

EXECUTIVE SUMMARY

THE PROPOSED 8,498.58 HECTARES (21,000 ACRES) OF LOGGING, OIL PALM PLANTATION AND AGROFORESTRY DEVELOPMENT IN PRIVATE LAND BUKIT BATU PUTIH (PT1227), MUKIM KERATONG, DISTRICT OF ROMPIN, PAHANG DARUL MAKMUR

PROJECT PROPONENT
YP OLIO SDN BHD

EIA CONSULTANT
ECO SYNERGY SOLUTION SDN BHD

INTRODUCTION

The project proponent is YP Olio Sdn Bhd. The project has been approved by MMK Pahang, 20/2017 dated on 19 July 2017 to YP Olio Sdn Bhd as a land owner to develop agriculture area covering about 8,498.58 hectares (21,000 acres).

LEGAL REQUIREMENT

Subject to section 34A (1) of the Environmental Quality Act 1974 [127] and Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015, the project site fall under Second Schedule:

First Schedule: Activity 13 Development in Slope Area:
Development or land clearing less than 50 per cent of an area with slope greater than or equal to 25° but less than 35°

Second Schedule: Activity 1(a) Agriculture:
Land development schemes covering an area of 500 hectares or more to bring forest into agricultural production

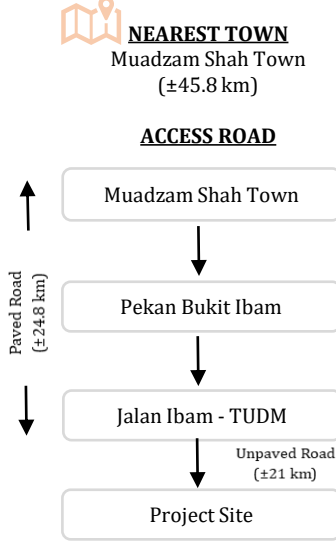
Activity 5 (c) Forestry:
Logging or cutting or taking of timber from forest at 300 meters or more above mean sea level covering an area of 100 hectares or more, outside permanent reserved forest

Activity 5 (d) Forestry:
Logging or cutting or taking of timber covering an area of 500 hectares or more

PUBLIC ACCEPTANCE



ACCESS ROAD



PROJECT ACTIVITIES

During Logging

- Construction of road and drainage system
- Installation of erosion and sedimentation control tools
- Construction of base camp
- Construction of log yard
- Extraction of timber
- Transport logs onto trucks
- Transport logs to log yard
- Transport logs to sawmill
- Biomass management

Post Logging

- Demolition of base camp and log yard
- Removal of machineries, vehicles and waste from concession

Plantation Development

- Nursery Establishment and Construction of Quarters and Site Office
- Site Preparation
- Maintenance
- Harvesting

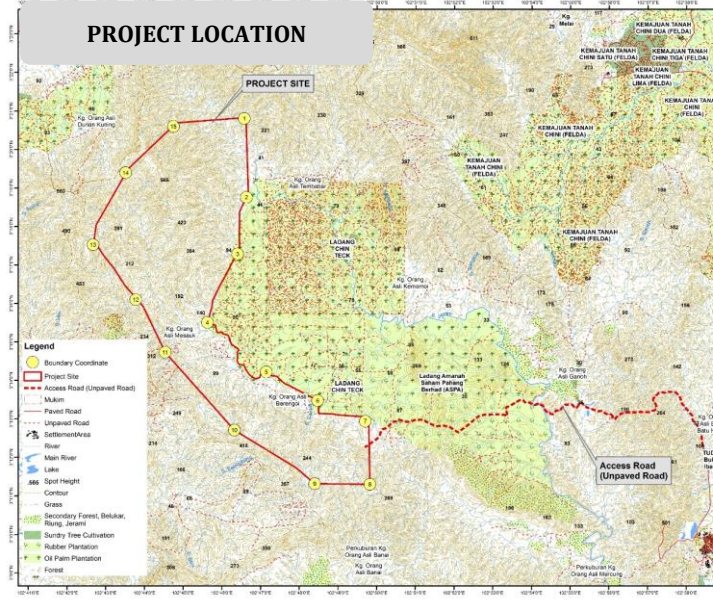
PROJECT DESCRIPTION

- The Project site is in Private Land Bukit Batu Putih, Mukim Keratong, District of Rompin, Pahang Darul Makmur
- The human settlement identified within 5 km radius are KOA Berenggoi, KOA Mesauk, KOA Banai, KOA Tembabar and KOA Durian Kuning.
- Water intake point for Muadzam Shah Water Treatment Plant located approximately ±50 km from the Project site. Water quality modelling has been conducted to estimate the TSS load and recommendation of mitigation measures will be proposed.

