

Proposed Forest Plantation (*Eucalyptus* sp. and other species) on Sultanate Land with an Area 372.93 Ha at Mukim Ulu Nenggiri, Kuala Betis, Gua Musang, Kelantan Darul Naim (SCHEDULE 1)

**EXECUTIVE SUMMARY**

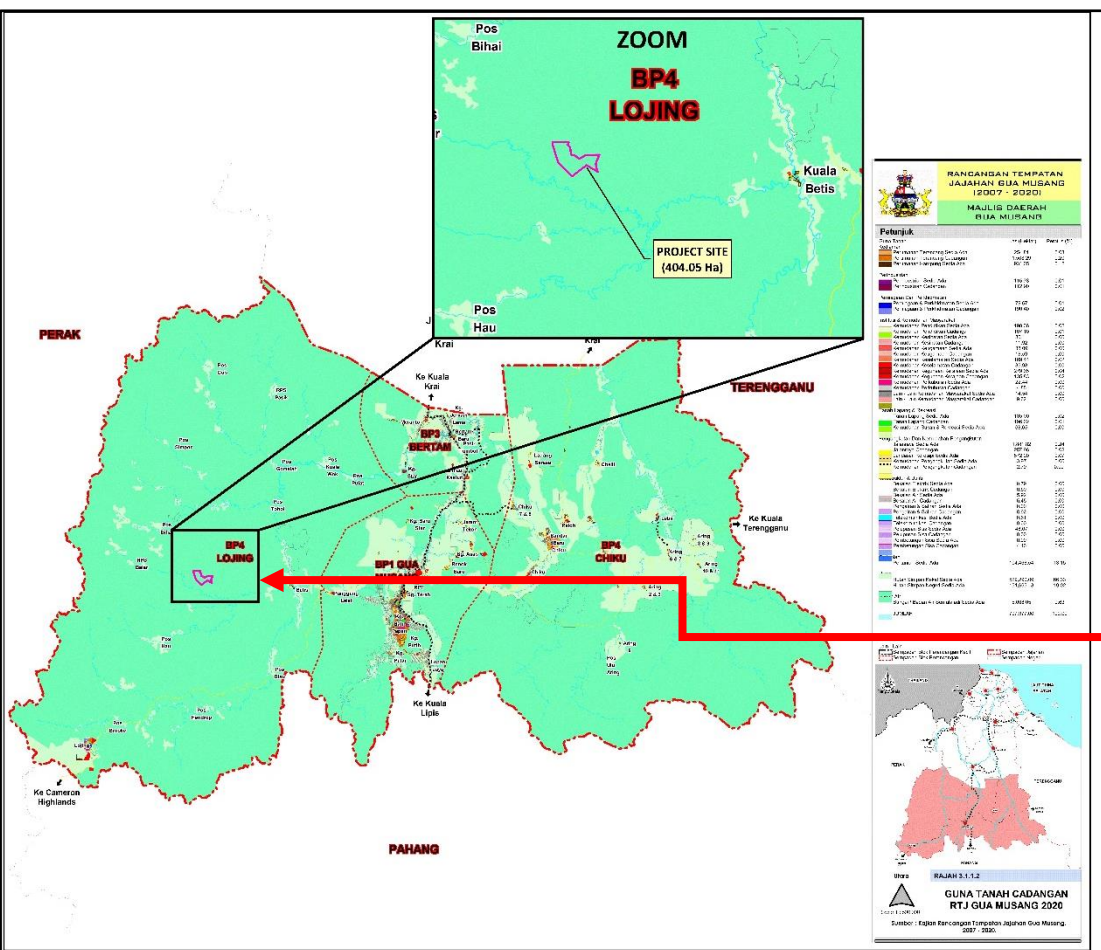
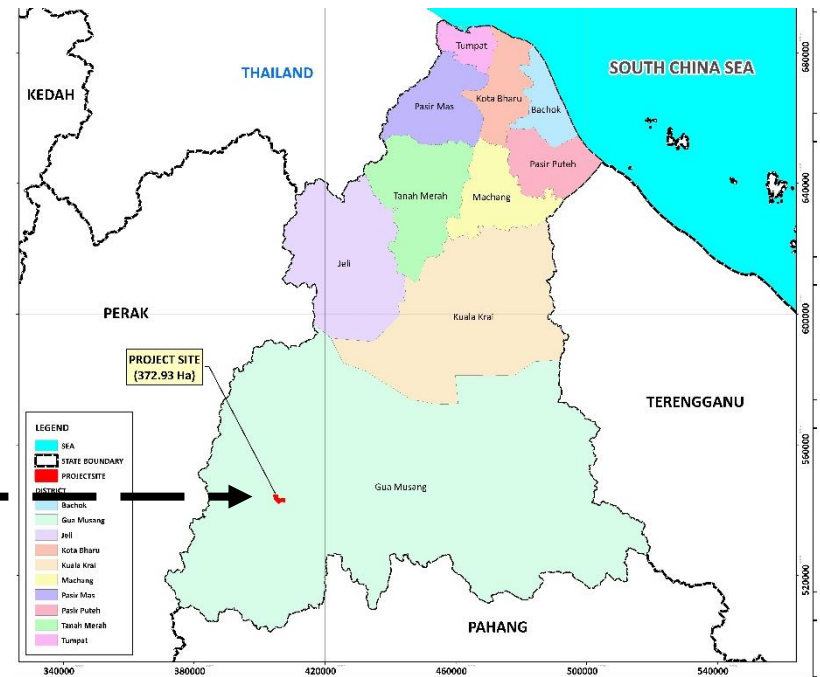
**1.0 INTRODUCTION**

