

# EXECUTIVE SUMMARY

A PROPOSED OF REFORESTATION WITH RUBBER TREE (SPECIES OF TIMBER LATEX CLONE (TLC)) PLANTATION (158.0 HA), AT HSK BALAH, COMPARTMENT PART OF 104, MUKIM ULU NENGGIRI, DAERAH BERTAM, JAJAHAN GUA MUSANG, KELANTAN DARUL NAIM

**PROJECT PROPONENT**  
Kompleks Perkayuan Kelantan  
Sdn. Bhd. (KPKSB)

**CONTRACTOR**  
Paramount Logging and Mining  
Sdn. Bhd. (PLMSB)

**ENVIRONMENTAL CONSULTANT**  
Green Hope Consultancy Sdn. Bhd.

## INTRODUCTION

The project title is proposed of **Reforestation with Rubber Tree (Species of Timber Latex Clone (TLC)) Plantation** at HSK Balah, Compartment Part of 104, Mukim Ulu Nenggiri, Daerah Bertam, Jajahan Gua Musang, Kelantan Darul Naim. KPKSB as a project proponent or license owner has getting approval by **Kelantan State Government** through **Department of Forestry (DOF) Negeri Kelantan** to develop the proposed project area with leasing period of fifty (50) years as related correspondence reference number: JPNK/75/31/1 JLD.23 (17) dated on 13<sup>th</sup> May 2024 for area of 158 ha @ 390.42 acres. Afterwards, an agreement has been made between two (2) parties involving KPKSB as a project proponent will develop the proposed area with TLC plantation and PLMSB as a contractor for timber harvesting activity.

## LEGISLATIVE REQUIREMENTS

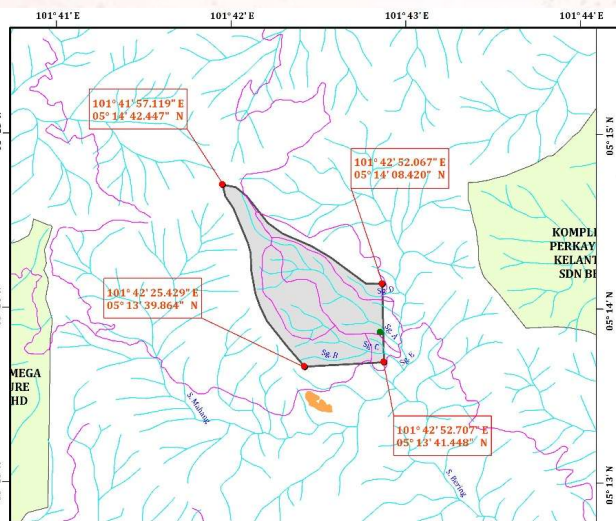
According to subsection 34A(1) of the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015

The project is subject to under First Schedule,

**“Activity 5(e) : development of planted forest covering an area of 100 hectares or more but less than 500 hectares”**

## PROJECT LOCATION

- The proposed project site is located approximately 47.08 km northwest of Gua Musang town area and 4.58 km southeast of Orang Asli Pos Gob community area.
- To reach the boundary of proposed project site, using route D29 (Jelawang – Gua Musang). From three-way junction of Kg. Meranto to HSK Balah, it will take about 43.27 km journey to reach the site boundary of KPKSB.
- Based on **“Rancangan Tempatan Jajahan Gua Musang (RTJGM) 2020”**, the proposed project site is located in permanent forest reserve area known as HSK Balah, **“Blok Perancangan (BP4) : Lojing”** and **“Blok Perancangan Kecil (BPK 4.5) – Hutan Simpan Gunung Stong & Sungai Betis”**.



