

PROJECT SUMMARY OUTLINE

Name of Project: Construction of a Concrete Wharf at Mudlot 42 Stanleytown, New Amsterdam, Berbice.

Name of Developer/ Company: Dwayne Ferdinand. (Managing Director of Home Designs |Engineering Associates)

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Project Location Details

Mudlot 42 is situated along the eastern bank of the Berbice River of New Amsterdam in the county of Berbice, Guyana and can also be accessed via the Stand Public Road.

Additionally, the property is neighbored by Home Designs | Engineering Associates equipment and container yard on the northern boundary and the Transport & Harbors Department on the southern boundary.

The property contains an area of 2.916 acres having the following boundary measurements:

Northern boundary: 400 feet

Eastern boundary: 436 feet

Southern boundary: 356 feet

Western boundary: 439 feet

The property was most previously owned by Banks DIH Limited and was used for storage complete with wharf. Both the storage facility (existing timber building) and site have been inactive for several years.

An agreement of sale was made on the 7th of May 2018 between Banks DIH Limited and Mr. Dwayne Ferdinand. Since acquiring the property, Mr. Ferdinand has cleared the open land area of small vegetation and dirt filled and compacted same. The existing timber structure is also currently being demolished.

Please see below for an aerial image of the property taken from google maps as well as the attached site plan from Guyana Lands & Surveys.



Aerial Image Taken from Google Maps on Saturday, August 29, 2020 at 10:24 AM

Project Design

The construction of the concrete wharf is expected to consist of the following 6 stages:

1. **Site clearing and Land Preparation:** All remaining vegetation (bushes and shrubs) will be removed. All discarded vegetation will be taken offsite and disposed of properly. Once the land is cleared, the entire site area will be filled with dirt and compacted to achieve a final grade level as specified by the engineers.
2. **Revetment:** interlocking PVC sheet piles will be driven into the river shore using heavy equipment to create a permanent revetment along the shore front of Mudlot 42. This stage is critical to ensure there is little to no erosion of site land into the River.
3. **Pile Driving:** Heavy equipment will be used to lift, place and drive pre-cast concrete piles into the bed of the Berbice River as specified by the engineer's pile layout plan. Piles will be driven to a minimum depth specified by the engineer to ensure a solid foundation for the subsequent stages as it relates to construction.
4. **Wharf Construction (PHASE I):** this stage will consist of the fabrication and installation of formwork and steel reinforcement. All formwork and steel will be made onsite and installed, then shored/supported adequately. Once all formwork and steel reinforcement is completed ready mix concrete will be poured into forms and adequately consolidated to ensure maximum strength. Concrete will be given adequate curing time prior to being subjected to any live loads. After this curing period has ended all formwork will be removed and discarded offsite appropriately.
5. **Site Development:** the final stage of the project will consist of miscellaneous works which include the construction of boundary fences, construction of concrete drains, construction of a guard hut and construction of concrete pads to be used for material storage, equipment storage etc. see attached site plan layout.

Source of Utility Services

Power

The project site will receive raw power from GPL mains which are existing within Mud lot 41 Stanleytown (immediate neighboring property). In addition, Mr. Ferdinand also has access to mobile generators which will be used to substitute power if necessary.

Water

The project site will utilize water from GWI mains which are existing within Mud lot 41 Stanleytown (immediate neighboring property).

Communication

The project site will utilize water from a GTT+ main line which are existing within Mud lot 41 Stanleytown (immediate neighboring property). In addition, cellular phones will also be used while on site.

Facilities

The project site will be fitted with temporary facilities (portable toilets) sourced by Cevon's Waste Management.

Waste and/or Recyclable Materials		Destination		
		Reuse and Recycling		Disposal
Possible Materials Generated	Estimated volume (High, Medium or Low Volume)	On-site (How will materials be reused and/or recycled on-site?)	Off-site (Specify the contractor and recycling facility)	Specify the contractor and/or landfill site/ transfer station
Timber (form board)	High	Form boards will be reused throughout the duration of the project for bracing/ framing purposes as needed.		upon completion of project all remaining form boards will be transported offsite by truck into the New Amsterdam Waste Dump Site.
Wood material waste (plywood)	High	plywood will be reused throughout the project as formwork for concrete pouring.		upon completion of project all remaining plywood sheets will be transported offsite by truck into the New Amsterdam Waste Dump Site.
Cardboard	Low			cardboard waste will be stockpiled and moved offsite by truck into the New Amsterdam Waste Dump Site.
Ferrous metals (e.g. iron, steel)	Low	All ferrous metal waste generated will be stored onsite for reuse by Mr. Ferdinand where possible.		

