

# **EXECUTIVE SUMMARY**

## **ENVIRONMENTAL IMPACT ASSESSMENT**

### **SECOND SCHEDULE**

## EXECUTIVE SUMMARY

# PROPOSED COCONUT PLANTATION DEVELOPMENT IN MUKIM BEBAR, PEKAN, PAHANG DARUL MAKMUR

PROJECT PROPONENT:  
DATARAN BUDIMAN SDN. BHD.

EIA CONSULTANT:  
 Pro Alam Consultants

## INTRODUCTION

This project shall be involved the planting of two varieties of coconut trees i.e. Matag hybrid and Aromatic Green Dwarf (also known as the Pandan coconut) in land area of 414.398 hectares in Mukim Bebar, Pekan, Pahang Darul Makmur.

### PROJECT PROPONENT:

**DATARAN BUDIMAN SDN. BHD.**  
**No. 8888, Jalan Kemayang-Triang,**  
**28380 Kemayan, Bera,**  
**Pahang Darul Makmur**

Contact Person: Mr. David Lu Boo Kiong

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### ENVIRONMENTAL CONSULTANT:

**KR PRO ALAM CONSULTANTS**  
**9A, Cempaka Seri 2,**  
**Laman Cempaka, Kota Seriemas,**  
**71800 Nilai, Negeri Sembilan**

Contact Person: Dr. Nurul Ruhayu Mohd Rosli

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Email: krproalam@yahoo.com

## LEGAL REQUIREMENT

**Prescribed Activity Subject to Section 34A, Environmental Quality Act, 1974**

**Proposed Project falls under Second Schedule**

### **Activity 1 First Schedule: Agriculture**

*(a) Land development schemes covering an area of 20 hectares or more but less than 500 hectares to bring forest into agricultural production*

*and;*

### **Activity 5 Second Schedule: Forestry**

*(f) Conversion of an area of:*

*ii. Peat swamp forest for industrial, housing or agricultural use covering an area of 50 hectares or more.*

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## STATEMENT OF NEED

The proposed Project is aim to enhance the economic development in the area.

In line with RTD Pekan to expand the agriculture sector within the framework for the development of agro-based.

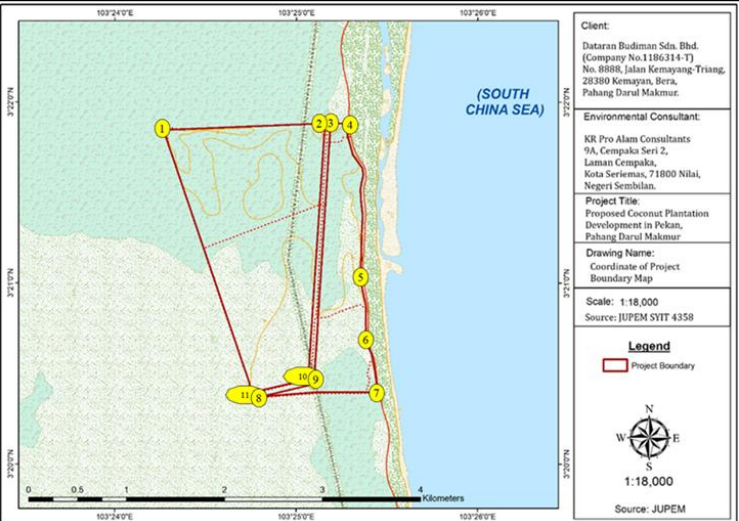
under social development objectives is to improve agriculture and generate more labour force for economy (RSN Pahang 2050).

## PROJECT LOCATION

Proposed Project is situated in the south of Pekan District, approximately 300 meters away from the terrestrial zone and can be assess via highway known as Laluan Persekutuan 3.

The proposed Project site is located at Lot 22419 (land area of 116.8 hectares) and Lot 22420 (land area of 297.5 hectares) Mukim Bebar, Pekan, Pahang Darul Makmur.

The Project covers an area of approximately 414.398 hectares (1,023.998 acres).



