

**ENVIRONMENTAL IMPACT ASSESSMENT (EIA)**  
**FOR "CADANGAN PROJEK PEMBANGUNAN LADANG HUTAN DENGAN PENANAMAN POKOK PELBAGAI SPESIES (121.0 HEKTAR) DI HSK RELAI, KOMPATMEN 10 (SEBAHAGIAN) & 11 (SEBAHAGIAN), MUKIM RELAI, DAERAH CHIKU, JAJAHAN GUA MUSANG, KELANTAN DARUL NAIM"**

**PROJECT LOCATIONS**

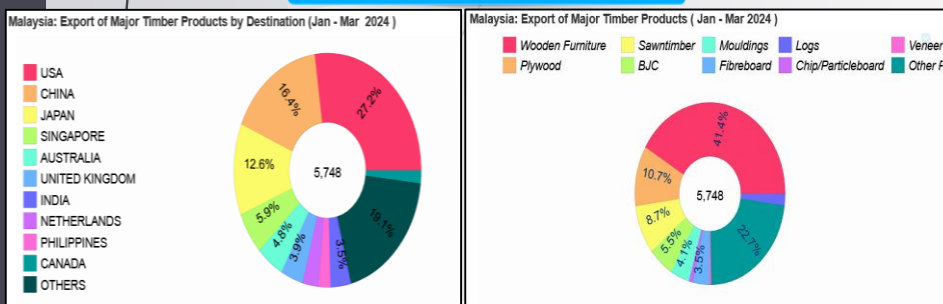
**LEGISLATIVE REQUIREMENTS**

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

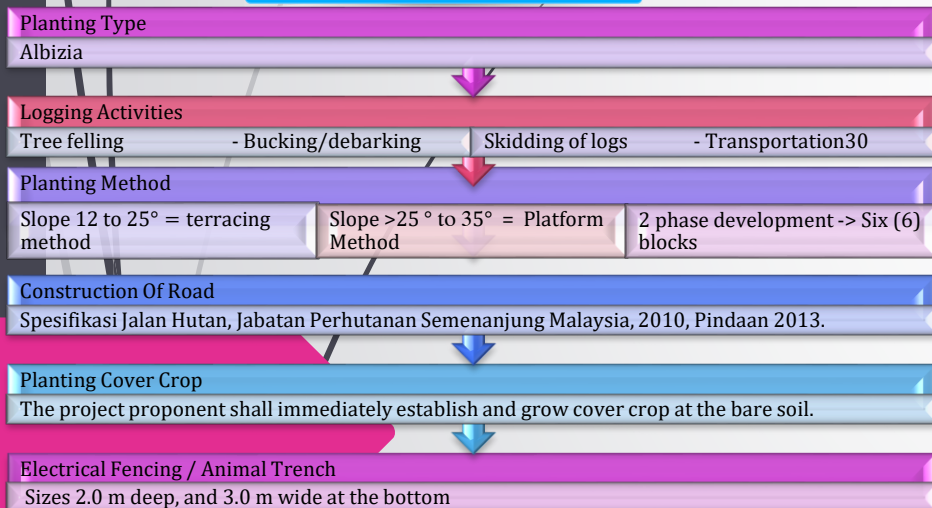
The project is subject to under First Schedule,

