Floyd Elcock

Project Summary

Floyd Elcock
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Name of Developer: Floyd Elcock

Developers' Address: 1469 Section A Block x Diamond East Bank Demerara

Contact details: 683/1592

Project Type: Sawmill

Projected Capital Investment: Guy$30M

Annual Turnover: Guy$15M

Project Duration: Approx. 10-20 years dependent on customers' demands.

Project Location: Loo Creek on the Eastern side of the Soesdyke Linden Highway.

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Project Location and Description

The purpose of this project summary is to present the establishment of a state-of-the-art sawmill facility aimed at meeting the increasing demand for high-quality lumber in the construction, furniture, and wood products industries. As the global need for sustainable and reliable timber sources grows, this sawmill project will not only contribute to economic development but also prioritize environmentally responsible practices to ensure long-term viability.

Our sawmill will be strategically located to optimize supply chain efficiency and reduce transportation costs, ensuring that raw materials are sourced sustainably and processed into premium timber products. This initiative will provide a reliable source of employment, support local communities, and enhance the region's overall economic growth.

By utilizing the latest technology in milling processes and adhering to rigorous environmental standards, the sawmill aims to set new benchmarks for operational efficiency, product quality, and environmental stewardship. This project summary outlines the key aspects of the project, including the facility location, preconstruction phase, construction phase, operational phase, potential environmental effects along with mitigation measures and waste management.

Through this endeavor, we aim to position the sawmill as a leading player in the industry, known for its commitment to innovation, quality, and sustainability.

The potential sawmill will be on 8.4 acres of land which will be located at Loo Creek on the Eastern side of the Soesdyke Linden Highway and can be accessed from the Soesdyke/Linden Highway. The surrounding of the operation is mixed with other sawmills which is located a short distance away.

Pre-construction phase

Feasibility Study and Planning

- **Market Analysis**: Research the demand for sawmill products in the target market and assess the potential profitability.
- **Location Selection**: Choose a site with access to raw materials (e.g., timber), transportation infrastructure, and utilities.
- **Regulatory Compliance**: Ensure the location complies with zoning laws, environmental regulations, and local building codes.

Design and Engineering

- **Sawmill Layout**: Plan the layout of the sawmill, including the placement of machinery, storage areas, and access roads for logistics.
- **Blueprints and Drawings**: Create detailed architectural and engineering drawings to guide construction and machinery installation.
- **Environmental Impact Assessment**: Conduct a study to identify any potential environmental concerns and obtain necessary permits.
- **Utilities and Infrastructure**: Assess and plan for electricity, water supply, waste disposal, and any other utilities needed for operation.

Budgeting and Financing

- **Cost Estimation**: Develop a detailed cost estimate covering land acquisition, construction, machinery, and initial operational costs.
- **Financing**: Secure financing from banks, investors, or other funding sources to cover construction and equipment costs.
- **Contingency Planning**: Set aside a contingency fund to manage unforeseen expenses during construction.

Procurement of Materials and Equipment

- **Machinery and Equipment Selection**: Choose the sawmill machinery based on production requirements (e.g., saws, conveyors, kilns, etc.).
- **Supplier Negotiation**: Negotiate contracts with suppliers for raw materials (e.g., timber), machinery, and other necessary equipment.
- **Logistics Planning**: Plan how machinery and materials will be transported to the construction site.

Permitting and Approvals

- **Obtain Permits**: Apply for all required permits, including construction permits, environmental impact approvals, and operational licenses.
- **Insurance**: Arrange for insurance coverage, including liability and property insurance, to protect the project during construction.

Site Preparation

- **Land Clearing**: Clear the construction site of trees, rocks, and other debris, the vegetation will be kept in a designated area to be decomposed and one person will be hired to complete this task.
- **Excavation and Grading**: Prepare the land for construction by leveling the site and ensuring proper drainage.
- **Access Roads and Infrastructure**: Construct temporary access roads for equipment and workers, along with the foundation for buildings and machinery.

Contractor Selection and Hiring

- **Hiring and Training**: Select qualified workers and provide them with the necessary training for the job.

Schedule and Milestones

- **Project Timeline**: Develop a detailed timeline for the construction phase, highlighting key milestones such as site clearing, building completion, and machinery installation.
- **Construction Milestones**: Set up deadlines for when each phase of construction will be completed, ensuring that everything stays on track.

