

Project Summary Outline

Concrete Batching Plant at Block X

Te Huis Te Coverden, East Bank Demerara,

Guyana

Submitted by: Coosal's Guyana Construction Inc

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1. Summary of Project

Currently, there is a shortage of concrete to supply the demand in the country to satisfy critical infrastructural development, as publicly announced by the President of the Co-operative Republic of Guyana.

Most projects are delayed due to the lack of ready-mixed concrete required for auger piling which is a service we offer and are urgently required.

Coosal's Guyana Construction Inc. is a construction firm incorporated under the Companies Act of Guyana since November 2020 with its office located at 169 Charlotte Street. Our aim is to produce and supply high quality, highly reliable ready-mixed concrete readily available for use in infrastructural development projects inclusive of housing projects, bridges, soil stabilization by establishing a concrete batching plant.

Our products are trusted in the use of construction of hotels, mega infrastructural/ civil projects, major road constructions, to name a few.

2. Description of the Site

The proposed location for the development is currently an empty lot. It is referred to as Block X of Te Huis Te Coverden and is located on the East Bank Demerara Corridor; approximately 20Km from the capital city of Georgetown. It has GPS coordinates of: Northings – 727118m, Eastings – 365230m. It is bounded on the West by the Demerara River, on the East by a mix of manufacturing sites and residences, on the South by residences and mostly a vacant lot, and on the north by residences surrounded by thick vegetation. The land is built up and flat with existing storm water drainage.