## Project Location Coordinate

Point	Latitude	Longitude
1	3° 21' 50.10017"	103° 24' 9.84502"
2	3° 21' 51.95735"	103° 25' 3.30496"
3	3° 21' 51.98435"	103° 25' 5.26675"
4	3° 21' 51.85364"	103° 25' 10.37610"
5	3° 21' 37.12751"	103° 25' 15.69615"
6	3° 20' 51.15454"	103° 25' 16.60329"
7	3° 20' 22.59390"	103° 25' 20.34439"
8	3° 20' 21.38437"	103° 24' 41.75703"
9	3° 20' 25.42363"	103° 24' 59.19560"
10	3° 20' 27.01147"	103° 24' 57.34710"
11	3° 20' 22.58933"	103° 24' 38.25575"



# EXECUTIVE SUMMARY

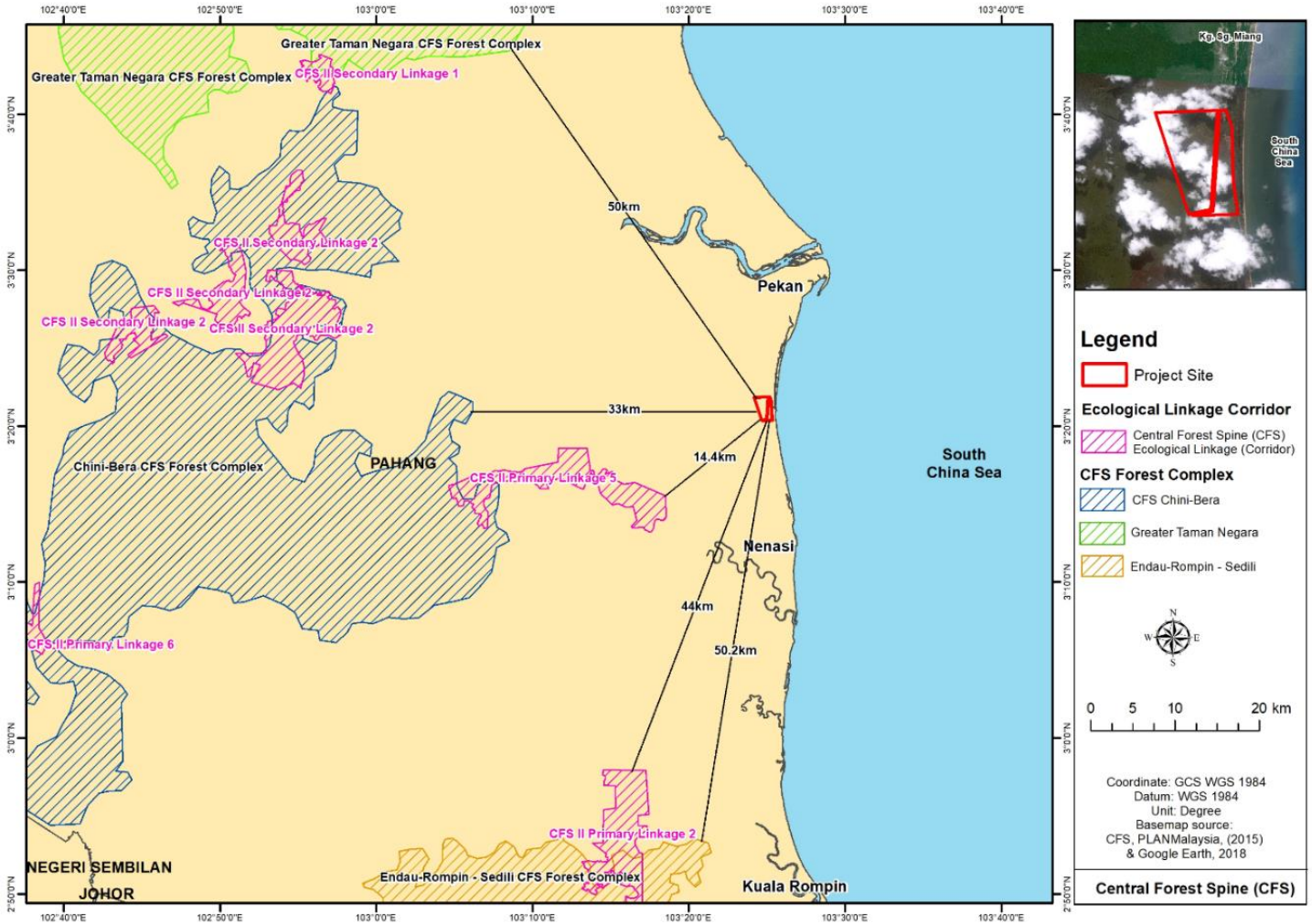
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## Project Location and Sensitive Receptor



The proposed Project site is situated about 14 km from the eastern border of CFS2-PL5: Ibam FR – Kedondong FR, Pekan FR and Nenasi FR, and about 33 km from the eastern border of Chini-Bera forest complex.