**PROJECT TITLE:**  
 “PROPOSED FOREST PLANTATION (*EUCALYPTUS* SP. AND OTHER SPECIES) ON SULTANATE LAND WITH AN AREA 372.93 HA AT MUKIM ULU NENGGIRI, KUALA BETIS, GUA MUSANG, KELANTAN DARUL NAIM”

**PROJECT OPERATION:**  
**Forest Plantation**

**LOCATION:**  
 PW1704, Mukim Ulu Nenggiri, Daerah Kuala Betis, Jajahan Gua Musang, Kelantan Darul Naim

**PROJECT AREA:**  
**372.93 hectare**



**BASED ON RANCANGAN TEMPATAN JAJAHAN GUA MUSANG 2020, THIS PROJECT UNDER:**

- BP 4: Lojing
- Zoning area as:

**FOREST**

**2.0 PROJECT PROPONENT AND ENVIRONMENTAL CONSULTANT**

LEASE HOLDER	PROJECT PROPONENT	ENVIRONMENTAL CONSULTANT
<p><b>LSJ PLANTATION SDN. BHD.</b>                      PT 5158 (1<sup>st</sup> Floor), Jalan Kempas ¼, Bandar Utama, 18300, Gua Musang, Kelantan                      PIC Project:                      Dr. Wan Iman Wan Mohd Nazi                      Tel no.: 013-288 8639</p>	<p><b>W WORLD SDN. BHD.</b>                      First Floor, H-2-4, Plaza Damas 60, Jalan Sri Hartamas 1, Sri Hartamas, 50480 Kuala Lumpur.                      PIC Project:                      Datin Wan Taqwa Wan Mohd Nazi</p> <div style="text-align: center;">                           W WORLD SDN. BHD.                     </div>	<p><b>NILAIMAS SERVICES (001953513-D)</b>                      No. 17-2 &amp; 17-3, Jalan Equine 10D, Taman Equine, 43300 Seri Kembangan, Selangor                      Tel.: 03-8940 9959,                      Fax : 03-8940 9958                      PIC Project:                      Dato Seri Ts Hj. Mohd Nawahidudin Bin Mahamad Isa</p> <div style="text-align: right;">                           NILAIMAS SERVICES  <small>ENVIRONMENTAL &amp; TRAFFIC CONSULTANTS</small> </div>

