

EXECUTIVE SUMMARY

“Proposed Forest Plantation Development on Part of Compartment 3, 18, 19, 64, 65 & 66 with a Total Area of 268.72 Hectares (±664.01 Acres) in Som Forest Reserve, Mukim Kuala Tembeling, District of Jerantut, Pahang Darul Makmur”.

PROJECT PROPONENT

Akokaya Sdn. Bhd.
(Company No.: 200401019008 (657511-P))
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EIA CONSULTANT

KenEp Consultancy & Services
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STATEMENT OF NEED



Source
- Timber



Demand
- Construction & Industries



Proposed Forest Plantation Development

LEGISLATIVE REQUIREMENT

Environmental Quality (Prescribed Activities)
(Environmental Impact Assessment) Order 2015

First Schedule

Prescribed Activity 5(e): “FORESTRY: Development of planted forest covering an area of 100 hectares or more but less than 500 hectares”.

PROJECT LOCATION

The proposed Project area can be accessed by traversing from Jerantut town by using Jalan Jerantut – Benta / Route 64 for about ±17.3 km. The unpaved access road (old logging road) can be found on the right side of the main road and will be used during site preparation activity and forest plantation development.

PROJECT BACKGROUND

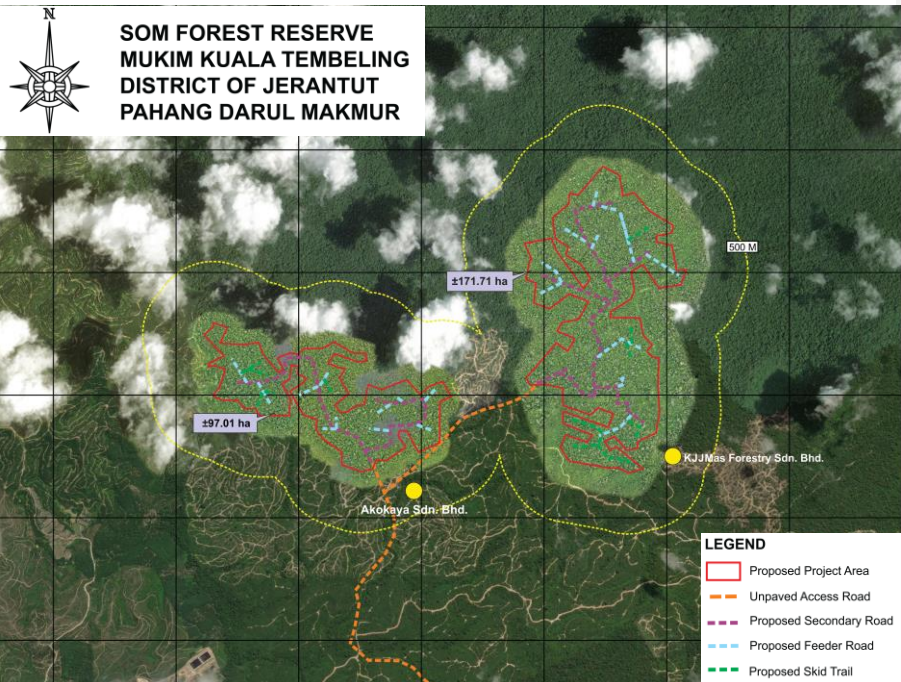
This land has been approved by Department of Forestry (DOF) Negeri Pahang through a letter with a reference number: Ref: PHN.PHG. 100-21/0/7080 (J) (8) on 23rd February 2023 to Akokaya Sdn. Bhd. with an acreage of 268.72 hectares (±664.01 acres) on parts of compartment 3, 18, 19, 64, 65 & 66 in Som Forest Reserve, Mukim Kuala Tembeling, District of Jerantut, Pahang Darul Makmur.

The concept of this Project is to develop the forest into forest plantation using high productivity plantation system. The Project implementation will begin with site preparation activities followed by stacking, planting of cover crops, lining and planting of *Eucalyptus* (*Pokok kayu putih*).

The area will be converted to forest plantation soon after the site preparation activity done. Existing natural vegetation including shrub and bushes will be preserved. Then, maintenance of the plantation such as weeding, watering and others will be carried out. The project will be implemented according into two (2) phases and five (5) blocks to minimize land disturbance and avoid planting at the seasonal stream area.

The proposed Project area is located near to approved EIA for forest plantation development project namely Yakin Kosmo Sdn. Bhd., Naza Industries Sdn. Bhd., Kerjaya Jutamas Sdn. Bhd., Akokaya Sdn. Bhd. and KJJMas Forestry Sdn. Bhd.