# EXECUTIVE SUMMARY

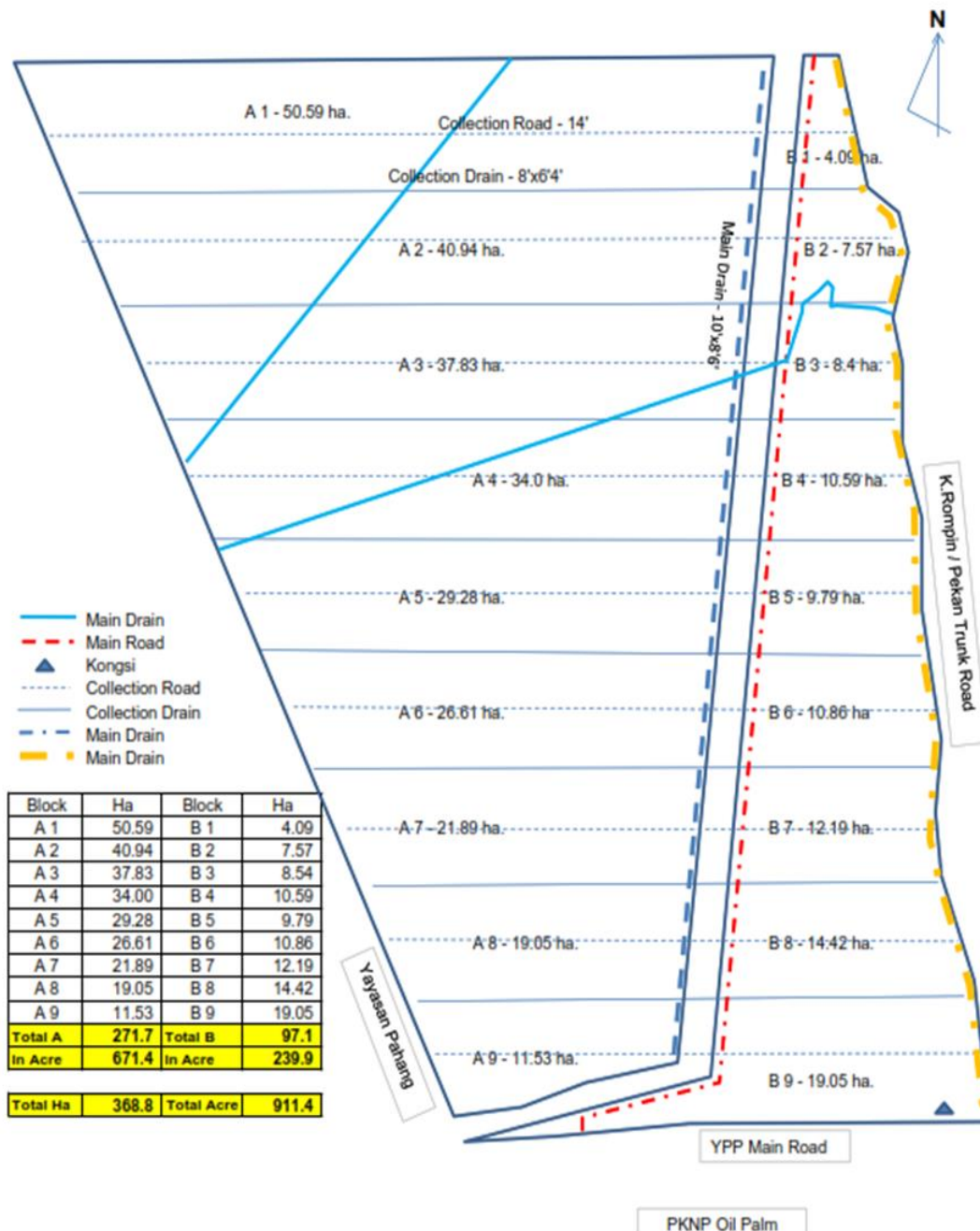
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## PROJECT DESCRIPTION

- This project shall be involved the planting of two varieties of coconut trees i.e. Matag hybrid and Aromatic Green Dwarf in land area of 414.398 hectares.
- An approximately 368.82 hectares will be allocated for coconut plantation while the remaining area will be allocated for road accessibility, drainage system and other facilities.
- The planting of coconut will be based on 7.5 meter x 7.5 meter plot, in which approximately 205 trees/hectare will be planted with a total of approximately 75,440 (i.e. 205 trees x 368 hectares) coconut trees.