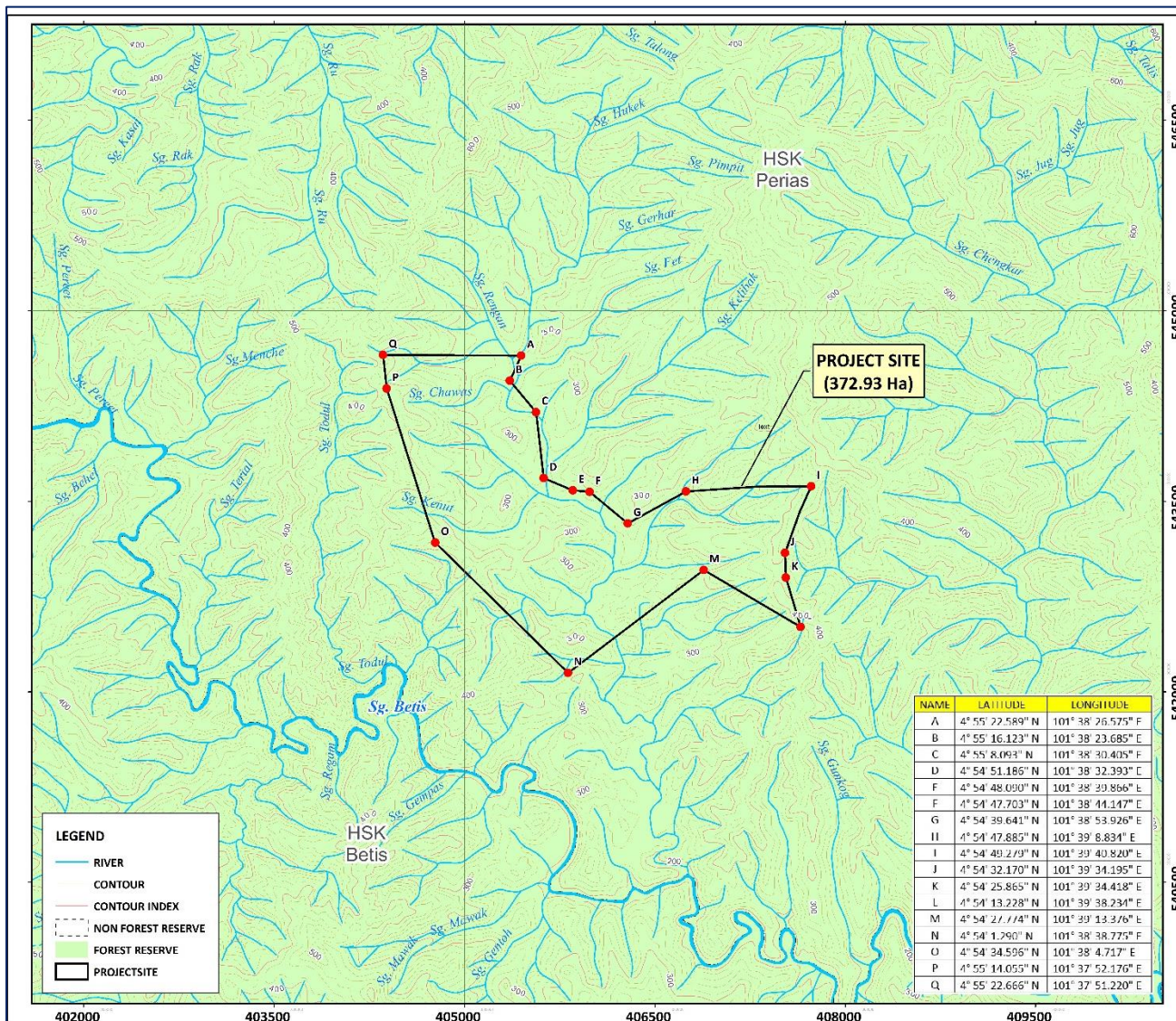
Proposed Forest Plantation (*Eucalyptus* sp. and other species) on Sultanate Land with an Area 372.93 Ha at Mukim Ulu Nenggiri, Kuala Betis, Gua Musang, Kelantan Darul Naim (SCHEDULE 1)

3.0 LEGISLATIVE REQUIREMENTS

Section 34A of the Environmental Quality Act 1974, Environmental Quality (Prescribed Activities) (Environmental Impact Assessment)

Schedule 1, Activity 5(e): Forest plantation development covering an area of 100 hectares or more but less than 500 hectares

4.0 PROJECT DESCRIPTION



POINT	LATITUDE	LONGITUDE
A	4° 55' 22.589" N	101° 38' 26.575" E
B	4° 55' 16.123" N	101° 38' 23.685" E
C	4° 55' 8.093" N	101° 38' 30.405" E
D	4° 54' 51.186" N	101° 38' 32.393" E
E	4° 54' 48.090" N	101° 38' 39.866" E
F	4° 54' 47.703" N	101° 38' 44.147" E
G	4° 54' 39.641" N	101° 38' 53.926" E
H	4° 54' 47.885" N	101° 39' 8.834" E
I	4° 54' 49.279" N	101° 39' 40.820" E
J	4° 54' 32.170" N	101° 39' 34.195" E
K	4° 54' 25.865" N	101° 39' 34.418" E
L	4° 54' 13.228" N	101° 39' 38.234" E
M	4° 54' 27.774" N	101° 39' 13.376" E
N	4° 54' 1.290" N	101° 38' 38.775" E
O	4° 54' 34.596" N	101° 38' 4.717" E
P	4° 55' 14.055" N	101° 37' 52.176" E
Q	4° 55' 22.666" N	101° 37' 51.220" E