WATER QUALITY

- There are thirty one (31) water quality station
- Based on the calculations of the WQI, it shows that the range of WQI on September 2019 is in between 72.95 and 97.76
- Based on the calculations of the WQI, it shows that the range of WQI on Dec/Jan 2020 is in between 81.50 and 94.05

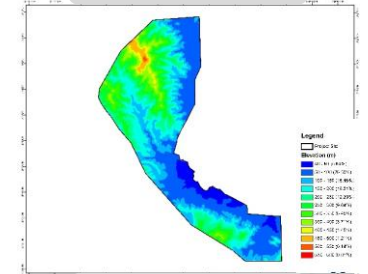
PROJECT LOCATION



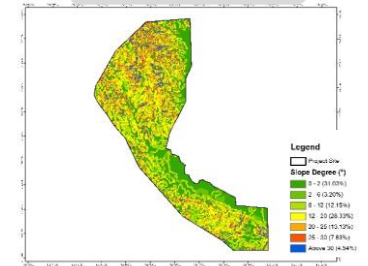
PROJECT SITE CONDITION



ELEVATION



SLOPE ANALYSIS



FAUNA STUDY

Mammals
11 species

Avian
34 species

Herpetofauna
9 species



Footprint of Leopard Cat



Long-tailed Macaque

WILDLIFE FOUND ON CAMERA TRAP



Tapir



Sun Bear



Malayan Porcupine

FLORA STUDY

Ten dominant family at the project site

Family	No of Genus	No of Species
Rubiaceae	16	21
Leguminosae	14	21
Annonaceae	10	19
Dipterocarpaceae	4	18
Euphorbiaceae	6	17
Clusiaceae	4	15
Malvaceae	10	14
Anacardiaceae	9	14
Bursaceae	4	14
Phyllanthaceae	6	10

ASSESSMENT FINDING WITHIN PROJECT SITE



Pavetta graciliflora



Pternandra echinata

IMPACT MONITORING (IM)

Component	Regulated Parameters	Frequencies
*Air Quality	PM ₁₀	Quarterly
**Noise	L_{max} L_{min}	Quarterly
***Water Quality	Total Suspended Solids (TSS)	Monthly
	Biochemical Oxygen Demand (BOD)	
	pH	
	Temperature	
	Turbidity	
	Ammoniacal Nitrogen (NH ₃ -N)	
	Dissolved Oxygen (DO)	
	Total Coliform	
	Chemical Oxygen Demand (COD)	

PERFORMANCE MONITORING (PM)

LD-P2M2 Tools	Performance Monitoring (PM) Parameters	Recommended Limit	Frequencies
Sediment Trap	Silt Marker	2/3 depth from sediment trap	Weekly or after rain event (in-situ)
Perimeter Drain	Performance		
River Buffer Cover Crop			
Earth Drain with Check Dam	Sediment Level		Quarterly
Temporary or permanent waterway crossing (culvert/bridge)	Structure and Performance		

COMPLIANCE MONITORING (CM)

Component	Regulated Parameters	Applicable Standards	Frequencies
**Noise	L_{max}	Day: 55 dBA Night: 50 dBA	Quarterly
***Water Quality (Discharged from Sediment Trap)	Total Suspended Solids (TSS)	50 mg/L	After 12.5 mm rainfall (using rain gauge)
	Turbidity	250 NTU	

