



# Project Summary

**SECTOR OF OPERATION: FORESTRY**

**NAME OF DEVELOPER: KHEIMCHAND SINGH**

**BUSINESS NAME: KHEIMCHAND & SON LOGGING**

**DEVELOPER'S ADDRESS: LOT 15, OLD ROAD DEKINDEREN EAST**

**BANK ESSEQUIBO**

**CONTACT DETAILS: 674-1421**

**PROJECT TYPE: LOGGING**

**PROJECT LOCATION: SFA ESS 30/12, LEFT BANK OKO RIVER**

## **Project Site Description**

The SFA Ess 30/12 is situated at Left Bank Oko River, and can be accessed from Itaballi heading in the direction of Arimu. The total land area of the concession is 5082 hectares (12557 acres). There are no residential communities neighbouring the concession; however, there are similar small scale logging concessions surround the concession. These include Ashraf Alli & Son Sawmill ESS 77/11, Sustainable Green Forest Timbers Ess 21/21, Dunkel/Westbury Logging Association Ess 48/12, M&S Bissoon Sawmilling Ess 07/13, etc. The soil type of the area is mixed; loam, sand and laterite and the terrain are hilly.

The expected lifetime of the logging operations is approximately fifteen (15) years but this is dependent on the continuous renewal of the State Forest Authorizations (SFA) Agreement. The spatial boundaries cover the entirety of the SFA Ess 30/12 concession, while temporal boundaries span the project's expected 15-year duration, subject to State Forest Authorization (SFA) Agreement renewals. Water for drinking and domestic use is sourced from a nearby creek within the concession, with rainwater collected for additional drinking needs. Buffer zones protect water bodies from logging activities.

## **Summary of Project Operation**

The project involves sustainable logging operations within the concession area SFA ESS 30/12, located on the Left Bank of the Oko River. The operation commenced since in 2012. The primary purpose of the operations is to supply the demand for logs while preserving sustainable forest resources and protecting the environment by adhering to selective logging standards. Logs are harvested based on the stipulated measures set out in the Guidelines for Forest Operations, 2018 by GFC.

The logs are selected by a tree spotter, which is the chainsaw operator(s). There are approximately two (2) chainsaw operators, two (2) choker-men who assist the chainsaw operators, and a driver. The logs are harvested based on the tags issued by the Guyana Forestry Commission (GFC). However, the production per month is approximately <sup>100</sup>~~1300~~ cubic meters of logs and some of the species harvested are Green Heart, Purple Heart, Kabukalli, Shibidan, Kerati, Dalli, Cow Wood,

Bullet Wood, Mora, Wamaradan, etc. Additionally, the equipment used onsite is 1 bulldozer, 1 tractor, 1 log truck, 1 skidder, and 2 chainsaws.

A tarpaulin camp of 25 ft L by 20 ft W by 10 ft H in dimensions is established within the concession to house the five (5) workers and solar lights are used at night. The toilet facility entailed one (1) pit latrine (plumb toilet).

Working hours will be from 8:00 hrs. to 4:00 hrs. from Monday to Sunday.

Approximately five (5) people are employed to carry out various operational tasks as they relate to the logging activities and these include chainsaw operators, choker-men, and tractor driver, etc.

Personal Protective Equipment (PPE) is provided to all employees, including long boots, helmets, gloves, and visibility vests. Additionally, a first aid and snake bite kit are present on site at all times.

### **Non-Technical Explanation**

The project involves small-scale logging operations within SFA Ess 30/12, utilizing sustainable practices to supply timber while minimizing environmental impacts. Logs are selectively harvested based on guidelines set by the GFC, ensuring forest sustainability and biodiversity preservation.

### **Environmental Impacts**

The following environmental impacts may be as a result of the logging operations, but these are not of significant risks to the environment and human health:

#### **Soil erosion and degradation**

Logging activities can disturb the natural structure of forest soils, causing erosion and reduced soil fertility and making it more difficult for new trees to grow. Also, this can have an adverse effect on water quality during rainy weather conditions.

#### **Noise Emissions**

The noise is emitted during the operation of the machines and equipment.

#### **Habitat Loss and Fragmentation**

Logging can destroy and fragment habitats for a wide range of species, including animals, birds, insects, and fungi. This can lead to a decrease in biodiversity and ecosystem health.

### **Carbon dioxide emissions and Climate Change**

Trees absorb carbon dioxide from the atmosphere, so logging can increase carbon dioxide emissions, contributing to climate change. In addition, trees play a vital role in managing local and regional climates by cycling water and moderating temperatures.

