Project Title: S. Kassim & Sons Poultry Farm

Location: Portion of Tract ‘B’ Glastulich or Lot 23, East Bank Berbice

Land Area: 20 acres

Proposed Investment: $300,000,000.00

Contact Details: 692 - 4027

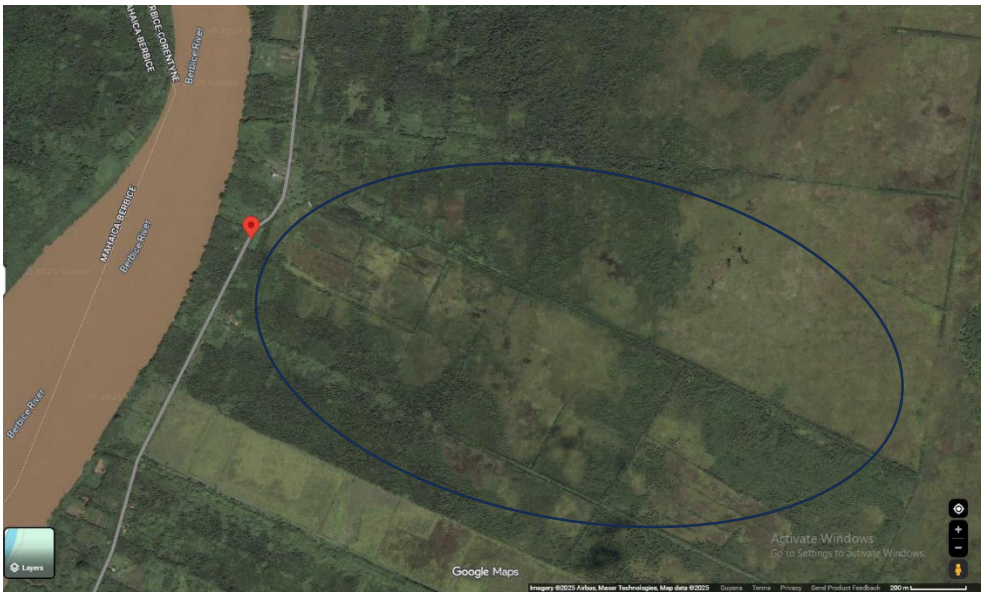
Submitted by: Shazamadeen Kassim, CEO for S.Kassim & Sons Poultry Farm.

1. Project Description

This document outlines a localized poultry farming initiative established along the Right Bank of Berbice River, more fully described as Portion of Tract B Glastulich or Lot 23, East Bank Berbice, comprising approximately 20 acres. On the northern, southern, and eastern half of the site is land owned by Mr. Kassim, on the western half includes the access road and the Berbice River.

The project is situated in a rural agricultural area conducive to farming activities and is designed to contribute to regional food security and agricultural sustainability through the controlled rearing of broiler chickens. The boilers will be bred in different stages in 20 pens with dimensions 420ft x 50ft. This is to accommodate adequate spacing, minimize the risk of contamination, and different stages of production.

The core of this project revolves around a staged poultry rearing system, managing approximately 1,500,000 Broilers per cycle and 2,000,000 Layers annually. This project also aims to provide a Fertilizer output of approximately 100,000 tons annually and produce approximately 200,000 tons of feed annually. It targets efficient and sustainable poultry production at a manageable scale that aligns with the environmental and logistical capacity of the rural area.



Map showing the proposed area for the operation

Site Location and Accessibility

Location: Right Bank of the Berbice River, 34.5 km from New Amsterdam, along the Public Road. The location of the project along the public road provides easy mobility of produce to market sources, while its rural location situates the project within a farming-friendly, less densely populated region, minimizing potential conflict with residential areas. The irrigation canal located to the North-West of the project affords reliable access to water for operational use.

2. Site Observations and Physical Characteristics

At present, the plot of land is unoccupied and covered with dense vegetation.

The proposed infrastructure development includes:

- Twenty Broiler and Layer pens, equipped with 36 air intake and extraction fans per pen. Each pen will be fully automated with silos for feed and water.
- Ponds will be situated parallel to pens to provide a zero-waste option for the disposal of chicken excreta, to be utilized as fertilization of fish ponds.
- On-site, a prayer building, guard hut, dwelling office, machinery bond, feed bond, meat processing center, and freezing compartment will be constructed on the North-Eastern most portion of the site.

Topography and Soil

The terrain of the land is flat (plain) with silty clay soil.

Flat terrain simplifies construction and infrastructure development.

Silty clay soils are compact when dry and provide a firm, stable surface for construction, and the low permeability will provide an ideal environment for fish ponds. Waterlogging, however, may affect chicken areas as such raised pens will be used to mitigate adverse effects.