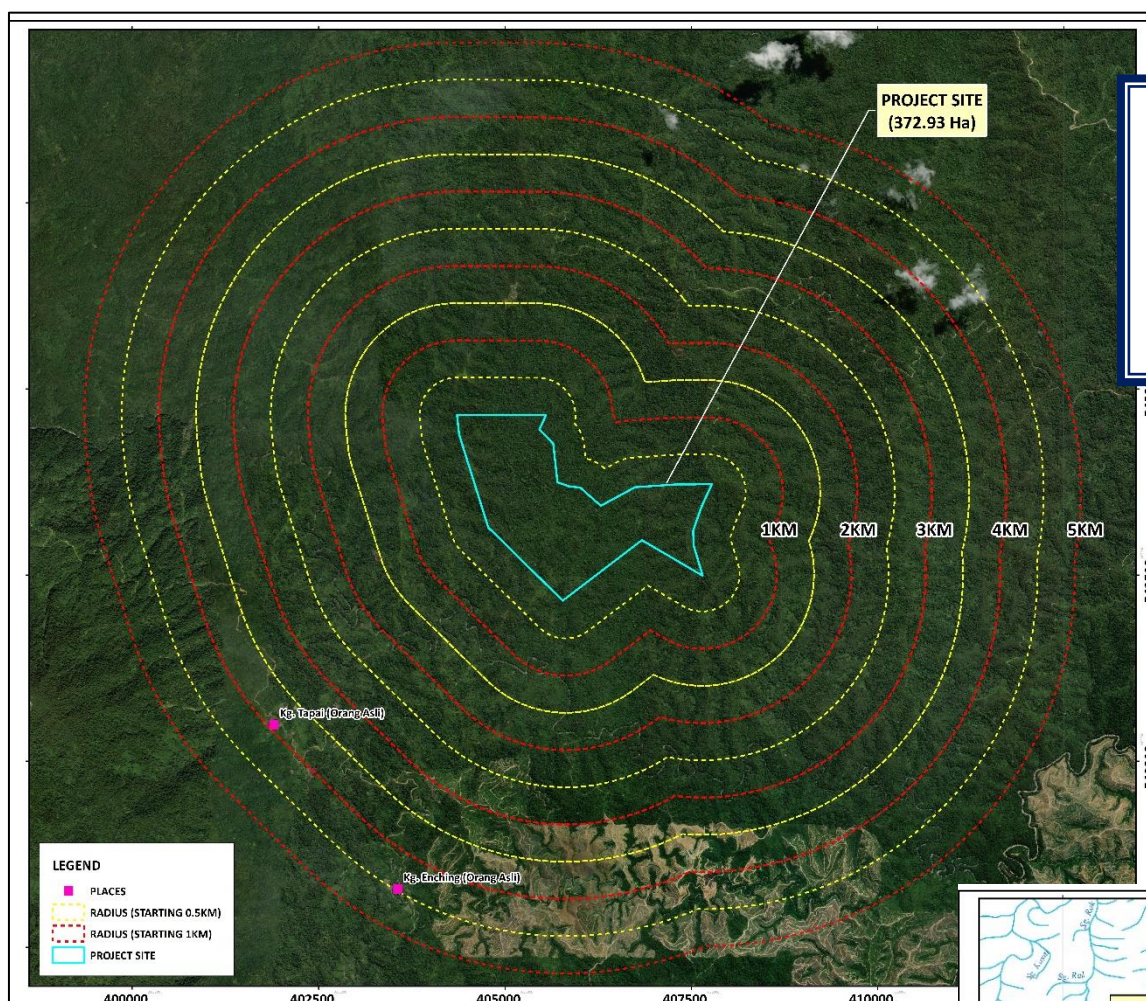
LOCATION

- Located at Kelantan Sultanate Land PW 1704, Mukim Ulu Nenggiri, Daerah Kuala Betis, Jajahan Gua Musang, Kelantan Darul Naim
- The plantation site can be accessed from 484 (Jalan Persekutuan) Jalan Gua Musang – Kg Kuala Betis before traversing approximately 33.1km the existing secondary road to the project entrance.

Proposed Forest Plantation (*Eucalyptus* sp. and other species) on Sultanate Land with an Area 372.93 Ha at Mukim Ulu Nenggiri, Kuala Betis, Gua Musang, Kelantan Darul Naim (SCHEDULE 1)