POTENTIAL IMPACT AND MITIGATION MEASURES

Significant Potential Impacts	Magnitude Of Significant Potential Impacts	P2M2
1) Soil erosion and sedimentation 2) Reduce river depth/drain capacity 3) Declining water quality level	High	<ul style="list-style-type: none"> Scheduling of the development. Plant cover crop. Prepare silt trap, and sediment basin. Retain buffer zone.
Waste Generation a) Biomass waste b) Solid waste c) Scheduled waste	High	<ul style="list-style-type: none"> No open burning. Provide garbage bins. Composting waste approach. Proper storage area.
1) Habitat-Fragmentation. 2) Human-Wildlife Conflict	High	<ul style="list-style-type: none"> Phasing/Directional development. Wildlife-Human conflict management strategies. Report incident. Prohibition of wildlife poaching Signage on prohibition of wildlife hunting or trapping.
Declining Air Quality Level	Medium	<ul style="list-style-type: none"> Spraying water on road (water bowser) Apply crusher run for unsealed road
Noise Pollution	Low	<ul style="list-style-type: none"> Use quieter and/or silence machineries. Use proper personal protection equipment (PPE) on site with ear plug. Regularly servicing and maintaining vehicles and machineries.
Nuisance During Project Abandonment	Medium	<ul style="list-style-type: none"> Preparing Project Abandonment Plan. Warning signage to be installed. Removes vehicles involved in the Project development. Initiate environmental control measures. Regular inspections on site.

RINGKASAN EKSEKUTIF

CADANGAN AKTIVITI PEMBALAKAN, PENANAMAN KELAPA SAWIT DAN PEMBANGUNAN AGROPERHUTANAN SELUAS 8,498.58 HEKTAR (21,000 EKAR) DI TANAH PERSENDIRIAN BUKIT BATU PUTIH (PT12227), MUKIM KERATONG, DISTRICT OF ROMPIN, PAHANG DARUL MAKMUR

PENGGERAK PROJEK
YP OLIO SDN BHD

PERUNDING EIA
ECO SYNERGY SOLUTION SDN BHD

PENGENALAN

Penggerak projek adalah YP Olio Sdn Bhd. MMK Pahang ke 20/2017 bertarikh 19 Julai 2017 telah memberi kelulusan kepada YP Olio Sdn Bhd sebagai pemilik tanah untuk membangunkan kawasan pertanian seluas 8,498.58 hektar (21,000 ekar).

KEPERLUAN UNDANG-UNDANG

Tertakluk kepada Akta Kualiti Alam Sekeliling 1974 (Akta 127) dan Perintah Kualiti Alam Sekeliling (Aktiviti Yang Ditetapkan) (Penilaian Kesan Kepada Alam Sekeliling) 2015: tapak cadangan projek jatuh pada **Jadual Kedua**:

Jadual Pertama: Aktiviti 13 Pembangunan di Kawasan Cerun: Pembangunan atau pembersihan tanah yang meliputi kawasan yang kurang daripada 50 peratus kawasan cerun yang berkecerunan melebihi atau sama dengan 25° tetapi kurang daripada 35°

Aktiviti 5 (c) Perhutanan: Pembalakan atau penebangan atau pengambilan kayu dari hutan pada ketinggian 300 meter atau lebih di atas purata aras laut yang meliputi kawasan seluas 100 hektar atau lebih, di luar kawasan hutan simpan kekal

Aktiviti 5 (d) Perhutanan: Pembalakan atau penebangan atau pengambilan kayu yang meliputi kawasan 500 hektar atau lebih

JALAN AKSES

BANDAR TERDEKAT
Bandar Muadzam Shah
(±45.8 km)

JALAN AKSES

Bandar Muadzam Shah

Pekan Bukit Ibam

Jalan Ibam - TUDM

Tapak Projek

AKTIVITI PROJEK

Jalan berturap
(±24.8 km)

Jalan tidak berturap
(±21 km)

Semasa Pembalakan

- Pembinaan jalan dan sistem perparitan
- Pemasangan alat kawalan hakisan dan pemendapan
- Pembinaan rumah pekerja
- Pembinaan matau
- Pengekstrakan kayu
- Mengangkut balak ke lori
- Mengangkut balak ke matau
- Mengangkut balak ke sawmill
- Pengurusan biomas

Selepas Pembalakan

- Perobohan rumah pekerja sementara dan matau
- Membawa mesin, kenderaan dan sisa keluar dari tapak projek