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

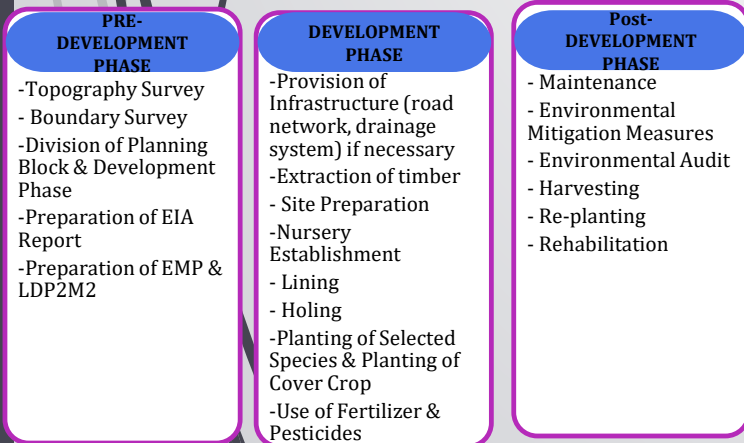
**STATEMENT OF NEED**



**PROJECT DESCRIPTION**



**ALBIZIA SPECIES PLANTATION**



**INTRODUCTION**

This EIA report is prepared for "Cadangan Projek Pembangunan Ladang Hutan Dengan Penanaman Pokok Pelbagai Spesies (121.0 hektar @ 298.99 ekar) Di Hutan Simpan Kekal (HSK) Relai, Kompitmen 10 (Sebahagian) & 11 (Sebahagian), Mukim Relai, Daerah Chiku, Jajahan Gua Musang, Kelantan Darul Naim". As refer to correspondence by Department of Forestry (DOF) Negeri Kelantan (refer Appendix A) through reference number : PHN.KN.200/1/1701(32) dated on 05<sup>th</sup> March 2024, an area was approved for Spesis Perdumas Resources Sdn. Bhd. (SPRSB) for leasing period of fifty (50) years based on the conditions that have been agreed between both of parties which is SPRSB and DOF Negeri Kelantan.

**EXISTING ENVIRONMENT**

**Zone Of Study (3-5 km Radius)**

- Surrounded - HSK Relai & seventeen (17) of neighbouring plantation and two (2) existing agriculture
- Tandak Air = 1 (kg. RKT Chalil)

**Socio-economic**

- Population = Daerah Chiku 30,025 individuals with 16,681 male and 13,344 female
- Health and Disease (G.Musang on December 2022) = Malaria = 114 case, Dengue = 76 case, Leptospirosis = 9 case, Covid -19 = 3906 case
- Nearest Orang Asli Settlement = Orang Asli Kampung Pasir Linggi (8.71 km south ) from proposed project site

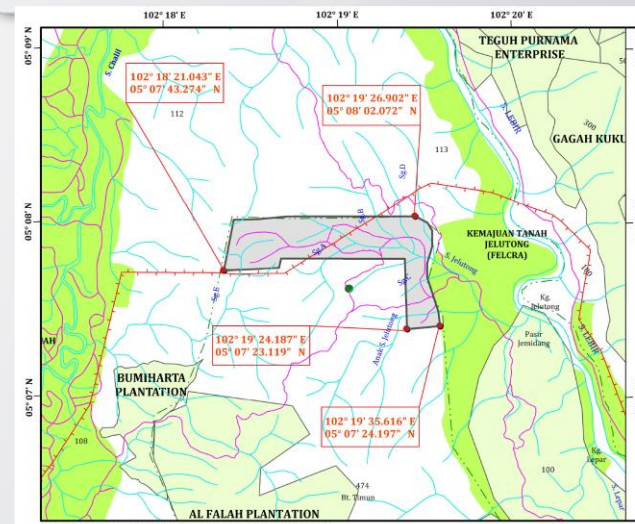
**Biological**

- Flora = 99 species of plants
- Fauna = Bird - 47 species, mammal - 13, reptiles and amphibians - 4 species
- CFS = located beside from D- Primary Linkages (PL2) that links Taman Negara - FR Lebir
- ESA = Rank 3

**Physico - Chemical**

- Topography = Elevation 60 m to 180 m (gently rolling hills)
- Slope = <25° = 98% (118.58 Ha) , > 25° = 2% (2.42 Ha)
- Geology = situated in Permian period
- Lithology = intermediate to basic volcanic
- Soil Series = Steepland
- Drainage system = Tributaries of Sg.Chalil flow to Sg. Chalil then will flow into Sg. Lebir. Sg. Jelutong and its tributaries will flow to north direction and will enter Sg. Lebir.
- Water treatment Plant = LRA Aring (9.94 km southeast of proposed project site )
- Meteorology = RPS Kuala Krai
- Baseline environmental quality
  - Water = 10 station, WQI-Class I to Class III)
  - Air Quality = 2 station, PM<sub>10</sub> = A1=42 µg/m<sup>3</sup>, A2= 42 µg/m<sup>3</sup>
  - Ambient noise level = 2 station (day- time = N1-64.9 dB(A), N2 -56.7 dB(A)), (night time = N1-46.9 dB(A) & N2-57.6 dB(A))

- The proposed project site is located approximately 1.57 km west of Kg. Jelutong community area, 2.43 km northwest of Kg. Lepar community area, 3.66 km northwest of Kg. Miak community area, 4.75 km north of Kg. RKT Chalil community area, 5.31 km northwest of Kg. Laka community area, 14.08 km northeast of Kg. Paloh 3 community area and 75.15 km northeast of Gua Musang town area.
- The proposed project site can be access by using existing access road Kampung Paloh 3 community area, then will go through RKT Chalil. From RKT Chalil it will take about 6.39 km of actual distance to reach the boundary of proposed project site.
- As referring to "Rancangan Tempatan Jajahan Gua Musang", the proposed project site is located in permanent forest reserve area known as **HSK Relai, "Blok Perancangan (BP2): Chiku"** and "Blok Perancangan Kecil (BPK 2.4) - Hutan Simpan Ulu Lebir".
- According to correspondence from **Pejabat Pengarah Tanah Dan Galian Negeri Kelantan** as attached in **Appendix A** through reference no : PTG.KN.8/2/31Jld.5 dated on 5<sup>th</sup> June 2024, the proposed project was not overlapped with any application or approval of mineral tenement.