3. Operational Overview

Poultry Rearing Process

The poultry operation is designed to support a high-capacity, cyclical rearing system, managing over 1.5 million broiler and layer birds per production cycle. The rearing process is staged and continuous, allowing for optimized resource use and infrastructure efficiency. Chicks are sourced from Bounty Farm, ensuring a reliable and traceable supply chain that supports consistent flock performance. Comprehensive nutritional and veterinary care protocols will be implemented across

all production units to safeguard flock health and maintain high survival and productivity rates. The farm conducts three daily health inspections, ensuring proactive monitoring and early detection of potential issues across such a large-scale operation. Birds are harvested and restocked on a rolling two-week schedule, allowing for uninterrupted production flow. Between each cycle, strict cleaning and disinfection procedures are carried out, adhering to international biosecurity standards to minimize disease risk.

In alignment with sustainable farming principles, the farm incorporates an integrated poultry-fish system. Chicken coops are strategically placed alongside or above a series of engineered fish ponds, allowing for the efficient use of nutrient-rich manure as a natural input for aquatic food production. This synergy enhances the productivity of the fish ponds while reducing waste and feed costs. Additionally, organic waste, including processed chicken manure, is treated and utilized as organic fertilizer on a nearby cash crop farm, creating a closed-loop nutrient cycle that improves soil health and supports local agricultural output. This integration of poultry, aquaculture, and crop farming demonstrates a scalable, environmentally responsible approach to high-density livestock production.

After 6 -7 weeks, the birds will be sold either live or processed in a sanitary and safe environment to ensure the proper handling and storage of the product for human consumption. It should be noted that any processed birds will be done via the Halal (prayer) method approved by the Central Islamic Organization of Guyana.

Processing Facility

Manual poultry processing will be conducted for the time being until further development of the operation.

Processing steps

- **Slaughter:** An average of 800 to 1000 birds will be placed on a culling line, which will be transported to the cones, where they will be culled and allowed to bleed. An average of 10 cones will be installed for one culling line.

- **Scalding:** The bird will be submerged in hot water to loosen the feather follicles, which makes de-feathering easier. An average of three heaters will be installed to facilitate this process.
- **De-feathering (Plucking):** The birds will be placed into a de-feathering machine to easily remove the feathers. An average of three de-feathering machines will be installed to facilitate this process.
- **Evisceration:** The internal organs are removed. This involves cutting the feet and wing tips and carefully removing the intestines and other organs.
- **Washing and Chilling–** The birds will be washed in clean water to remove any blood from the evisceration stage. The final products are then weighed, labeled, and packaged for sale and immediately cooled in a freezer to slow down bacterial growth.

Employment and Utilities

Employment: The operation will provide jobs for over 500 people, supporting the local economy and offering livelihood opportunities in a rural context. Working hours will be from 08:00 hrs to 16:30 hrs, Monday to Sunday.

Water Supply: Rainwater and irrigation canal water are harvested and stored, ensuring a sustainable, low-cost supply. Drinking water is commercially sourced from GWI, reflecting a concern for human health and hygiene. Water will be stored within six 450-gallon tanks with a water filtration system for a constant supply.

Energy Supply: Power is drawn from the Guyana Power and Light (GPL) grid, solar energy, and the use of silent generators, to control potential noise and air pollution risks. This also simplifies maintenance and regulatory compliance.

4. Environmental Considerations

Waste Management

The waste strategy is structured to minimize environmental risks while making productive use of by-products:

Solid Waste: Domestic waste (plastic, cardboard, etc.) is collected and disposed of in on-site pits, reducing the risk of uncontrolled littering.

Organic waste:

Manure and Litter Management

- Daily Collection from broiler houses and manure belts in layer facilities.
- Windrow Composting of poultry manure and used bedding on concrete, roofed compost pads.
    - Maintain high temperatures (55–65°C) to kill pathogens.
    - Use bulking agents (e.g., rice husk, wood shavings) to balance the carbon-to-nitrogen ratio.
    - Cure compost for use on the cash crop farm or sell as organic fertilizer.

Fish Pond Sludge

- Periodic sludge removal from sedimentation zones of fish ponds.
- Dry in lined drying beds and mix with poultry compost to enhance nutrient content.

Mortality Management

- Daily collection and recording of dead birds or fish.
- Use in-vessel composting or deep burial pits with biosecurity controls far from the canal and water sources.
- Avoid open burning or dumping near drainage.

Liquid Waste:

Runoff and Leachate Control

- Containment berms and surface grading to direct runoff away from the irrigation canal.
- Install leachate collection channels and sumps at all manure storage and composting areas.
    - Treat leachate using constructed wetlands, biofiltration strips, or evaporation ponds.
- Maintain a minimum 50-meter buffer between waste storage areas and the canal.