There are settlement area located within 5 km radius of the proposed Project area namely Ladang RISDA Damak (workers quarters at 1.75 km; southwest), Kampung Samak Jani (sub settlement: Kampung Temagi, Kampung Jani, Kampung Derus, Kampung Samak (4.3 km; north)), Kampung Redan (sub settlement: Kampung Serunai (4.6 km; north)), Kampung Jaya Putra (5 km; southwest) and Kampung Som (5.75 km; south) respectively. The agriculture area found within the vicinity of the proposed Project area is oil palm and rubber plantation owned by Kemajuan Tanah S. Atuk Jani (FELCRA) and Kemajuan Tanah Jaya Putra Satu, Dua, Tiga dan Empat (FELCRA) at the west of proposed Project area respectively.



Existing Landuse

Nearest settlement – Ladang RISDA Damak (workers quarters at 1.75 km; southwest), Kampung Samak Jani (sub settlement: Kampung Temagi, Kampung Jani, Kampung Derus, Kampung Samak (4.3 km; north)), Kampung Redan (sub settlement: Kampung Serunai (4.6 km; north)), Kampung Jaya Putra (5 km; southwest) and Kampung Som (5.75 km; south) respectively.

Agricultural area - oil palm and rubber plantations owned by FELCRA Kemajuan Tanah S. Atuk Jani and FELCRA Kemajuan Tanah Jaya Putra Satu, Dua, Tiga and Empat (western part of the proposed Project area)

EXISTING ENVIRONMENT



Topography



Geology – Triassic



Hydrology

Meteorology

Batu Embun Station



Soil

Durian-Muchong-Bungor and Durian-Melaka-Tavy

Water Intake

Mela Water Treatment Plant located in Sungai Jelai (15.12 km northeastern) and Batu Embun Water Treatment Plant located in Sungai Pahang (38.37 km southeastern)

• Located within flat to very steep area with elevations ranging from 16.667 m above Mean Sea Level (MSL) to the highest of 180 m.

• Topographically, most of the proposed Project area (31.93%) is considered as hilly area with slope gradients ranging between 12°-20°. About 17.95% of the proposed Project area ranging between 25°-35° and 8.29% of the proposed Project area ranging between >35° at the proposed Project area.

Flowing into tributaries of Sungai Kerak, tributaries of Sungai Parah and tributaries of Sungai Som. Sungai Kerak will directly flow to Sungai Pahang. Sungai Parah will flow to Sungai Redah. Sungai Redah and Sungai Som will flow to Sungai Ceka, Sungai Jelai and Sungai Pahang

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PROJECT ACTIVITIES

PLANNING

- Soil & Topography Study;
- Schedule of Works;
- Environmental baseline studies; and
- Environmental Impact Assessment.

DEVELOPMENT

- Boundary demarcation and positioning;
- Road Construction/ Main drainage;
- Construction of Sediment Trap;
- Establishment of Site Office and Worker's Quarters;
- Biomass Management; and
- Planting Cover Crop.

OPERATION

- Nursery Establishment and Maintenance;
- Construction of Animal Trench; and
- Field Establishment (Lining, Holing and Planting of Seedling)

MAINTENANCE AND HARVESTING

- Weeding and Manuring;
- Fertilizer Application;
- Water Management / Conservation;
- Pest Disease and Weed Control;
- Pruning and Thinning;
- Harvesting and Post-Harvest Field Maintenance; and
- Replanting

ABANDONMENT

- Removal of structure and facilities; and
- Revegetation on the disturbed land.

IMPACT ASSESSMENT & MITIGATION MEASURES

POTENTIAL IMPACT

PROPOSED POLLUTION PREVENTION AND MITIGATION MEASURES



- 1) Limit the work area to the minimum and expedite work during dry season;
- 2) Installation of Best Management Practices (BMPs) before the development started;
- 3) Carry out regular maintenance on the sediment trap;
- 4) Maintain bund and drainage in place within the proposed Project area
- 5) Monitor the water quality at the sediment trap discharge from the Project area
- 6) Carry out water quality monitoring programme.
- 7) Retain riparian buffer zones
- 8) Installation of rain gauge
- 9) Scheduling development by phases



- 1) The machinery used should also be properly checked and maintained at optimum operating conditions
- 2) Any complaints from nearby residents should be immediately attended to and actions taken
- 3) Regulate the number of external and internal vehicle trips per day
- 4) Carry out ambient noise monitoring programme
- 5) Provide workers with earplugs or earmuffs
- 6) Have work shifts for the workers
- 7) Carry out regular audiometric test on the workers