Concrete	Low	Concrete will be mixed in such a way as to reduce any/all waste. Any waste will be poured into low areas of mudlot 42 to serve as land fill.		
Paint	Low	All remaining paint will be stored onsite in cans for reuse by Mr. Ferdinand where possible.		
Stone/ Gravel	Low	All stone/gravel waste generated will be stored onsite for reuse by Mr. Ferdinand where possible.		
Sand	Low	All sand waste generated will be stored onsite for reuse by Mr. Ferdinand where possible.		
Topsoil	Medium	N/A	N/A	N/A
Chemical Admixture (Concrete Enhancing Solvents)	Low	Admixture operations will take place within a pre-existing berm. Any spill waste will be kept in berm and removed periodically.		

Plastics	Low	Construction plastic will be reused throughout the duration of the project as coverings to protect open formwork or other materials that need protection from rain/sun, etc.		upon completion of project all remaining construction plastic waste will be transported offsite by truck into the New Amsterdam Waste Dump Site.
PVC	Low	All PVC waste generated will be stored onsite for reuse by Mr. Ferdinand where possible.		
Co-mingled recyclables (e.g. paper, cans, glass and plastic bottles, cardboard) from workers	Medium			Waste bins for co-mingled recyclables will be supplied by and maintained by Cevon's waste management services
General waste (e.g. food waste, contaminated food packaging, non-recyclable plastics) from workers	Medium			Waste bins for general waste will be supplied by and maintained by Cevon's waste management services
Mixed waste	Low			Waste bins for mixed waste will be supplied by and maintained by Cevon's waste management services

Project Size

Capital Investment

The project is expected to absorb approximately Thirty Million Dollars (\$30,000,000.00) over the course of a three (3.0) year period.

No. of Employees by stage

Based on our knowledge of construction we approximate the need for an average of twenty (20.0) employees to accomplish each stage. Kindly note also we expect each stage to take approximately six (6.0) months to complete.

Site clearing and Land Preparation: 10 employees

Revetment: 20 employees

File Driving: 20 employees

Wharf Construction (PHASE I): 20 employees

Wharf Construction (PHASE II): 20 employees

Wharf Construction (PHASE III): 20 employees

Site Development: 20 employees

Non – Technical Explanation of Project

The project consist of the construction of a wharf at Mudlot 42 Stanleytown, New Amsterdam Berbice for the purpose of importing construction materials such as sand, stone and cement, etc.

To begin the site and shoreline will be cleared of any existing structures or buildings, plants, trees, bushes or other waste material.

PVC sheet piles will then be used to create a revetment (palling off) along the shore line of the property.

Concrete piles will be driven to an approved depth below the bed of the Berbice River to create a solid foundation. Once the foundation is completed the wharf will be constructed using high strength concrete reinforced with steel rods as per our engineer's specifications.

Additionally, the remaining site area will be developed to facilitate ease of operations, this includes the construction of additional Roadways, material storage pads, guard hut, fences, drains, etc. within the property boundaries.

Duration of Project (by stage)

The total duration of time expected for the completed construction of the wharf and site development is expected to last a total of 36 months (3 years). If approved we are hopeful to complete the project between December 2020 to December 2023.

The following stages along with their expected durations are listed below:

1. Site clearing and Land Preparation: *2 months (partially completed)*
2. Revetment: *6 months*
3. Pile Driving: *6 months*
4. Wharf Construction (PHASE I): *6 months*
5. Wharf Construction (PHASE II): *6 months*
6. Wharf Construction (PHASE III): *6 months*
7. Site Development: *6 months*

Potential Environmental Effects and Mitigation Measures to be taken

The main concerns regarding the wharf's construction and its future use are listed below

1. The potential for the entry of construction materials and other anticipated debris into the shore front of the Berbice River.
2. The development of siltation under the wharf.
3. And finally, a concern associated with vessels who traverse the Berbice River by night when visibility may be hindered.

These potential dangers and/ or concerns are considered individually for various aspects of the proposed construction and planned activities thereon.

Our aim is to reduce and/or eliminate these impacts to the best of our abilities by introducing precautionary measures and processes built into our methodologies.

The following table is a list of the potential effects we anticipate and the mitigation measures we will use to correct each respectively.

Potential Effect	Mitigation Measure
Introduction of debris during construction into nearby marine communities	<ul style="list-style-type: none">- Dedicated waste storage and removal bins will be placed near the construction site to reduce the amount of waste on the site at any given time.- Barriers will be constructed around the wharf perimeter to ensure dust and other debris isn't taken into the river via wind or rain.
Development of sediments	<ul style="list-style-type: none">- Appropriate spacing of concrete piles based on engineer's specifications will be used to reduce the rate at which siltation will naturally occur.
Boat related activities and night-time travel	<ul style="list-style-type: none">- All vessels mooring to the wharf will be subject to the use of safe docking practices in accordance with Guyana transport & harbors, maritime administration division.- All external surfaces will be fitted with light reflective caution tape, this includes piles, revetment and wharf.- Flood Lamps will be installed to all corners of the wharf.

DWAYNE FERDINAND
Managing Director | HDEA