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## PROJECT ACTIVITIES

Phases	Activities
<b>Pre-construction</b>	<ul style="list-style-type: none"><li>• Delineation of the proposed land boundaries</li><li>• Identification which area for road accessibility, construction of drains</li></ul>
<b>Construction</b>	<ul style="list-style-type: none"><li>• Site clearing</li><li>• Construction of drainages and irrigation system</li><li>• Construction of road accessibility</li><li>• Construction of infrastructure facilities (such as workers quarter) and utility facilities (for examples sewage tank, electricity and water)</li><li>• Establishment of nursery plot</li><li>• Field preparation and planting method</li></ul>
<b>Operation and Maintenance</b>	<ul style="list-style-type: none"><li>• Manuring and fertilization</li><li>• Weed controls</li><li>• Pest and disease control</li><li>• Water management</li><li>• Harvesting of crops</li><li>• Transporting of crops</li></ul>



# EXECUTIVE SUMMARY

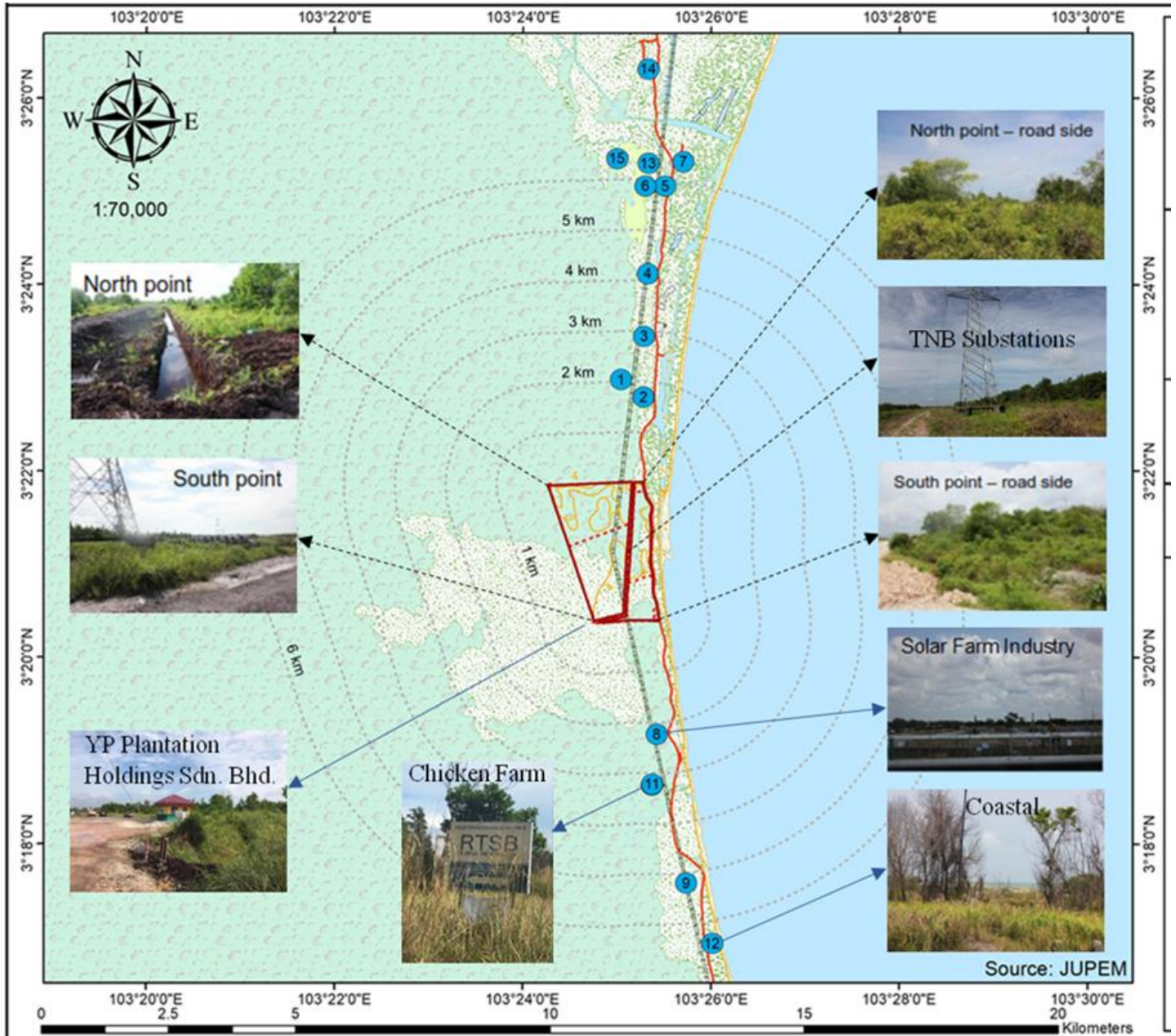
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## EXISTING ENVIRONMENT