- 1) Frequent spraying of water on the exposed surface especially during dry seasons
- 2) Implement all vehicles to go through the washing bay before exiting the site
- 3) Traffic controls such as speed limits and traffic volume restrictions
- 4) Vehicles transporting construction material should be covered properly with tarpaulin
- 5) The burning of wastes is prohibited
- 6) Proper maintenance of vehicle
- 7) Carry out ambient air monitoring programme



- 1) Collaboration with Jabatan Perhilitan when necessary
- 2) Ensure personnel handling environmental and wildlife management is appointed.
- 3) Engage with the locals who have field knowledge and experience
- 4) No feeding of the wildlife
- 5) Hunting, poaching, disturbing, capturing, destroying, confining and/ or breeding of animals are prohibited



- 1) No open burning
- 2) Adequate disposal bin prepared on site
- 3) Proper disposal at approved dump site
- 4) Proper scheduled waste storage area
- 5) Workers shall be provided with adequate sanitation facilities
- 6) Regular maintenance of septic tank
- 7) Every worker shall be supply with appropriate apparels and apparatus during spraying of pesticides and fertilizers application

Biomass Management

1. Felled trees must be cut into small pieces, piled in between planting rows, and left to rot or being use for stacking to act to hold the soil and reduce erosion.
2. The remaining non-marketable trees are useful as building material for temporary bridges or for a foundation in road development.
3. Biomass waste can be packed to be use as erosion and slope protection. Apart from that, biomass waste also can be left to mulch on site and applied over the bared and exposed area.
4. Biomass waste will be sold to the factory that process the waste to chipping board as a material for furniture.



- 1) Observe safety aspects pertaining to the condition of the proposed Project area
- 2) Follow the emergency response plan formulated
- 3) Proper housekeeping on-site
- 4) Foreign workers must undergo a medical screening through FOMEMA
- 5) Ensure no retention in the empty containers resulting the breeding of mosquitoes
- 6) Employees are asked to wear long sleeved shirts with long pants



- 1) Given the first opportunity to local community when suitable employment positions arise
- 2) Road safety and dust mitigation measures must be implemented
- 3) Project Proponent should fix any road damage causes by their heavy vehicle
- 4) Movement of equipment and machinery shall be planned and closely monitored

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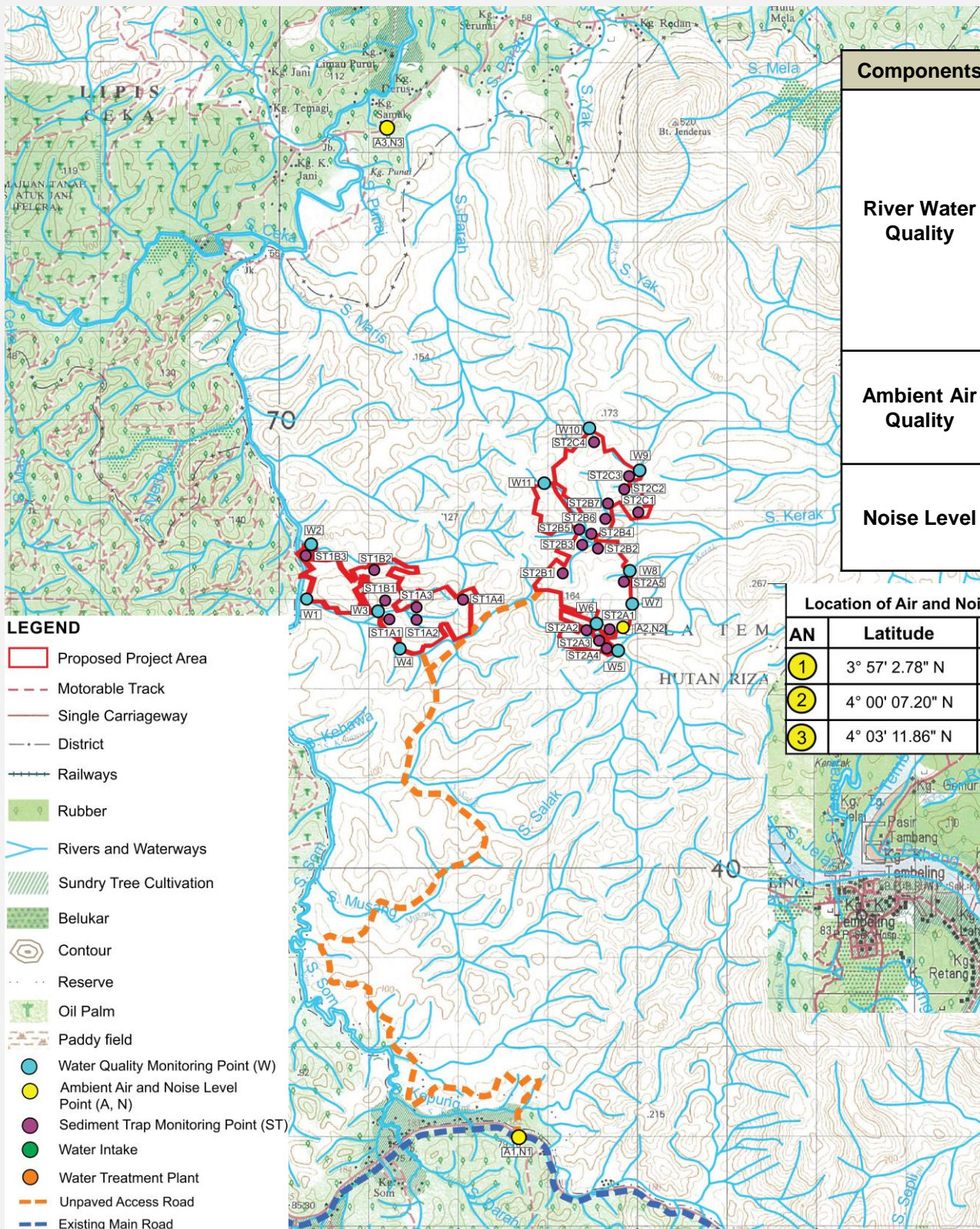
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PERFORMANCE MONITORING (PM)

