



Nexus Wood Working Furniture WorkShop & Drying Facility Project Summary

Name of Developer: Khem Singh

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Project Type: Furniture Workshop and K

Introduction

Nexus Wood-Working was registered under the business names (REGISTRATION ACT, CHAPTER 90:05) on February 26th, 2018. This project aims to establish a sustainable furniture operation that emphasizes eco-friendly practices from production to distribution. By integrating environmentally conscious methods into every stage of our business model, the project strives to minimize our carbon footprint and contribute positively to the environment.

Chapter 2

A description of the site

The proposed furniture workshop & drying facility will be located on 5 acres of land situated at Plot 8 Loo Creek Industrial Area North Moblissa Agriculture Area Eastern Side Soesdyke Linden highway. The project location can be reached by traveling along the Soesdyke-Linden Highway in the Loo Creek Area, then going through the forest to meet the plot of land. There are no water ways in close proximity to the area. The surroundings of the operation have activities similar in nature e.g. (sawmills).

Chapter 3

The project designs

Phase 1: Proposed area will be cleared of vegetation with a with the use of a bulldozer and the vegetation will be kept in a designated area to be decomposed and one person will be hired to complete this task. Construction materials such as lumber of various dimensions, sand, stones, steel rods, cement, etc. will be mobilized to the site to be used in the construction phase.

Phase 2: The infrastructures such as the office, mill shed, washroom with toilet and septic tank and mechanic workshop have to be constructed with the dimensions stipulated on the site plan and the equipment with the necessary electrical support has to be installed. The expected duration of this phase is about one 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 (upper flat) and the dwelling place. 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 private Waste Disposal Service and the frequency of emptying the receptacle would depend on how fast 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 will be used in this phase. Approximately 10 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 (s) will be transported to the nearest Hospital for treatment.

Phase 3 – Operational

The following are Machines will be used in the processing of Lumber to Furniture Woods:

- Planer- A planer is used to smooth and level the flat surfaces of a board to a consistent thickness.
- Jointer - A Jointer is used to create a square surface on the edge of a board. jointers are also used to face joint one side which allows the planer to create parallel surfaces with uniform thickness.
- Sharper - shapers can cut much larger profiles than routers - such as for crown molding and raised-panel doors - and readily drive custom-made bits fabricated with unique profiles.
- Molder -moulds" the shape by cutting away the excess wood needed to reveal the profile.
- A bond saw, is an all-purpose tool for woodworking when you want to make rough cuts. The teeth alternate between left and right bends, working like a chisel for cutting parallel to the grain. A rip saw cuts only on the push stroke to craft a clean cut along the grain.
- Wood Kiln. The kiln process involves the drying of wood in a chamber where air circulation, relative humidity and temperature can be controlled so that the moisture content of wood can be reduced to a target point without having any drying defects. The most commonly used kilns are conventional and dehumidification kilns.

Timber species such as, Purpleheart, Greenheart, Kabukalli, Manni, Mora, Shibadan, BulletWood, Crabwood, Kurokai, Silverballi and other timber species will be processed onsite. The timbers 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 are temporarily stored in the log pond, which has the capacity to hold approximately 200-220 m3 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 will be furthered processed.

Utilities such as water and electricity will be provided by Guyana Water Incorporated (GWI) and the Guyana Power and Light Incorporated (GPL also a 20 kva silencer generator will be on site respectively while the telephone service will be provided by the Guyana Telephone and Telegraph Company (GTT). Solar lights will be utilized to provide lights for the office and mill shed.

Ten (10) people will be employed to work daily at the furniture workshop. Working hours will be 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) will be provided to the workers such as gloves, visibility vests, helmets, goggles, dust mask 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 on standby to transport any injured person to the nearest Health Centre.

Fire extinguishers and sand buckets will be placed at strategic points of the operation and a "No Smoking" sign will be placed in a contiguous area.

Projected Capital Investment: Gyd \$25million

Annual Turnover: Projected Gyd \$5M

Number of Employees: (10) Ten

Potential environmental impacts and	Proposed mitigation measures
<p>Wood Waste Saw dust and Wood shavings will be generated during the manufacturing.</p>	<p>Cut out lumber will be reused to minimize the waste of lumber and where instances of small cut out pieces cannot be re-used; these are store in bags for land fill site other 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 (6 inches), shavings wood ends, slabs/barks and wood chips etc. will be used as landfill and other revetment works around the site, wood waste will also be given to person in the charcoal business, poultry farmers and other interested persons along the Linden /Soesdyke Highway. 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.</p>
<p>Domestic Waste There will also be domestic waste generated from the presence of workers which may include food scraps, food boxes and other solid waste.</p>	<p>Private waste collection service will used to remove domestic waste on a weekly basis.</p>
<p>Effluent Grey and sewage water produced by workers and customers;</p>	<p>Effluent will be discharged into the septic tank to be treated anaerobically. The septic tank will be accessible for cleaning and will be</p>

	emptied when fill by Puran Waste Disposal Service.
<p>Hazardous waste</p> <p>Gasoline used for the Generator and Lube oil drain from the generator, Paints, Stains and Wood Glue are used during the manufacturing process.</p>	<p>Gasoline is used for the generator only and is stored in a resealable container/ jar in small quantity (2 gal). and will be store in a fuel room.</p> <ul style="list-style-type: none"> •Waste oil will be reused to lubricate the machinery & plant during manufacturing process. •Safety ventilation practices will be employed during entire process and employees will be required to wear gloves and breathing mask when painting and spraying are conducted.
<p>Air Pollution</p> <p>Manufacturing activities may generate dust.</p>	<p>Manufacturing site will be soaked as necessary and workers are required to wear dust masks</p>
<p>Noise Nuisance</p> <p>Manufacturing activities may generate noise through the operation of equipment and machinery.</p>	<p>All our sound making devices., generators and planers will be enclosed in structures constructed with materials of good noise insulation properties such as hollow concrete blocks, insulation boards, solid clay bricks and will be equipped with silencers or mufflers to reduce the noise level to 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.</p>

	Workers will be provided with appropriate Personal Protective Equipment (PPE).
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.	Fire extinguishers and sand buckets will be placed at strategic points within the sawmill so in case there is a fire emergency then the firefighting equipment can be used. Staffers will be trained in the use of the fire extinguishers. The electrical circuits and points will be checked regularly.
Vibration Vibrations generated from the use of the equipment and heavy-duty machinery	The equipment will be placed on concrete foundation to dampen the vibrations and loader will be working only when the need arises that is to 'feed' the mill with logs. The equipment and machinery will be worked during working hours and serviced according to manufacturer's specifications.