The Project site is originally a peat swamp area which is considered a secondary forest. Previously a logged over forest and no longer a pristine or natural peat swamp forest. It is located in the south of Pekan District, approximately 300 meters away from the terrestrial zone. The Project site is located outside the boundary of Pekan Forest Reserve.



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## Hydrology

- No river within Project site, only existing channel
- 6 stations along the channel were selected for baseline water quality study
- There is no seawater intrusion in the channel even during high spring tide
- Nearest river is Sungai Miang about 7 km away
- Estuarine part of this river experience tidal effect
- Cluster of *Nypa fruticans* grown at the river bank
- Coastal area of South China Sea is located 1 km away from the Project site



## Meteorology

Annual rainfall is 2,954 mm

Average annual temperature is 26.7°C

Average annual percentage of humidity is 87.0%

## Topography

Project site is a low lying area with the elevation ranging from 0° – 2° and less than 4 m

Classified under Terrain Class 1 which is flat

## Soil Classification

Mainly from Bayas Series with reddish brown

Only 2.88% of Pauh Series with pale grey in colouration



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## Flora Study

No plant species were listed as threatened categories under IUCN Red List (including 7 species with Least Concern status) and Malaysia Plant Red List.

Flora were categorized as common lowland, secondary and succession plant species due to the land use status and anthropogenic disturbances.

Family	Genus	Species
Euphorbiaceae	7	9
Fabaceae	6	8
Poaceae	7	8
Cyperaceae	6	7
Rubiaceae	6	7
<b>Overall: 134 species; 111 genera; 56 families</b>		



## Fauna Study

### Birds

Protection Status Wildlife Conservation Act 2010 (Act 716)	IUCN-Red List Status IUCN Red List of Threatened Species (2020)
(TP) Totally Protected: 73 species	(CR) Critically endangered: 0
(P) Protected: 11 species	(EN) Endangered: 0
(NP) Not Protected: 9 species	(VU) Vulnerable: 0
	(NT) Near Threatened: 0
	(LC) Least Concern: 93 species



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## Mammals

Protection Status Wildlife Conservation Act 2010 (Act 716)	Red List of Mammals for Peninsular Malaysia (2017)	IUCN-Red List Status IUCN Red List of Threatened Species (2020)
(TP) Totally Protected: 3 species (P) Protected: 5 species (NP) Not Protected: 4 species	(Cr) Critically endangered: 0 (En) Endangered: 0 (Vu) Vulnerable: 0 (Nt) Near Threatened: 2 species (Lc) Least Concern: 10 species	(CR) Critically endangered: 0 (EN) Endangered: 2 species (VU) Vulnerable: 2 species (NT) Near Threatened: 0 (LC) Least Concern: 8 species

## Reptiles



Protection Status Wildlife Conservation Act 2010 (Act 716)	IUCN-Red List Status IUCN Red List of Threatened Species (2020)
(TP) Totally Protected: 1 species (P) Protected: 17 species (NP) Not Protected: 9 species	(CR) Critically endangered: 0 (EN) Endangered: 0 (VU) Vulnerable: 3 species (NT) Near Threatened: 0 (LC) Least Concern: 24 species