Penubuhan Ladang Hutan

- Penubuhan tapak semaian dan Pembinaan Kuarters dan Pejabat Tapak
- Penyediaan tapak
- Penyelenggaraan
- Penuaian

PERATUSAN PENERIMAAN



KETERANGAN PROJEK

- Tapak projek terletak di tanah persendirian Bukit Batu Putih (PT12227), Mukim Keratong, Daerah Rompin, Pahang Darul Makmur
- Terdapat beberapa kawasan perunahan terletak di dalam radius 5 km iaitu KOA Berenggoi, KOA Mesauk, KOA Banai, KOA Tembar dan KOA Durian Kuning.
- Takat pengambilan air yang terdekat adalah Loji Rawatan Air Muadzam Shah yang terletak kira-kira ±50 km dari tapak projek. Permodelan kualiti air telah dilakukan untuk menganggar nilai TSS dan mencadangkan langkah mitigasi.

Jalan berturap
(±24.8 km)

KUALITI AIR

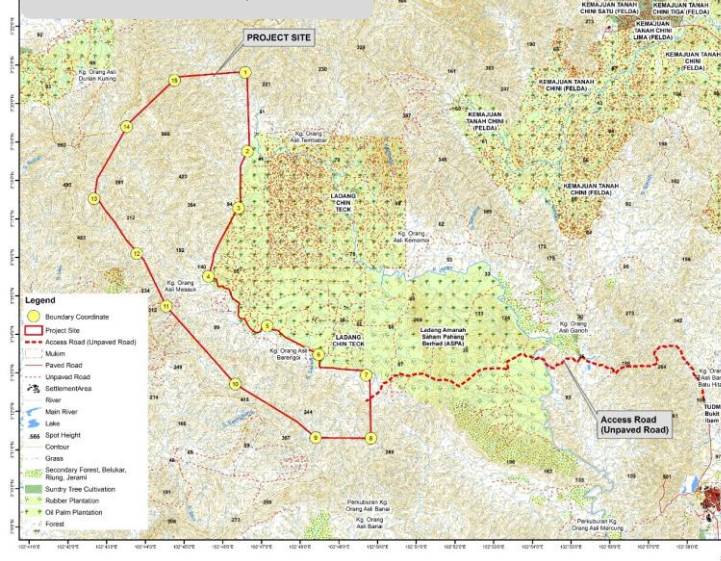
- Terdapat tiga puluh satu (31) stesen kualiti air
- Berdasarkan pengiraan WQI, WQI pada September 2019 adalah di antara 72.95 dan 97.76
- Berdasarkan pengiraan WQI, WQI pada Dec/Jan 2020 adalah di antara 81.50 dan 94.05

KAJIAN FLORA

10 keluarga dominan di tapak projek

Family	No of Genus	No of Species
Rubiaceae	16	21
Leguminosae	14	21
Annonaceae	10	19
Dipterocarpaceae	4	18
Euphorbiaceae	6	17
Clusiaceae	4	15
Malvaceae	10	14
Anacardiaceae	9	14
Burseraceae	4	14
Phyllanthaceae	6	10

LOKASI PROJEK



METEOROLOGI

Stesen Muadzam Shah
Purata Tahunan Hujan:
2350.5 mm

Purata Bulanan Suhu:
Max - 27.6%
Min - 26.0%

Purata Bulanan Kelembapan:
Tertinggi - 87.1°C
Terendah - 81.8°C

KAJIAN FAUNA

Mamalia
11 spesies

Burung
34 spesies

Herpetofauna
9 spesies



Tapak kaki kucing batu
Kera

HIDUPAN LIAR YANG TERTANGKAP MELALUI PERANGKAP KAMERA



Tapir

Beruang

Landak Raya

PENEMUAN FLORA DALAM TAPAK PROJEK



Pavetta graciliflora

Pternandra echinata

KEADAAN TAPAK PROJEK

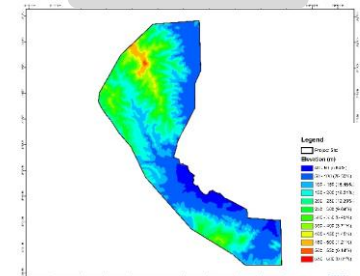


Utara
(16/10/2019)