COMPLIANCE MONITORING (CM)

Components	Parameter	Location	Frequency
Sediment Trap	Silt Control (Total Suspended Solid, Turbidity)	Refer Appendix 5-1: LDPM2	Monthly
Access Road	Dust control	-	Quarterly
Earth drain with check dam	Sediment level		
River Buffer	Performance		
Turfing and Hydroseeding			
Waterway Crossing (Culvert)	Structure and Performance		

Components	Parameter	Location	Frequency
Sediment Trap	Total Suspended Solid Turbidity	Refer Appendix 5-1: LDPM2	Monthly, and within 24 hours after storm event of ≥12.5mm
Site Inspection by CePEOEIA, CISEC / CESSWI	-	-	Quarterly, and within 24 hours after storm event of ≥12.5mm
Environmental Audit	-	-	Once every four months during development and operation stage



IMPACT MONITORING (IM)

Components	Location	Parameter & Frequency
River Water Quality	11 stations (tributaries of Sungai Som, tributaries of Sungai Parah and tributaries of Sungai Kerak)	Parameter: Temperature, pH, Chemical Oxygen Demand, Biological Oxygen Demand, Ammoniacal Nitrogen, Oil & Grease, Total Suspended Solid, Dissolved Oxygen, Phosphorus, Nitrate and Total Coliform Frequency: Monthly
Ambient Air Quality	3 stations (Sharing Access Road, Project Boundary, Nearest Settlement Area)	Parameter: PM ₁₀ , PM _{2.5} , SO ₂ , NO ₂ , CO, O ₃ Frequency: Monthly
Noise Level		Parameter: Leq, Lmax, L ₁₀ , L ₉₀ Frequency: Quarterly

Location of Air and Noise Monitoring Point			Location of Water Quality Monitoring Point		
AN	Latitude	Longitude	W	Latitude	Longitude
1	3° 57' 2.78" N	102° 14' 55.22" E	1	4° 00' 17.41" N	102° 13' 31.06" E
2	4° 00' 07.20" N	102° 15' 27.17" E	2	4° 00' 10.72" N	102° 14' 37.68" E
3	4° 03' 11.86" N	102° 14' 02.82" E	3	4° 00' 11.71" N	102° 13' 58.29" E
			4	3° 59' 59.14" N	102° 14' 06.79" E
			5	3° 59' 58.43" N	102° 15' 25.34" E
			6	4° 00' 08.93" N	102° 15' 16.15" E
			7	4° 00' 15.10" N	102° 15' 29.64" E
			8	4° 00' 27.84" N	102° 15' 29.52" E
			9	4° 01' 02.45" N	102° 15' 32.27" E
			10	4° 01' 18.97" N	102° 15' 14.36" E
			11	4° 00' 58.53" N	102° 14' 58.58" E