Risk Management

- **Identify Risks**: Identify potential risks such as delays, supply chain disruptions, or unforeseen costs.
- **Mitigation Strategies**: Develop strategies to manage risks, such as alternative suppliers or backup plans for weather delays.
- **Safety Plan**: Create a safety plan to protect workers during the construction phase, including protective equipment and training.

Stakeholder Engagement

- **Community Relations**: Engage with local communities and stakeholders to keep them informed about the project and address any concerns.
- **Regular Updates**: Provide regular updates to investors, contractors, and other stakeholders about the progress of the project.

Construction phase

The infrastructures such as the office, dwelling house, washroom with toilet and septic tank and mill shed and mechanic workshop have to be constructed with the dimensions stipulated on the site plan (site plan is processing) and the equipment with the necessary electrical support has to be installed. The expected duration of this phase is about two month or may be prolonged due to bad weather. For the mill shed, the posts will be placed on concrete bases and a two-story wooden building will be constructed for the office (bottom flat) and the dwelling place (upper flat). The base of the mechanic workshop will be concreted so as to avoid contamination of the ground water.

Solid waste such as empty cement bags, pieces of wood, food boxes, beverage bottles and tins, etc. will be expected to be generated during the construction phase and the waste will be collected in a garbage receptacle (plastic drum) and emptied by Puran Brothers Waste Disposal Service and the frequency of emptying the receptacle would depend on how fast the it is filled. Noise emission is expected to be minimal since most of the tools that would be utilized will be hand held electrical tools and works will be carried out during the day from 8:00 hrs. to 17:00 hrs., Monday to Saturday. Vibration is not expected to be emitted since no heavy-duty machinery such as a loader or skidder will be used. Approximately five (5) persons will be hired for this phase. They will be responsible to provide their own PPE. A First Aid Kit will be onsite in case of minor injury but if there is a major injury then that person will be transported to the nearest health care facility.

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Operational phase for the sawmill

This proposed sawmill operation will be able to process atleast 30,000 to 40,000 bm of logs per month. The sawmill will be equipped with two (2) wood mizer mill Lt 70, one (1) moulder, one (1) log loader and two (2) generator (175 kva and 25kva).

Dressed and rough lumbers will be process and these will be stored on dunnage because it will be removed from the sawmill site and transported via trucks to various lumber yard and sawmills in the region. Some of the timber species that are process at my sawmill are as follows, Tatabu, Torinario, Farm Board or Baroamalli, Antwood, Karatie, Silverballi, Dukalie, Purpleheart, Greenheart etc. The logs will be sourced from logging concessionaires from Ituni, Kwakwani, Mabura, etc. and will be transported to the site by hired log trucks. The logs will be offloaded from the log truck by the log loader and discharged in the log pond. The logs will be temporarily stored in the log pond, which will have the capacity to hold approximately 300-430 m^3 of logs. From the log pond, the log loader will transport the logs to the mill for processing to remove the bark and saw it into the boards. From the mill, the boards are further processed by the edger. Both dressed and rough lumber are produced.

Utilities such as water and electricity are provided by Guyana Water Incorporated (GWI) and the Generator respectively while the telephone service is provided by One Communication Network. Solar lights will be utilized to provide lights for the dwelling house, office and mill shed. No generator will be used.

Ten (10) people will be employed to work daily at the sawmill. Working hours are from 8:00 hr to 17:00 hr, Monday to Saturday. All loading and offloading of logs and lumber will occur during the working hours. Personal Protective Equipment (PPE) provided to the workers is gloves, visibility vests, helmets, goggles and steel tip boots. A First Aid Kit will be placed in the office to treat any minor cut(s) or bruise(s) and a vehicle will be standby to transport any injured person to the Linden Hospital Complex.

Five (5) fire extinguishers and five (5) sand buckets are placed at strategic points of throughout my operation and "No Smoking" sign are placed contiguous area.

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Environmental Effects

The following environmental effects may be generated from the operation of the Sawmill

Noise Nuisance
Sawmills are noisy places due to the machinery used for cutting, drying, and processing wood. This noise can disturb nearby communities and wildlife, particularly species that are sensitive to noise pollution.

Fire
The source of the fire may be as results of defective electrical equipment such as loose wiring, overload sockets, etc. or arson or the carelessness of workers who may smoke onsite.