## Amphibians

11 species recorded and falls under Least Concern in IUCN Red List



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## SOCIO ECONOMY

### Demographic Characteristics in Mukim Bebar, District Pekan

Statistics		Mukim Bebar	District Pekan
Number of households		3,545	6,353,470
Number of housing settlements		3,972	7,346,910
Total population		16,905	105,587
Gender	Male	53.50%	52.34%
	Female	46.70%	47.66%
Ethnic compositions	Bumiputera	15,280	50,327
	China	145	97,199
	India	81	1,340
	Others	8	380
	Non-Malaysian	1,391	1,446
Age group	0 - 14 years old	5,771	33,202
	15 - 64 years old	10,446	67,235
	> 65 years old	688	5,150

- The proposed project did not fall under the roaming area of indigenous peoples. All of the respondents were Malay community. Majority are farmers, fishermen, government servants and also working in factories or private sectors.
- Most of the respondents have agreed positively of this proposed project, as it can provide job opportunities (77.3%) and can reduce the income gap of the population (75.8%). They also strongly agree that the project can improve the downstream industry and the agricultural industry (33.3%).



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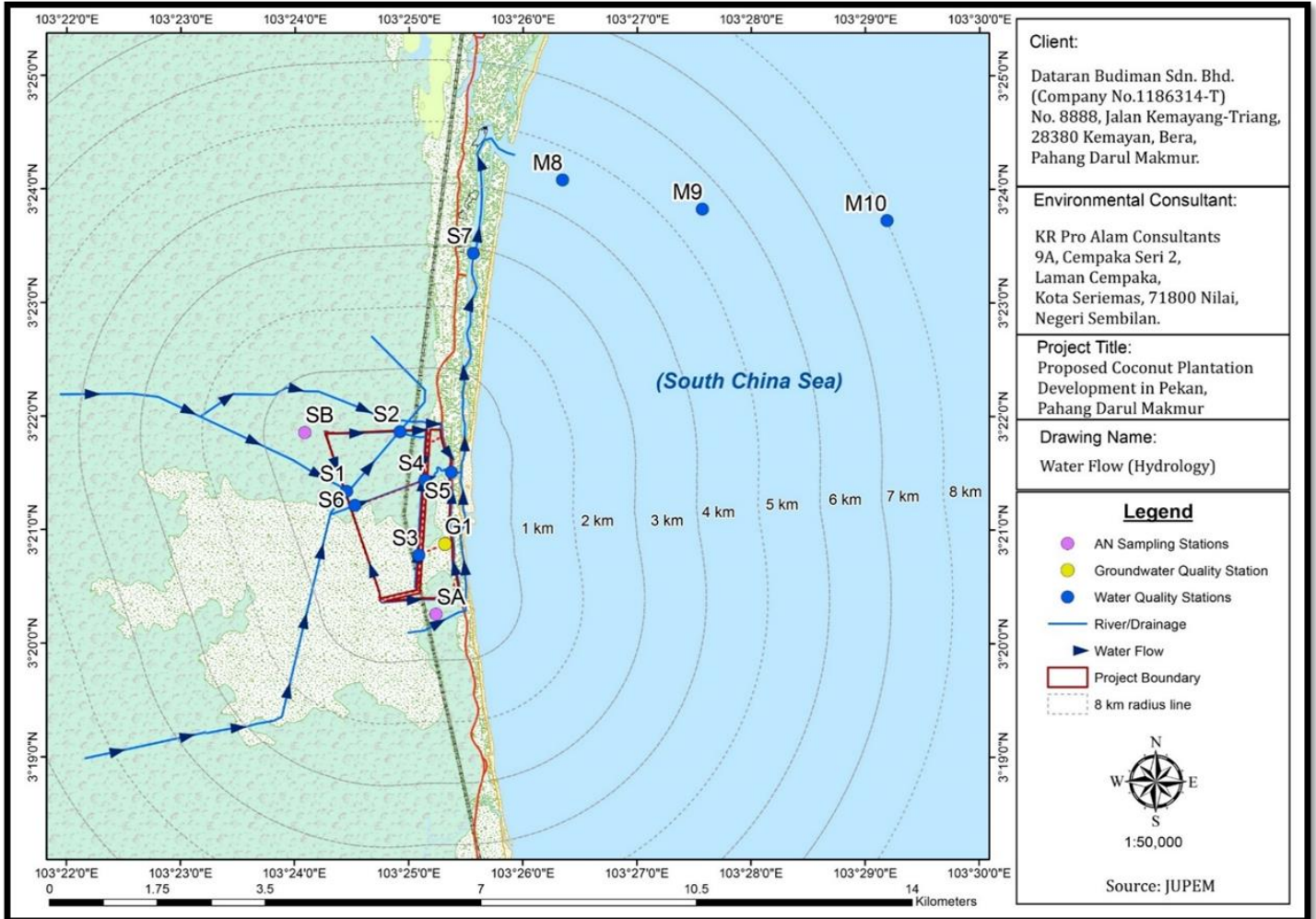
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## Sampling Points