Source: Topography Map No. 3765, Directorate of National Mapping Malaysia

**Plant Type**  
• Timber Latex Clone (TLC)

**Site Preparation**  
• Tree felling  
• Skidding of logs  
• Bucking/debarking  
• Transportation

**Planting Method**  
• Slope <25° = Terracing  
• Slope >25° - 35° = Platform method  
• Two (2) Phase development  
• Eight (8) Planning blocks

**Construction of Road**  
• Spesifikasi Jalan Hutan, Jabatan Perhutanan Semenanjung Malaysia, 2010, Pindaan 2013.

**Planting Cover Crop**  
• The project proponent shall immediately establish and grow cover crop at the bare soil.

**Electrical Fencing / Animal Trench**  
• Sizes 2.0 m deep, and 3.0 m wide at the bottom.

## Physico - Chemical

- Topography = Elevation 440 m- 1000 m
- Slope = <25° = 63.2% (99.86 Ha), >25° = 36.8% (58.14 Ha)
- Geology = Permian period
- Soil Series = Steepland
- Drainage System = Sg. Bering → Sg. Jenera → Sg. Nenggiri → Sg. Kelantan
- Water Treatment Plant = LRA Kuala Balah (24.07 km northeast of proposed project site)
- Meteorology = RPS Kuala Betis and Cameron Highlands Meteorology Station
- Baseline Environmental Quality  
Water = 7 station = WQI Class I  
Air Quality = A1 & A1 = 14 µg/m<sup>3</sup>  
Ambient Noise Level = day time = N1- 63.0 dB(A), N2 – 60.2 dB(A) night time = N1- 46.4 dB(A), N2 – 45.8 dB(A)

## Zone of Study (3-5 km Radius)

- Surrounded - HSK Balah, HSK Gunung Stong Selatan and two (2) neighbouring plantation.
- Community Settlement = Orang Asli Pos Gob & Orang Asli Pos Pasik.

## EXISTING ENVIRONMENT

### Biological

- Flora = 109 species of plants
- Fauna = Bird - 55 species, mammal - 35 species, reptiles and amphibians - 21 species
- CFS = D Secondary Linkages 1 = 33.40 km west
- ESA = Level 2

### Socio - Economic

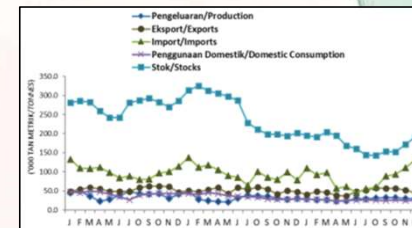
- Population = Daerah Bertam 32,240 individuals with 17,206 male and 15,034 female
- Health and Disease Gua Musang = Malaria-114 case, Dengue-76 case & Leptospirosis-9 case
- Orang Asli Settlement = Pos Gob & Pos Pasik

## IMPACT MONITORING

Impacts	Regulated Parameter	Monitoring Locations	Frequencies
<b>Water Quality Level</b>	pH, Temperature, Turbidity, Dissolved Oxygen, Biochemical Oxygen Demand, Chemical Oxygen Demand, Total Suspended Solid, Oil & Grease, Ammoniacal Nitrogen, Iron, Manganese, E.Coli	Seven (7) water sampling location has been selected for this proposed project site.	Quarterly
<b>Noise Quality Level</b>	Leq Lmax Lmin	Two (2) noise sampling location has been selected for this proposed project site.	Quarterly
<b>Air Quality Level</b>	Particulate Matter with the size of less than 10 micron (PM <sub>10</sub> )	Two (2) air sampling location has been selected for this proposed project site.	Quarterly

## PROJECT DESCRIPTION

## STATEMENT OF NEED



TLC plantations are seen as a potential alternative to the natural forests for timber and latex supply



## PERFORMANCE MONITORING

Monitoring Aspect	Monitoring Parameter	Compliance Limits	Monitoring Locations	Frequencies
- Sediment Trap - Sediment Basin	TSS, Turbidity	As per COA	At proposed sediment trap and sediment basin location as per shown in LD-P2M2 plan	Every two (2) weeks or when rainfall more 12.5 mm
- Silt Fence - Road Side Drain	NA	NA	At location of silt fence, road side drain within project site and sump	Every week or per rainfall event