### **Solid Waste Generation**

Solid waste can contaminate the environment and degrade the aesthetic quality of the surroundings if not managed effectively. The following solid waste is generated onsite:

1. Domestic waste, including of plastic bottles, food scraps, etc. is generated by the workers.
2. Sawdust would be generated during the felling process but in small quantities, and damaged/split ends, is removed from time to time, using the chainsaw(s).

### **Fire**

Flammable substances such as gas and diesel are stored onsite and if not managed properly, can be ignited if a worker who smokes discards a burning cigarette butt.

### **Particulate Matter (dust)**

Sawdust is emitted during log harvesting and the chainsaw milling process, as well as dust generated when vehicles travel along the trail during dry weather.

### **Hazardous materials/waste**

If these materials or wastes are not properly stored, it can result in an accidental spill or discharge may occur, resulting in soil pollution.

### **Water quality**

The removal of trees and disturbance of forest soils can cause increased sedimentation in rivers and streams, which can have detrimental to water quality and the aquatic ecosystems.

### **Cumulative Impacts**

There are several other active small-scale logging concessions surrounding this concession, which can collectively have negative impacts on air, water, and land resources.

### **Mitigation measures**

The environmental impacts identified above will be mitigated through the implementation of sustainable forest management and the adherence of best environmental standards and guidelines.

### **Soil erosion and degradation**

Logs are harvested in accordance with Condition 5.1(a)(b) of the State Forest Authorizations (SFA) Agreement as well as GFC's Guidelines for Forest Operations, 2018. Also, vegetative cover is maintained on the edges of the trail to reduce the displacement of soil particles. Buffer zones are maintained, and the harvesting of logs is not done within the buffer zones.

### **Noise Emissions**

The noise levels generated are expected to be insignificant since the tractor and chainsaws are equipped with an exhaust stack. They are serviced and maintained every month so as to reduce emissions into the environment and downtime. Chainsaw blades checked and replaced with sharp ones. Workers will be provided with appropriate PPE, including hearing protection.

### **Habitat Loss and Fragmentation**

Logs are harvested based on Reduced Impact Logging (RIL) techniques, which result in the conservation of ecosystems and biodiversity.

### **Carbon dioxide emissions and Climate Change**

Logs are not cleared-fell but are selectively harvested based on a breast height of 1.3 m and a diameter above 35 m. However, if there are more than one (1) tree within an 8-metre radius, only trees over 40cm at breast height will be harvested based on the GFC guidelines. This practice leaves the majority of the forest intact and helps preserve the carbon stored in the trees and soil, thus reducing the release of CO<sub>2</sub> into the atmosphere and also allowing saplings to continue absorbing CO<sub>2</sub> through photosynthesis. Also, it minimizes soil disturbances during logging activities, thus maintaining the integrity of the forest floor and preventing the release of stored carbon from the soil.

### **Solid Waste Generation**

1. The garbage is collected in a garbage receptacle and emptied in a solid waste pit located approximately three hundred (300) meters away from the creek that flows within the concession.
2. The sawdust is left at the tree stumps to decompose while the wood ends are stored onsite to be reused as meat boards, stool and to fill

### **Fire**

Workers are briefed verbally on the importance of fire safety almost quarterly, and a 'No Smoking' sign is placed at the fuel storage area. A sand bucket and a fire extinguisher are placed at the camp site and can be easily accessed should there be a fire emergency. There has been no occurrence of fire onsite since the logging commenced in the concession.

### **Particulate Matter (dust)**

During dry weather conditions, the speed limit of 30 km/hr. is adhered to. The chainsaw operators are provided with the appropriate PPE dust masks to protect them from dust, long boots, visibility vests, hard hats (helmets) and gloves. The technique utilized is selective logging thus leaving the majority of the forest intact and adequate forest cover hence minimizing the dust emissions within the concession.

### **Hazardous materials/waste**

Fuel is stored on site, including 1–45-gallon drum of diesel and 5 gallons of gasoline, and kept in a designated area located at the campsite. The drum with the diesel as well as the plastic pail with the gasoline is tightly covered to avoid any accidental spillage or release.

Waste oil is generated from the servicing of the machines and equipment once per month. The quantity of waste oil generated is 2-3 gallons and is reused on the chainsaws. The waste oil is stored in the 5-gallon tightly closed plastic pail in a designated area at the campsite.

There are no chemicals and/or preservatives stored onsite.

**Water quality**

Buffer zones along water bodies such as rivers, streams, etc. are maintained to prevent soil erosion and protect water quality and aquatic habitats.

**Cumulative Impacts**

Cumulatively, the impacts on air, land and water will not be significant since the concessionaires have to adhere to the Code of Practices and regulations established by GFC to ensure that logging is done in a sustainable manner and the Environmental Protection Act and its associated regulations for environmental protection.

PREPARED & SUBMITTED BY: 

DATE: December 9, 2024