Sampling Points for Groundwater (G1), Channel Water (S1, S2, S3, S4, S5, S6), Marine Water (M8, M9, M10), Noise and Air Quality (SA, SB)



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## POTENTIAL IMPACT ASSESSMENT & MITIGATION MEASURES

### Phase: During Construction

Potential Impacts	Mitigation Measures
Soil erosion and sediment deposition from land clearing activities	Clearing will be done in stages
Water quality impacts from surface runoff and sedimentation	2 sediment ponds will be constructed to trap the sediment
Changes to hydrology and bed erosion of watercourses	Weir will be constructed at the channel to monitor water level
Vegetation loss and loss of habitat for fauna	Seek consultation with the PERHILITAN for any human-wildlife conflict
Short-term impact on air quality will be caused due to airborne dust during land clearing activities and pollutants produced by vehicles	Open burning is strictly prohibited

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## POTENTIAL IMPACT ASSESSMENT & MITIGATION MEASURES

### Phase: During Operation and Maintenance

Potential Impacts	Mitigation Measures
There will be no significant impact on flora	Coconut tree have been planted and cover crop will be fully grown and established
Conflicts human and wildlife that wanders through the plantation	Project Proponent shall seek consultation with the PERHILITAN
Soil erosion and sedimentation will be insignificant	<ul style="list-style-type: none"><li>• Soil will be stabilized due to the existence of plant cover and coconut have been planted</li><li>• River riparian buffer zone will be preserved</li></ul>
Hydrology impact will be insignificant	Proper water management with weir construction
Positive impact to the local society and upgrade their livelihood	Create more job opportunities to the local people



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## Descriptions of Performance Monitoring

LD-P2M2 Tools	Performance Monitoring Parameters	Standard/ Recommendation	Monitoring Location	Frequencies
Weir	TSS	50 mg/L	Refer to <b>Figure 5.6</b> in the report	Regularly or after heavy rain ( <i>in-situ</i> )
	Turbidity	50 NTU		
Collection Road and Main Road	Structure	-	Refer to proposed overall LD-P2M2 Layout Plan ( <b>Figure 8.2</b> in the report)	Quarterly
Field Drain, Collection Drain & Main Drain with Stop Bund	Structure & Performance			Quarterly
Wash Through	Sedimentation		Entrance	Regularly
Temporary/Permanent waterway crossings (culvert)	Structure & Performance		-	Quarterly
Riparian Zone (cover crops/ mulching)	Channel Buffer		No clearing activities	5 meters riparian zone

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## Descriptions of Compliance Monitoring

Component	Parameters	Compliance/ Standard	Monitoring Location	Frequencies
<b>During Construction</b>				
Air Quality	PM <sub>10</sub>	100 µg/m <sup>3</sup>	Refer <b>Figure 6.36</b> in the report	Quarterly
	PM <sub>2.5</sub>	35 µg/m <sup>3</sup>		
Noise Level	L <sub>Aeq</sub>	Day: 55 dBA Night: 50 dBA		Quarterly
<b>During Construction and Operation</b>				
Water Quality	Dissolved Oxygen (DO)	National Water Quality Standard for Malaysia (NWQSM), Department of Environment, Malaysia (DOE)	Refer <b>Figure 6.36</b> in the report	During Construction: Monthly
	pH			
	Temperature			
	Total Suspended Solids (TSS)			
	Turbidity			
	Biochemical Oxygen Demand (BOD)			During Operation: Quarterly
	Chemical Oxygen Demand (COD)			
	Ammonical Nitrogen			
	Nitrate			
	Phosphate			
	Faecal Coliform			
Pesticide				