**AERIAL VIEW OF SURROUNDING PROJECT**

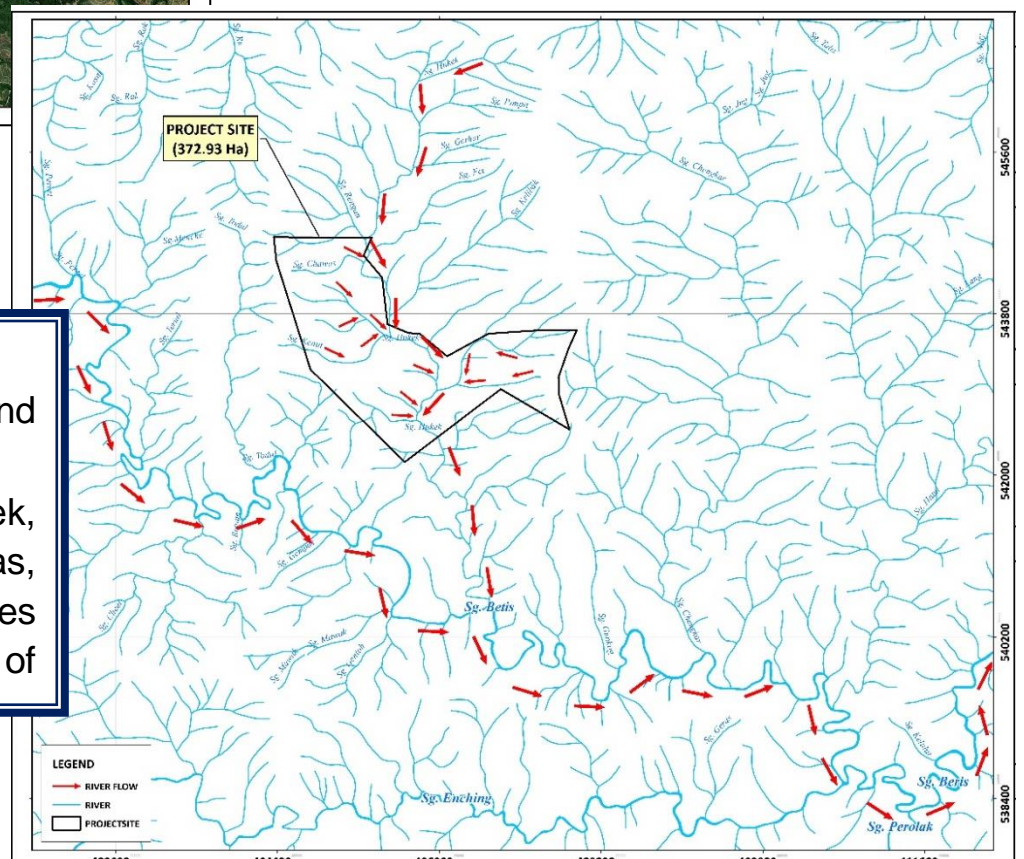


**ZONE OF IMPACT (ZOI)**  
Surrounding and Sensitive area within 1-5 km:

- Water body
- Residential area
- Forestry-type development

**WATERBODY**  
Waterbody from upstream and downstream Project Site

- Tributaries of Sungai Hukek, tributaries of Sg Chawas, tributaries of Sg Kenut, tributaries of Sg Kelibak and tributaries of



## 5.0 EXISTING ENVIRONMENT

### LANDUSE

- Project site is zone as FOREST.

### TOPOGRAPHY

- Hilly terrain surface with elevation range from 237 metre - 464 metre from mean sea level.
- Surrounded with fauna and flora with the nature of secondary forest.
- The project site is mainly drained to the Sungai Betis.

### CLIMATE

- Meteorology station selected are Kuala Krai for wind rose and wind speed, Lembaga Kemajuan Kelantan Selatan for humidity, temperature and Number of rainday . While, Pos Hau for number of rainfall.
- Most of data collected through out the years were deemed defective.
- Wind profile show the frequency occurrence on North East direction with percentage of 34.6%.

### WATER QUALITY

- 27 water sampling points for comparison with NWQS Class IIB.
- All of the water samples classified according to NWQS and WQI standard for river classification.