Vibration
Vibrations generated from the use of the equipment and heavy-duty machinery.

Particulate Matter (dust)
Sawmills produce a significant amount of sawdust, which can become airborne and cause air quality issues if not properly managed.

Emissions from Machinery:
The diesel and gasoline engines used to power the equipment in sawmills contribute to the release of greenhouse gases (GHGs), including carbon dioxide (CO2), as well as other air pollutants like nitrogen oxides (NOx) and volatile organic compounds (VOCs).

Soil erosion:
Establishing a sawmill can contribute to soil erosion through several direct and indirect mechanisms such as.

Clearing of Vegetation

- Building a sawmill often requires clearing trees, shrubs, and ground cover.
- Vegetation protects the soil by absorbing rainfall and anchoring the soil with roots. Its removal exposes soil to rain and wind erosion.

Grading and Excavation

- Earthmoving activities to level land or create access roads disturb the soil structure and compact it, increasing runoff.

Mitigation Measures

Mitigating the environmental impacts of sawmills is crucial for ensuring that timber production is both sustainable and responsible. Here are some key mitigation measures that can be implemented at sawmills to reduce their environmental footprint:

Noise Nuisance

Our company plans to enclosed all sound making devices at the facility such as enclosing planers with materials of good noise insulation properties such as hollow concrete blocks, insulation boards, solid clay bricks, however there is no residents living nearby of the facility but the company is willing to set the standards of the operation to the required level of the Environmental Protection Agency. In addition, we will ensure that all equipment is equipped with silencers and mufflers to reduce the noise level to also add to that our equipment purchased is the new models so the noise levels generated will not be significant as compared to the old models. The equipment and machinery will be worked during working hours. These will be serviced and maintained according to manufacturer's specifications. Blades will be checked and replaced with sharp ones. Workers will be provided with appropriate Personal Protective Equipment (PPE).

Fire

Fire extinguishers and sand buckets are placed at strategic points within the sawmill so in case there is a fire emergency then the firefighting equipment can be used. Staffs are trained in the use of the fire extinguishers. The electrical circuits and points are checked regularly.

Vibration

All equipment will be placed on concrete foundation to dampen the vibrations and the loader usually work only when the need arises that is to 'feed' the mill with logs. The equipment and machinery are worked during working hours and serviced according to manufacturer's specifications.

Particulate Matter (dust) and mitigation

Wood shaving/ Sawdust that will be generated by the mills will be removed from the mill floor daily a worker and we would try to not let it exceeds 15cm in height and sawdust from the planer will be trap in a dust containment bin, when this bin is full farmers/interested persons along the linden highway would usually collect for various personal reasons and the remainder will be used to land fill various sections of the sawmill.
The employees will be given appropriate PPE to protect themselves from dust. The mill floor will be wet from time to time to keep down the dust particles.

Soil Erosion

Minimize Land Disturbance

- Clear only the area necessary for the mill.
- Leave buffer zones of natural vegetation around the site.

Phase Construction

- Carry out construction in stages to limit exposed soil at any given time.

Contour Grading

- Grade slopes following natural contours to slow water runoff and reduce erosion.

Waste Generation

Solid Waste Management

Domestic waste such as food boxes, beverage containers, etc. will be collected in a covered garbage receptacle and will be emptied once weekly by the Puran Brothers Waste Disposal Services.

Wood waste such as sawdust will be collected/bagged from the mill floor in a timely manner we will try our best to not allow our sawdust to accumulate to more than 15cm, shavings, wood ends, slabs/barks and wood chips etc. will be used as landfill and other revetment works around the site. Extractor systems will be installed on planers and connected to the dust containment bin. The bins dimensions will be based on quantity of shaving and sawdust generated from the planers.

Effluent
Grey and sewage water produced by workers and customers; such as, the effluent will be discharged into the septic tank to be treated anaerobically. The septic tank will be accessible for cleaning and will be emptied when fill by Puran Waste Disposal Service.

Hazardous Waste
Waste oil of approximately 5-10 gallons will be generated from the servicing of the loader and generator. The waste oil will be stored in tightly covered 5-gallon plastic pails to avoid spillage and they will be kept in a designated area for storage also some wastes oil will be reused in the chainsaws on site.

Fuel will be stored in a fuel bond approximately 45 gallon of diesel and 15 gallons of gasoline.

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