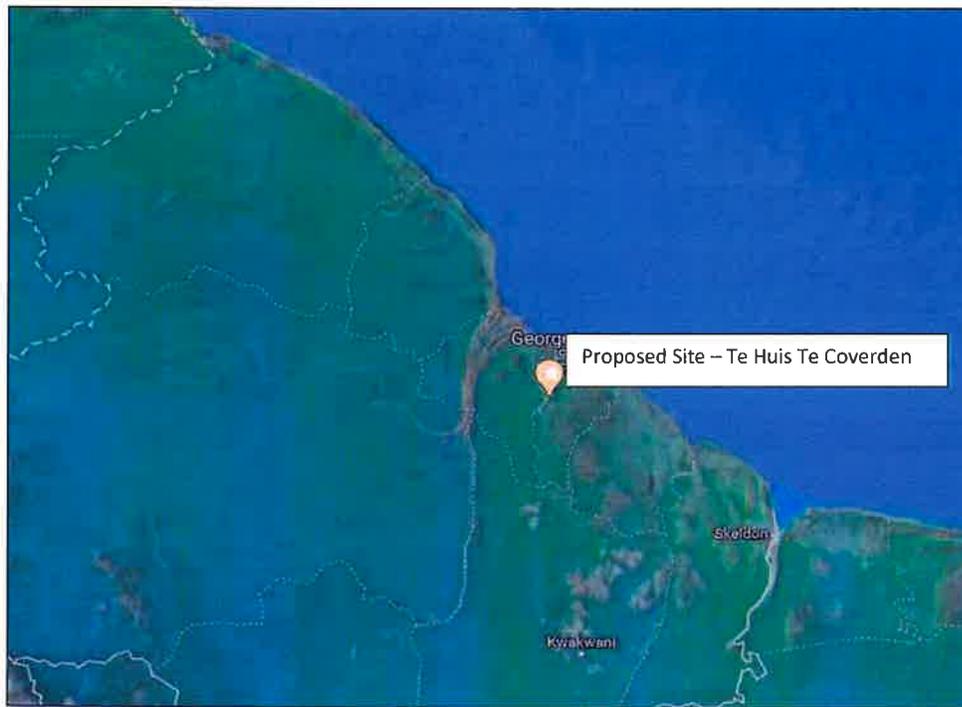


Figure 1: Proposed Site



Figure 2: Drone photo of proposed site

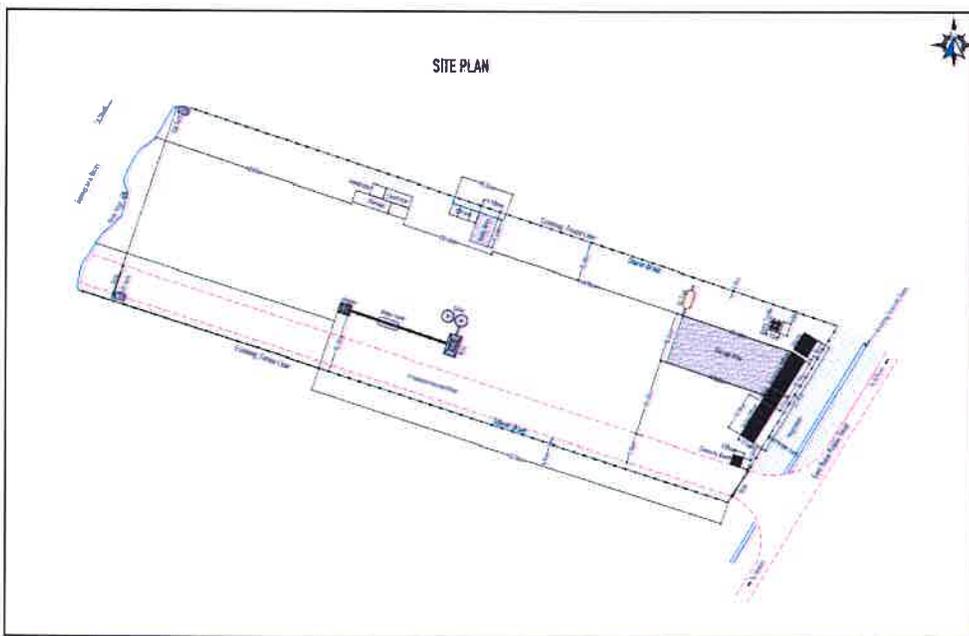


Figure 3: Proposed Site Layout

3. Project Design – Activities associated with the Project

The project is effectively broken into two (2) categories.

1. Construction Phase
2. Operational Phase

1. Construction Phase

The construction of the batching plant is relatively simple. The plant is a prefabricated one which will be erected on concrete pedestals. The bulk of activities for the construction phase arise from preparation of foundations and ancillary facilities. The construction is broken into the following work packages:

- Foundation Works
- Drainage structures
- Land grading and filling
- Erection of plant
- Construction of ancillary facilities (offices, warehouse, etc)
- Mechanical and piping works

The main raw materials which will be utilized during the construction phase include:

- Loam (approximately 2800m³)
- Crusher run (approximately 2500m³)
- Ready mix concrete for foundations (300m³)
- Wood for formworks (5000 BM)

These materials will be sourced from local suppliers creating a positive impact on the local economy.

2. Operational Phase

During the operational phase the following activities are expected:

- Aggregate haulage and stockpiling
- Batching of concrete
- Maintenance of equipment and facilities

It is estimated that a monthly volume of 2000m³ of ready mixed concrete will be produced along with 150MT of concrete remnants from trucks. The waste will be captured in dedicated settling ponds and disposed of at approved dump sites.

4. Project Design – Sources of Utility Services

We propose to utilize the following agencies as utility providers for the operation of the concrete batch plant at Block X, Te Huis Te Coverden.

- **Electricity – Guyana Power and Light Inc (GPL)**
GPL will be used as the main source of power to run the plant and service supporting facilities. A standby generator will be available to cater for failures in the local grid.
- **Potable Water Source – Guyana Water Inc.**
- **Telecommunication and Internet Services – Guyana Telephone and Telegraph Company**

5. Project Design: Waste Management Details

During the construction and operation phases of the project waste generated will be classified into the following categories:

- Domestic Waste
- Industrial Waste

6. Project Size and Details

The location for the project is a plot of land referred to as Block 'X' in Te Huis Te Coverden on the East Bank of Demerara, Guyana. It is bounded on the west by the Demerara River, to the North and South by heavily vegetated lands with residences, and to the east by residences and manufacturing sites. It is flat and currently built up with white sand. The batching plant was oriented on the plot to maximize the distances from residences and will be adjacent to heavily vegetated area providing a natural buffer.

To realize this development Coosal's will be making an investment of USD\$10M. The construction phase is expected to run for two months and will see the employment of 50-60 individuals.

7. Potential Environmental Impacts and their Significance

A preliminary environmental assessment was conducted to identify and assess the potential impacts the project may have on the bio-physical environment and mitigation measures are recommended to avoid, minimize, or remedy those potential negative impacts.

The methodology used to identify and assess the potential physical and biological impacts of the proposed Project included the following:

- i. Characterizing the baseline conditions through the review of secondary data to establish and assess the most likely environmental effects of the Project.
- ii. Identifying the source of impacts and the impacts that will be generated by the Project. This was achieved through a desk top analysis and review of relevant literature and the environmental management plans of similar projects.
- iii. Rating impacts to determine impact significance; and
- iv. Recommending appropriate mitigation to address significant negative impacts.

Impacts were categorized using the definitions below:

- Positive - An impact that results in a positive effect on the receiving environment or resource from activities performed at or by the project.
- Negative - An impact that results in a negative effect on the receiving environment or resource from activities performed at or by the project.
- Direct - An impact created as a direct result of the project.
- Indirect - An impact which may be caused by the project, but will occur in the future or outside the project's AoI.
- Short-term - An impact or activity that is expected to dissipate shortly after the cause ceases
- Long-term - An impact or activity that is expected to continue for significant time after the cause ceases
- Localized - Impact which is limited to the project's AoI
- Extensive - Impact which has extended beyond the vicinity of the project's AoI.