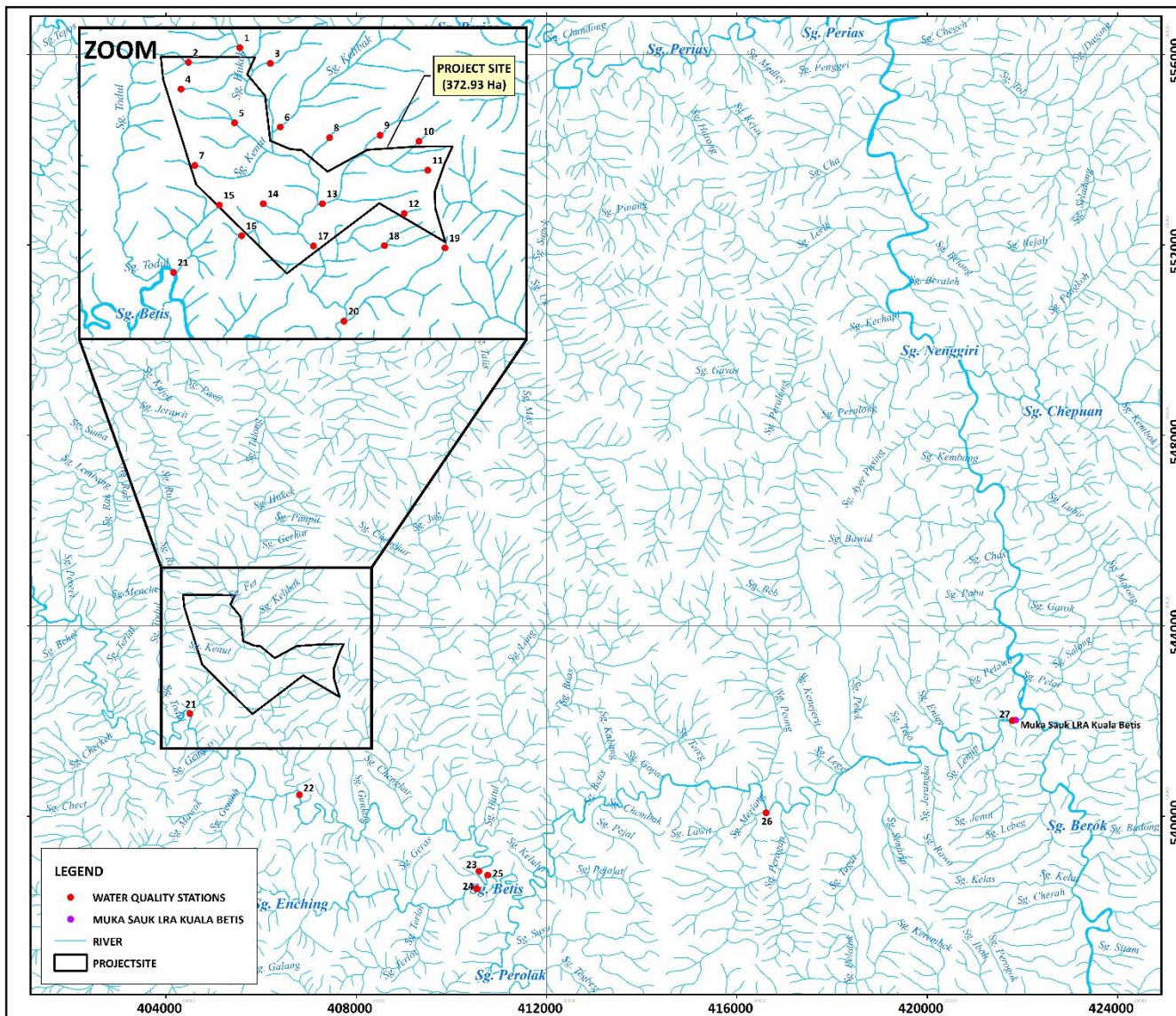
### AIR, NOISE AND VIBRATION OF SURROUNDING

- 2 ambient air, noise and vibration samples taken at the sensitive receptors surrounding the project area.
- 2 sample of gases monitoring at the project site which include SO<sub>2</sub>, NO<sub>2</sub> and CO.
- PM<sub>2.5</sub> and PM<sub>10</sub>, and all gas parameters were compared with MAAQS.
- Noise results were compared with Recommended Permissible Sound Level (Laeq) By Receiving Land Use for New Development.
- Vibration results were compared with Recommended Limits For Damage Risk In Buildings From Steady State Vibration