**PERFORMANCE MONITORING**



**COMPLIANCE MONITORING**





Environmental Components	Regulated Parameter	Applicable Standards	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

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</b> <b>Soil Erosion</b> <b>Sedimentation</b> 	<ul style="list-style-type: none"> <li>➤ Installation of cascade drain and slope drain.</li> <li>➤ Minimize the exposure period once the proposed project site being undergone the site clearance activity.</li> <li>➤ Ensuring that all drainage, soil erosion and sediment control measures are properly designed, constructed and maintained to provide water quality protection and to prevent the transportation of sediment.</li> <li>➤ Implementation of activity by block basis and development phase.</li> <li>➤ Do a scheduling to reduce the amount and duration of soil exposed.</li> <li>➤ Maintained an area slope more than 40° and maintain existing natural vegetation and preserved buffer zone as guidelines by DID Negeri Kelantan.</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>➤ 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> <b>Biomass wastes</b> <b>Solid wastes</b> <b>Scheduled wastes</b> 	<ul style="list-style-type: none"> <li>➤ Zero burning enhances the soil organic matter status, thus help to restore and improve the fertility and physical status of soils.</li> <li>➤ Solid waste must be segregated by the waste type.</li> <li>➤ Project proponent should notify workers not to burn the solid waste.</li> <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>➤ Proper storage area must be built to store empty agrochemical and fertilizer container and must be kept away from heat to prevent explosion.</li> <li>➤ Clear signage must be placed at appropriate area to reduce risks of explosions.</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. Temporary road humps/speed bumps should be installed at the road system in the project site.</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.</li> <li>➤ 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>➤ Clean up dusty spills immediately.</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>

SIGNIFICANT POTENTIAL IMPACTS	POLLUTION PREVENTION & MITIGATION MEASURES (P2M2)
<b>Ecology (Flora &amp; fauna)</b> 	<ul style="list-style-type: none"> <li>➤ Supporting conservation works by NGO's.</li> <li>➤ Strictly prohibit any workers and outsiders from hunting in any part of the project area.</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> <li>➤ Installing a non-harmful deterrent such as ditch and electric fence.</li> </ul>
<b>Socio-Economy</b> 	<ul style="list-style-type: none"> <li>➤ Project proponent should advertise the job offer to the community.</li> <li>➤ Have demarcated boundary markers to avoid unnecessary trespassing from local people and wildlife.</li> <li>➤ Existing road condition needs to be upgraded by having proper signage and traffic guides.</li> <li>➤ Foreign workers must undergo a Fomema checkup before entering site to prevent the spread of vector disease.</li> </ul>
<b>Health and Disease</b> 	<ul style="list-style-type: none"> <li>➤ Provide base camps or 'kongsi' houses for all workers.</li> <li>➤ All employees must undergo scheduled health screening twice a year.</li> <li>➤ Provide basic facilities and utility (potable or clean water, mosquito (treated net) and basic hygiene amenities) for employees.</li> <li>➤ Compliance monitoring report needs to be prepared by project proponent to monitor all the hygiene and health measures for each employee and contractor involve.</li> <li>➤ All rubbish must be dumped at a suitable area permitted by the local authorities.</li> <li>➤ Prevent stagnant water.</li> <li>➤ Avoid using river water nearby.</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>➤ Provide a proper safety road signage system.</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>

## Conclusion

- ❖ The implementation of proposed project site is indeed a support to the government policy and vision in expanding and upgrading the forest resource management and utilization.
- ❖ Based on study, various potential impact expected will occur during and after project implemented.
- ❖ With full commitment that will be given by project proponent and others contribute parties in carry out all the pollution prevention and mitigation measures (P2M2s) recommended in the EIA report, whatever potential impact occur on-site can be controlled, minimized and resolve.
- ❖ Establishing forest plantations are therefore best seen as tree farms with multiple values designed to provide one or more very specific services.