**SIGNIFICANT POTENTIAL IMPACT & POLLUTION PREVENTION AND MITIGATION MEASURES (P2M2)**

SIGNIFICANT POTENTIAL IMPACTS	POLLUTION PREVENTION & MITIGATION MEASURES (P2M2)
<b>Surface Runoff Soil Erosion Sedimentation</b>	<ul style="list-style-type: none"> <li>➤ Install crossing drain with certain interval at the plantation road for minimising the overland flow occur during rainstorm event.</li> <li>➤ Divert runoff away from the worker quarters and stumping/landing points where it can be diverting runoff to grass/vegetation area or to sedimentation pond.</li> <li>➤ Keeping slope length short and gradient low and also preserving the natural vegetation cover can help to reduce velocity of storm water and can limit erosion hazard.</li> <li>➤ Regular inspection and maintenance of the structures to ensure their performance efficiency, especially after heavy storm events.</li> <li>➤ Prepare sediment fence, sand bag barrier, sediment basin, check dam and sediment trap at appropriate location.</li> </ul>
<b>Water Pollution</b>	<ul style="list-style-type: none"> <li>➤ Fertilizers and agrochemical such as pesticides and weedicides must not be applied during the rainy days and monsoon season.</li> <li>➤ Workers must use fertilizers and agrochemical following the prescribed dosage and should be split to minimize losses e.g. split the annual dosage into 3-4 applications.</li> <li>➤ The entire storage area should be surrounded by a concrete dike or other equivalent structure designed to contain any spillage of the waste.</li> <li>➤ Any surface water run-off should be channeled to a proper drainage system to avoid the water from entering the storage area.</li> <li>➤ Use environment-friendly insecticides or pesticides.</li> <li>➤ The septic tank facility provided shall comply with all regulations stipulated in the Environmental Quality (Sewage) Regulations 2009.</li> <li>➤ Used oil and grease and lubricant from machineries or other equipment should NOT be disposed into the river, water channel nearby or ground.</li> <li>➤ Skid tanks must be located on stable ground which not prone to flood phenomenon with bunding and sited at least 50m away from the waterways.</li> </ul>
<b>WASTE PRODUCTION</b>	<ul style="list-style-type: none"> <li>➤ The zero burning improves soil organic matter, thereby enhancing soil fertility and physical condition.</li> </ul>
➤ <b>Biomass Wastes</b>	<ul style="list-style-type: none"> <li>➤ Solid waste must be segregated by the waste type.</li> </ul>
➤ <b>Solid Wastes</b>	<ul style="list-style-type: none"> <li>➤ Project proponent should notify workers not to burn the solid waste.</li> </ul>
➤ <b>Scheduled Wastes</b>	<ul style="list-style-type: none"> <li>➤ All scheduled wastes handling procedures must parallel with the Environmental Quality (Scheduled Waste) Regulations 2005.</li> <li>➤ All empty containers must be labeled as scheduled wastes.</li> <li>➤ The storage area should be equipped with fire fighting and other emergency response equipment as well as spill kit and comply fully with the requirements of the Fire and Rescue Department of Malaysia.</li> <li>➤ Clear signage must be placed at appropriate area to reduce risks of explosions.</li> <li>➤ Scheduled waste generated may be stored for 180 days or less and the quantity must not exceed 20 metric tonnes.</li> <li>➤ All scheduled waste must be disposed off at a licensed premise.</li> </ul>

