used for Stockpiling of Sand**



**Vacant Lands to the South of the Site which are owned by the Developers and are used for Parking of Heavy Machinery and Vehicles. The Developers residence is further south.**



**Industrial/Commercial Activities to the South East of the Site**