Pond Effluent Management

- Design ponds with settling zones to collect solids.
- Use aquatic plants (e.g., water hyacinth, duckweed) for nutrient uptake before water is recirculated or drained.
- Effluent should not be discharged directly into the canal without proper treatment.

Facility Wash Water

- Separate greywater from stormwater using independent drainage lines.

- Channel greywater into a septic tank or lined sedimentation basin for natural treatment before safe disposal.

Hazardous Waste:

Hazardous was will be generated during the maintenance of equipment. The quantity is unknown and it will be stored within 45-gallon drums and reused as lubricant or given to a person desirous.

Waste from the Processing facility

- **Blood** – The blood will be stored within 45-gallon barrels and given to pig farmers daily.
- **Feathers** – The feathers will be discharged by the New Amsterdam waste disposal site or buried.
- **Internal Organs and Unwanted Carcasses** – Will be stored in bags and given to pig farms or persons desirous of dog food meat.
- **Waste Water** – All wastewater will be channeled into a holding tank. The water will be filtered to prevent solids from escaping into the drainage system. The water will be treated with disinfectants before discharge, and the solids will be discharged via burial or by the New Amsterdam Waste Disposal Site.

Potential Environmental Impacts (Construction and Operation)

The site shows low environmental risk under current operations, though a few potential concerns are noted:

Construction

Dust: Aggregates for construction can contribute to dust nuisance. Cleaning and movement of dry materials may also generate dust, impacting air quality and occasional wet suppression methods will be conducted using an electric pump. There are no residents in the area to be affected by dust. Impacts of dust will primarily be during construction, and it will be short-term.

Water Pollution: While the operation will strive to prevent cross-contamination, ongoing monitoring is essential to ensure that there is minimal leaching to the water course. Hence, all construction work is being done away from water courses.

Noise and Vibration: There are no surrounding residents who can be affected by noise and vibration from the heavy-duty machines. However, working hours will be from 8:00 am to 4:30 pm. Impacts of noise and vibration will primarily be during construction, and they will be short-term.

Flooding: Not a concern due to effective natural drainage and sandy/clay soil, which promotes water infiltration.

Operation

Odour: If not properly managed, the decomposition of organic waste could result in nuisance smells, especially in hot, humid conditions. To mitigate the impacts, the facility will be cleaned daily, before and after production, with bleach, Jeyes Fluids, etc. Poultry manure will be utilized as fertilizer for cash crops and fruit trees that will be planted as buffer zones.

Noise

Noise pollution may occur from the use of the electrical water pump, plucking machine, and generators on-site. To mitigate this impact, electrical pumps will be used for water filtration, and the pressure system will only be used for a short period of time. The plucking machines are electrically driven motors; therefore, the noise emitted from the same can be deemed minimal. Additionally, the plucking machines will be operated within the plucking facility and will only be used during working hours, that is, from 8:00 to 4:40 pm.

Water Pollution

Water pollution can occur from the release of untreated effluent from the processing facility and the sanitization of the pen. To mitigate this impact, effluent from the processing facility will be directed to the holding tank, and the contents will be disposed of by a waste disposal company. Waste water from the sanitization of the pens and the plucking facility will also channel into holding tanks, which will be treated prior to release into the drainage canal located on the eastern half of the property. The settlement will be removed and disposed of at the New Amsterdam waste disposal site.

Occupational Health

Personal protective equipment will be provided for the workers, which includes gloves, eye protection, long boots, and a face mask. A first aid kit will be located on site to treat minor cuts or bruises, and transportation will be available 24 hrs for any emergency.

Public Health

- A sanitization station will be constructed for the employees.
- A footbath will be installed upon entry of the farm and each pen to prevent the transfer of diseases.
- Regular health check for employees
- Regular veterinary visits to the farm
- Staff training will be conducted on hygiene, zoonotic risk, and waste handling
- Clean and treated water will be provided to the employees.

Fly Infestation Plan

- **Waste Management -** Daily collection and removal of manure
- **Manure Drying –** Keep Litter as dry as possible using adequate ventilation and absorbent bedding.
- **Carcass Disposal –** A deep burial system will be utilized, as well as distribution to persons for dog food meat.
- **Fly trap and Baits –** UV lights traps, and bait stations around the farm and feed bunds will be installed.
- **Larvicides and Insecticides –** Eco-friendly larvicides and insecticides will be applied rotationally.

Community Engagement

There are no surrounding residents. However, if there are future developments within the area, contact information will be shared with the complainant to voice their concerns, regular updates will be provided on the farming activities and mitigation efforts, and a complaint log with resolved issues will be maintained on-site.

Conclusion

This $300 million industrial poultry farm project is designed to operate at the intersection of **agricultural innovation, environmental responsibility, and commercial profitability**. With integrated waste systems, modern automation, and a diversified revenue model, the project not only ensures high returns but also contributes positively to climate goals, food security, and job creation.