Impact Significance

The importance of an impact was assessed by a combination of the following:

- The significance of the impact on the resources should the impact occur; and
- The likelihood of that impact occurring.

In determining the significance level, consideration was given to the types of impacts from project activity relative to existing baseline conditions. Further, in determining the likelihood levels, consideration was given to the probability of an identified physical or ecological or socioeconomic resource to be impacted by the project. The anticipated likelihood of occurrence of an impact was identified to range from Rare to Certain.

Utilizing the outcomes of both the impact significance ranking and the identified likelihood of impact, the effect of impact causing action on the receiving environment was evaluated. The risk level was assessed by combining the significance column and the probability row in the following Risk Assessment Matrix

Likelihood	Impact Level				
	Negligible	Minor	Moderate	Major	Extreme
Rare	Low	Low	Low	Medium	Medium
Unlikely	Low	Low	Medium	Medium	High
Likely	Low	Medium	Medium	High	High
Almost Certain	Low	Medium	High	High	Critical
Certain	Low	Medium	High	Critical	Critical

Table 1: Levels of impact significance

8. Description of proposed environmental management and mitigation measures for all environmental, ecological, and social impacts.

A comprehensive environmental Management Plan will be developed to mitigate negative impacts. Table 2 details the potential environmental impacts envisaged.

Key – Impact rating parameters

Pos – Positive Loc – Localized Dir – Direct ST – Short Term
Neg – negative Ext – Extensive Indir – Indirect LT – Long Term

Environmental Component	Potential Impact	Impact Type	Impact Level	Likelihood	Significance	Proposed Mitigation Measure
Physical Resources						
Geology and Soils	Erosion from construction activities such as land clearing, piling, etc.	Neg; Dir; ST; Ext	Moderate	Likely	Medium	<ul style="list-style-type: none"> - Phased and planned land preparation - Soil disturbance should be limited to areas only where it is necessary. - Adequate drainage should be provided at temporary work areas. - Landscaping - Construction of abutment, use of erosion control matting and other physical measures
Air Quality	Soil compaction from the movement of heavy equipment	Neg; Dir; ST; Loc	Minor	Likely	Medium	<ul style="list-style-type: none"> - Soils that have been compacted by heavy equipment during the transport of materials and also during site works will be scarified. - Appropriate heavy-duty equipment will be utilized for all works.
Air Quality	The operation of machinery and the stockpiling of materials are potential sources of air pollution and dust emissions respectively	Neg; Dir; ST; Loc	Minor	Likely	Medium	<ul style="list-style-type: none"> - Machinery will be regularly maintained to reduce air pollutants and stockpiled material will be covered to reduce the escape of fugitive dust particles. - Contractor will also frequently use water to suppress dust.
Noise	Noise is expected to be generated from the operation of equipment on site and pile driving activities during the construction phase	Neg; Dir; ST; Loc	Minor	Likely	Medium	<ul style="list-style-type: none"> - Heavy duty equipment will be equipped with silencers and mufflers to abate noise level emissions. - Vehicles will be regularly maintained to facilitate effective functioning of equipment. As far as possible, pile driving hammers will be equipped with noise attenuation device.
Water Quality	Potential exists for sedimentation and discolouration due to surface runoff, erosion,	Neg; Dir; St; Ext	Moderate	Likely	Medium	<ul style="list-style-type: none"> - Erosion control measures will be implemented, and construction materials will be stored outside drainage lines to minimize sedimentation.

	and pile driving activities.	Neg; Dir; ST; Loc	Minor	Likely	Medium	-Large quantity of fuel will be stored in a double skin tank providing secondary containment to minimize the adverse impacts to the environment in the event of spillage.
Biological Resources						
Flora	Deforestation due to the clearing of vegetation for construction	Neg; Dir; ST; Loc	Moderate	Not Likely	-	Proposed construction site is free from vegetation.
Fauna	Limited species displacement and loss of habitat resulting from construction works	Neg; Dir; ST; Loc	Moderate	Likely	Medium	Water quality will be monitored to ensure ecologically acceptable turbidity, nutrient, and sediment.

Table 2: Environmental Impacts

The overall environmental impacts of the proposed project were considered to be moderate and manageable from a technical, social, and financial point of view.

9. Conclusion

Coosal's Guyana Construction Inc. is a company dedicated to the development of Guyana's infrastructure while at the same time creating a sustainable production environment. It is our belief, if granted project approval, the construction of the ready-mix concrete plant will have significant positive impacts on the local economy and the livelihoods of many Guyanese while having negligible impact on the environment.