SIGNIFICANT POTENTIAL IMPACTS	POLLUTION PREVENTION & MITIGATION MEASURES (P2M2)
<b>Air Pollution</b>	<ul style="list-style-type: none"> <li>➤ Reducing the dispersion of dust from unsealed road by limiting the vehicles speed.</li> <li>➤ Maintain the sealed road with crusher run or gravel to protect the earth surface from precipitation and dry weather.</li> <li>➤ Vehicles should be regularly serviced and maintained to reduce undesirable emissions. Workers are strictly prohibited to carry out open burning at site.</li> <li>➤ The usage of generator set in the site has to comply with the Environmental Quality (Clean Air) Regulation 2014.</li> <li>➤ Apply dust suppression measures when required.</li> <li>➤ Clean up dusty spills immediately.</li> <li>➤ Paving haul roads and storage areas helps to mitigate dust from heavy traffic that pulverizes surface materials.</li> <li>➤ Rinsing vehicles before they leave the project site and tightly cover loaded trucks.</li> </ul>
<b>Noise Pollution</b>	<ul style="list-style-type: none"> <li>➤ Installing silencers or using quieter machinery.</li> <li>➤ Modifying existing old equipment with damping materials and mufflers.</li> <li>➤ Work should be limited to daytime hours only.</li> <li>➤ Vehicles and machineries shall be regularly serviced and maintained.</li> <li>➤ The supervisor must keep a log book to compile all complaints and address the issues immediately.</li> </ul>

**CONCLUSION**

✓The proposed project site development could enrich back the tree sources at the forest area with TLC plantation which directly can increase and enhance the productivity of forest area and also could generate state government revenue.

✓Implementation of proposed reforestation project with rubber tree plantation project is indeed a support to the government vision and policies in expanding and upgrading the timber resources management and utilization.

✓The beneficial and positive impact will not only gain by project proponent but also to the surrounding area and the local communities living nearby the proposed project site.

SIGNIFICANT POTENTIAL IMPACTS	POLLUTION PREVENTION & MITIGATION MEASURES (P2M2)
<b>Ecology (Flora &amp; Fauna)</b>	<ul style="list-style-type: none"> <li>➤ Project activities shall be conducted in planning block and development phase to avoid massive clearance at one particular time.</li> <li>➤ Strictly no burning and any source that could cause spark and fire such as machines must be monitored.</li> <li>➤ Workers and local people are strictly prohibited from poaching on any wildlife species.</li> <li>➤ Any information if illegal hunting or trapping of wildlife should be immediately reported to the plantation management and that information must be channeled to DWNP.</li> </ul>
<b>Socio-Economy</b>	<ul style="list-style-type: none"> <li>➤ Publicizing the job opportunities available in the project site.</li> <li>➤ Project site must also have clearly marked boundaries.</li> <li>➤ Enlarge the existing road or create a new access route for the workers.</li> <li>➤ Installing appropriate signs and traffic guides.</li> <li>➤ Staff and local residents' interactions need to be monitored to avoid any problems.</li> <li>➤ Foreign workers must undergo a Fomema checkup before entering site to prevent the spread of vector disease.</li> </ul>
<b>Health &amp; Disease</b>	<ul style="list-style-type: none"> <li>➤ Providing basic facilities and incentives such as worker quarters for temporary living equipped with suitable toilet.</li> <li>➤ Hygiene factor should be a good practice to avoid any disease in workplace and maintain a good environment.</li> <li>➤ Regularly evaluate the legal requirements in order to guarantee the health and well-being of employees.</li> <li>➤ Conduct routine workplace inspections to find hazards.</li> <li>➤ Avoid contact with people who are sick with an infectious disease or sharing personal items with them.</li> <li>➤ Do not drink from or swim in water that could be contaminated.</li> </ul>
<b>Traffic</b>	<ul style="list-style-type: none"> <li>➤ The road entrance must properly maintain and have to follow Department of Forestry (DOF) guidelines.</li> <li>➤ The traffic movement of vehicles should be done during working hours only.</li> <li>➤ A proper safety road signage system shall also provide based on same standard requirements at appropriate spots.</li> <li>➤ Undertake regular maintenance of road network to minimize and control road damage.</li> <li>➤ Materials should be moved in and out of the project site without impeding the road traffic.</li> </ul>