### SOCIO ECONOMIC

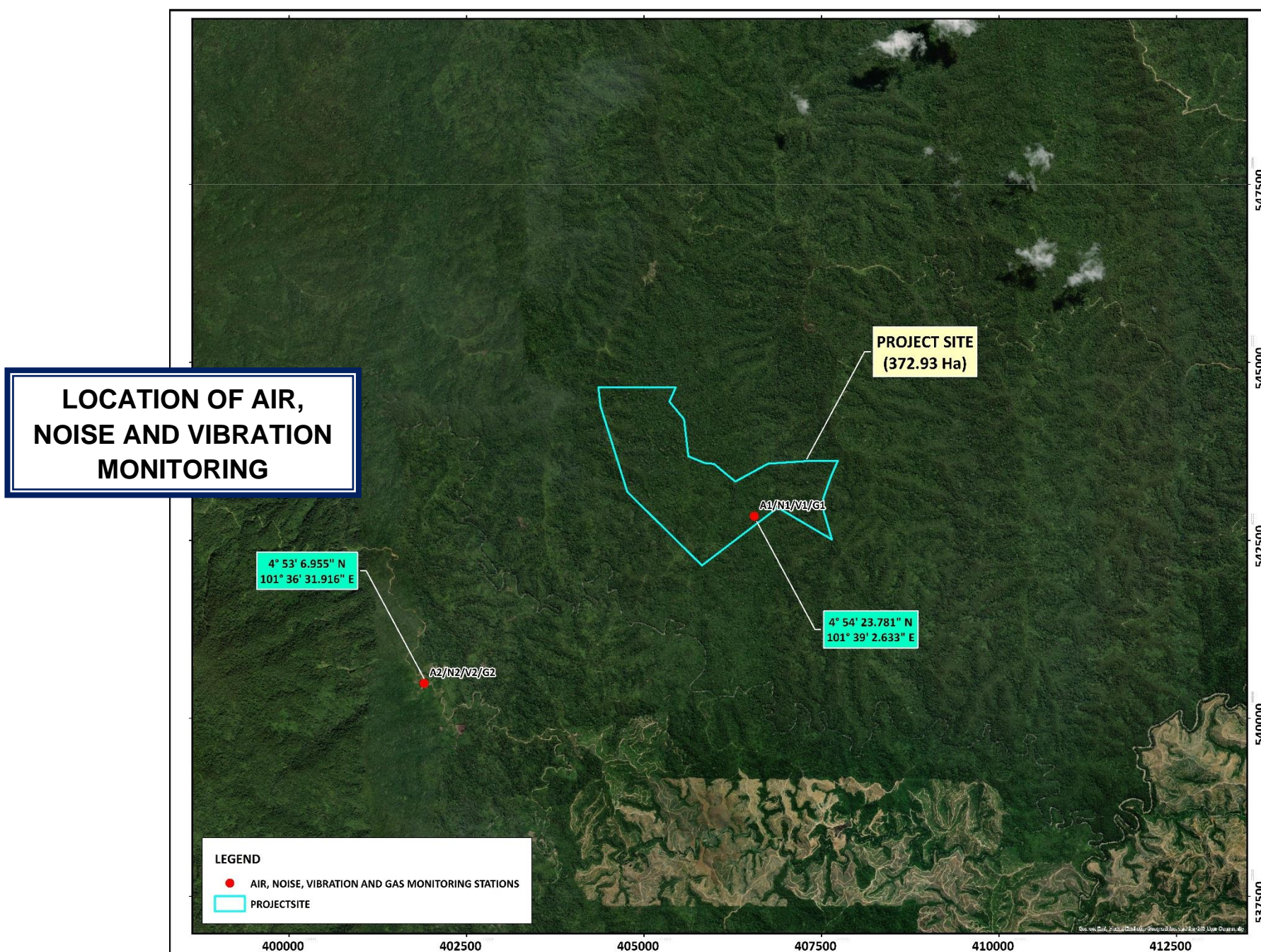
- 30 responden involved in Social Impact Assessment survey
- Majority of 46.7% of respondents does not agree towards the project, while a large part of 33.3% of respondents either not sure how to feel of the project or avoiding to answer. Only 20.0% of the respondents agreed to the project, which all came from Kampung Orang Asli Tapai

Proposed Forest Plantation (*Eucalyptus* sp. and other species) on Sultanate Land with an Area 372.93 Ha at Mukim Ulu Nenggiri, Kuala Betis, Gua Musang, Kelantan Darul Naim (SCHEDULE 1)



### WATER QUALITY MONITORING

NO	LATITUDE	LONGITUDE
1	4° 55' 26.174" N	101° 38' 20.969" E
2	4° 55' 20.622" N	101° 38' 1.719" E
3	4° 55' 20.354" N	101° 38' 32.444" E
4	4° 55' 10.513" N	101° 37' 58.937" E
5	4° 54' 57.925" N	101° 38' 19.055" E
6	4° 54' 56.377" N	101° 38' 36.220" E
7	4° 54' 41.836" N	101° 38' 4.175" E
8	4° 54' 52.451" N	101° 38' 54.700" E
9	4° 54' 53.404" N	101° 39' 13.664" E
10	4° 54' 51.199" N	101° 39' 28.290" E
11	4° 54' 40.272" N	101° 39' 31.648" E
12	4° 54' 23.958" N	101° 39' 22.811" E
13	4° 54' 27.598" N	101° 38' 52.102" E
14	4° 54' 27.548" N	101° 38' 29.920" E
15	4° 54' 26.943" N	101° 38' 13.432" E
16	4° 54' 15.433" N	101° 38' 21.797" E
17	4° 54' 11.715" N	101° 38' 48.776" E
18	4° 54' 11.855" N	101° 39' 15.415" E
19	4° 54' 11.102" N	101° 39' 38.140" E
20	4° 53' 43.376" N	101° 39' 0.291" E
21	4° 54' 1.548" N	101° 37' 56.297" E
22	4° 53' 6.231" N	101° 39' 11.108" E
23	4° 52' 14.262" N	101° 41' 13.718" E
24	4° 52' 1.206" N	101° 41' 12.206" E
25	4° 52' 11.564" N	101° 41' 19.780" E
26	4° 52' 54.767" N	101° 44' 29.566" E
27	4° 53' 58.189" N	101° 47' 17.401" E