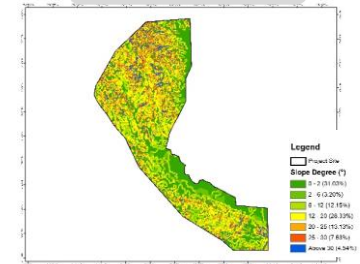


Tenggara
(17/12/2020)

KETINGGIAN



ANALISA KECECERAN



POTENSI IMPAK DAN LANGKAH MITIGASI

Potensi Impak Penting	Magnitud Kesan Berpotensi Signifikan	P2M2
1. Hakisan tanah dan pemendapan 2. Mengurangkan kedalaman sungai/ kapasiti parit 3. Penurunan tahap kualiti air	Tinggi	<ul style="list-style-type: none"> Pembangunan secara berjadual dan berperingkat. Tanam tanaman tutup bumi. Peraksanaan Konsep gangguan Tanah - Pencegahan Pencemaran dan Langkah- Langkah Mitigasi (LD-P2M2). Mengekalkan zon penampungan di kawasan sungai.
Penjanaan Sisa a) Sisa Biojisim b) Sisa Pepejal c) Sisa Buangan Terjadual	Tinggi	<ul style="list-style-type: none"> Tiada pembakaran terbuka Menyediakan tong sampah. Menggunakan kaedah perkomposan sisa. Kawasan penyimpanan sisa yang baik.
1) Pemecahan Habitat 2) Konflik manusia-hidupan liar	Tinggi	<ul style="list-style-type: none"> Pembangunan secara berperingkat / berarah. Strategi pengurusan konflik kehidupan liar- manusia. Laporkan sebarang kejadian. Larangan pemburuan kehidupan liar. Papan tanda tentang larangan memburu dan memerangkap kehidupan liar.
Penurunan Tahap Kualiti Udara	Sederhana	<ul style="list-style-type: none"> Menyembur air ke atas jalan. Penggunaan <i>crusher run</i> untuk jalan tidak berturap.
Pencemaran Bunyi	Rendah	<ul style="list-style-type: none"> Menggunakan mesin yang lebih senyap/tidak berbunyi. Penggunaan alatan perlindungan diri yang sempurna dengan <i>ear plug</i> di kawasan tapak. Melakukan penyelenggaraan kenderaan dan mesin yang terlibat dalam tapak Projek dengan kerap.
Gangguan Semasa Peninggalan Projek	Sederhana	<ul style="list-style-type: none"> Menyediakan Pelan Peninggalan Projek. Papan tanda amaran hendaklah dipasang. Membawa keluar kenderaan yang terlibat semasa pembangunan projek. Memulakan langkah pengawalan alam sekitar. Kekerapan pemeriksaan di tapak Projek.

PEMANTAUAN IMPAK(IM)

Komponen	Parameter Yang Dikawal Selia	Kekerapan
Kualiti Udara	PM ₁₀	Tiga bulan sekali
	LAeq Lmax	Tiga bulan sekali
Bunyi	Lmin	
	Jumlah Pepejal Terampai (TSS) Keperluan Oksigen Biokimia (BOD) Suhu Total Coliform pH Kekeruhan Oksigen Terlarut (DO) Keperluan Oksigen Kimia (COD)	

PEMANTAUAN PRESTASI (PM)

Komponen LD-P2M2	Parameter Pemantauan Prestasi	Had Yang Dicadangkan	Kekerapan
Kolam Mendapan	Penanda Mendapan (Silt Marker)	2/3 kedalaman kolam mendapan	Setiap minggu atau selepas hujan (<i>in-situ</i>)
Parit Perimeter	Prestasi		Setiap 3 bulan
Parit Tanah bersama Check Dam	Paras Mendapan		
Laluan air sementara atau kekal (jambatan/culvert)	Struktur dan Prestasi		

PEMANTAUAN PEMATAHAN (CM)

Komponen	Parameter Yang Dikawal Selia	Standard Yang Digunapakai	Kekerapan
Bunyi	LAeq	Siang 55 dBA Malam 50 dBA	Tiga bulan sekali
	Kualiti Air	Jumlah Pepejal Terampai (TSS)	50 mg/L
Kekeruhan		250 NTU	