Proposed Forest Plantation (*Eucalyptus* sp. and other species) on Sultanate Land with an Area 372.93 Ha at Mukim Ulu Nenggiri, Kuala Betis, Gua Musang, Kelantan Darul Naim (SCHEDULE 1)

**6.0 ENVIRONMENTAL ASSESSMENT MATRIX**

**KEY**

Symbol	Impact Class
1	Minor adverse environmental impact
2	Moderate adverse environmental impact
3	Major adverse impact
A	Minor Positive Impact
B	Major positive impact
U	Potentially adverse but insufficient information
N	Insignificant impact

		Project Activities																
		Site Investigation			Preparing and Land Clearing activities					Forest Plantation		Maintenance and harvesting			Abandonment			
		Field reconnaissance	Surveying and mapping	Baseline Sampling	Site Clearing	Construction of plantation drainage	Minimized Terracing	Construction of BMPs	Planting of cover crops /Natural cover crop	Nursery establishment	Preparation of <i>Eucalyptus</i> sp. planting holes	Planting of <i>Eucalyptus</i> sp.	Manuring/fertilizing	Weed control	Pest control	Harvesting activities	Rehabilitation and Abandonment Plan	
ENVIRONMENTAL COMPONENTS	Soil	Surface Erosion				1	1	1	1	1	1	1	1				1	1
		Slope Stability				1	1	1	1		1	1	1				1	1
		Soil compaction				1	1	1	1		1	1	1				1	1
	Air Quality	Soil fertility											1	1	1	1	1	1
		Smoke Emission				1	1	1	1	1	1	1	1	1	1	1	1	1
		Dust Generation				1	1	1	1	1	1	1	1	1	1	1	1	1
	Water Quality	Odor Pollution											1	1	1			1
		Turbidity				1	1	1	1	1	1	1	1	1	1	1	1	1
		Physical quality				1	1	1	1	1	1	1	1	1	1	1	1	1
	Noise generation	Chemical quality				1	1	1	1	1	1	1	1	1	1	1	1	1
		To worker				1	1	1	1	1	1	1	1	1	1	1	1	1
		To Nearest Settlement				1	1	1	1	1	1	1	1	1	1	1	1	1
	Waste	Solid Waste				1	1	1	1	1	1	1	1	1	1	1	1	1
		Biomass Waste				1	1	1	1	1	1	1	1	1	1	1	1	1
		Schedule waste				1	1	1	1	1	1	1	1	1	1	1	1	1
	Traffic	Hazardous waste											1	1	1	1	1	1
		Traffic Congestion				1	1	1	1	1	1	1	1	1	1	1	1	
		Flora & Fauna	Vegetation				1	1	1	1	1	1	1	1	1	1	1	1
	Birds					1	1	1	1	1	1	1	1	1	1	1	1	1
	Mammals					1	1	1	1	1	1	1	1	1	1	1	1	1
	Reptiles/ amphibians					1	1	1	1	1	1	1	1	1	1	1	1	1
	Invertebrates					1	1	1	1	1	1	1	1	1	1	1	1	1
	Fish					1	1	1	1	1	1	1	1	1	1	1	1	1
Social & Economic	Other aquatic life				1	1	1	1	1	1	1	1	1	1	1	1	1	
	Human settlement				1	1	1	1	1									
	Employment				B	B	B	B	B	B	B	B	B	B	B	B		
Aesthetic & Cultural	Wilderness				1	1	1	1	1									
	Visual quality				1	1	1	1	1									

Proposed Forest Plantation (*Eucalyptus* sp. and other species) on Sultanate Land with an Area 372.93 Ha at Mukim Ulu Nenggiri, Kuala Betis, Gua Musang, Kelantan Darul Naim (SCHEDULE 1)

**7.0 ENVIRONMENTAL MANAGEMENT PLAN (EMP)**

Item	Parameter	Monitoring Location	Frequency of Monitoring	Environmental Criteria	Documentation
<b>Water Quality</b>	Temperature, pH, DO, BOD, COD, TSS, and AN	Upstream and downstream of Project Site	Every Month	The results of the study sample will be compared with the baseline of the Malaysian Water Quality Criteria and Standards (MWQCS)	Environmental Monitoring Report will be submitted to DOE
<b>Environmental Audit</b>	According to compliance with the conditions of EIA approval	Throughout the execution of the project and its activities	Every 6 month/ year	Environmental audits should be conducted to ensure compliance with environmental regulations and guidelines	Environmental Monitoring Report will be submitted to DOE

