

ENVIRONMENTAL IMPACT ASSESSMENT REPORT

EXECUTIVE SUMMARY



PROJECT PROPONENT

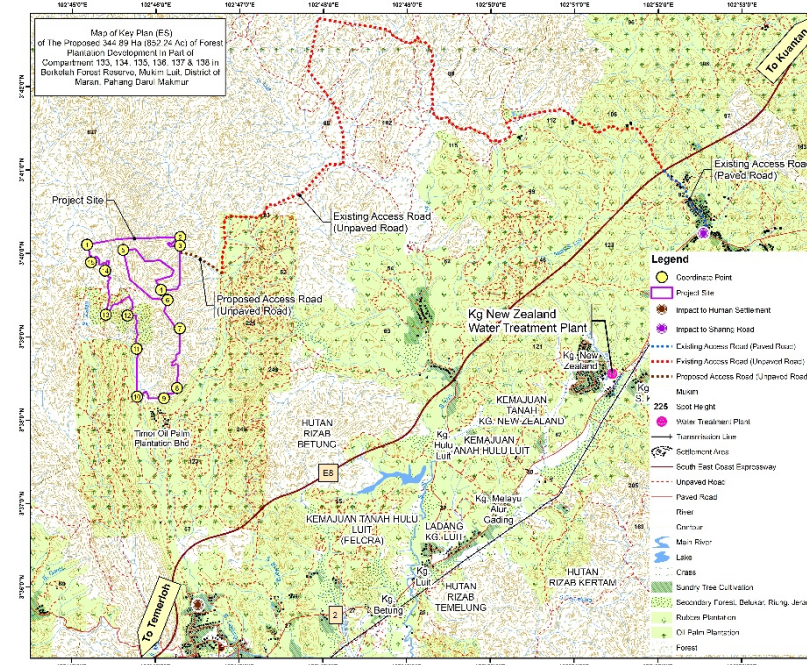
SINAR MAHAWANGSA SDN BHD



EIA CONSULTANT

EKO SYNERGY SOLUTIONS SDN BHD

PROJECT LOCATION



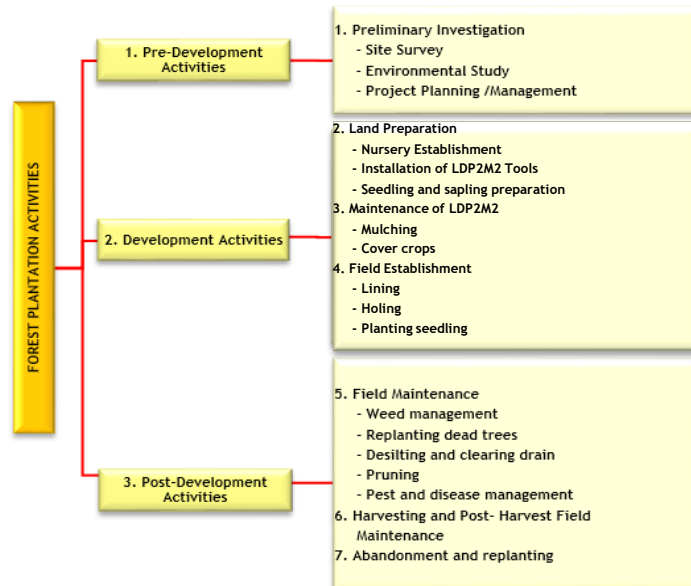
THE PROPOSED 344.89 HECTARES (852.24 ACRES) OF FOREST PLANTATION DEVELOPMENT IN PART OF COMPARTMENT 133, 134, 135, 136, 137 AND 138 OF BERKELAH FOREST RESERVE, MUKIM LUIT, DISTRICT OF MARAN, PAHANG DARUL MAKMUR

PROJECT DESCRIPTIONS

- 01** The Project site is located in part of compartment 133, 134, 135, 136, 137 and 138 of Berkelah Forest Reserve in Mukim Luit, District of Maran, Pahang Darul Makmur
- 02** The nearest town is Maran Town which is approximately ±15.9km from the project site boundary
- 03** The Project will develop a Forest Plantation Development covering an area of about 344.89 hectares
- 04** The nearest settlement area which are Kampung Berkat, Kampung Ulu Luit, Kampung Orang Asli Batu 55 and Kampung Seri Jaya located approximately ±4.28 km, ±5.04 km, ±4.0 km, and ±11.90 km from the project site.

LEGAL REQUIREMENT

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



PERFORMANCE MONITORING (PM)

LD-P2M2 Tools	Parameters	Recommended
Sediment Basin/Trap	Silt Marker	2/3 depth from sediment trap
Perimeter Drain	Performance	After rain event (in-situ)
Earth Drain with Check Dam	Sediment Level	Subjected to CoA
Temporary or permanent waterway crossing (culvert/bridge)	Structure and Performance	

ACCESS ROAD



The project site can be accessed by traversing from Maran town by using Route 2 for about ±15.90 km. Then, turn left onto Sri Jaya Junction and continue straight for about ±1.60 km. The Project site can be reached using the old existing logging road and proposed access road for about ±20.64 km and ±1.06 km.

POTENTIAL IMPACTS AND MITIGATION MEASURES

SIGNIFICANT POTENTIAL IMPACTS	MITIGATION MEASURES
1) Soil erosion and sedimentation 2) Reduce river depth/drain capacity 3) Declining water quality level	<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	<ul style="list-style-type: none"> No open burning. Apply air curtain burner. Provide garbage bins. Composting waste approach. Proper storage area.
1) Habitat-Fragmentation. 2) Human-wildlife Conflict	<ul style="list-style-type: none"> Phasing/Directional clearing. Wildlife-Human conflict management strategies. Report incident. Prohibition of wildlife poaching Signage on prohibition of wildlife hunting or trapping.
Declining Air Quality Level	<ul style="list-style-type: none"> Spraying water on road (water bowser) Provide wash through Apply crusher run for unsealed road
Noise Pollution	<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	<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.

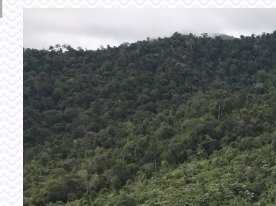
COMPLIANCE MONITORING (CM)

Component	Standard	Frequency
Noise (LAeq)	Day 55 dBA, Night 50 dBA	Subjected to CoA
Water Quality	50 mg/L TSS, 250 NTU Turbidity	After 12.5 mm rainfall (using rain gauge)
Air Quality	100 µg/m³	Subjected to CoA

IMPACT MONITORING (IM)

Impact	Parameter	Limit	Standards	Frequency
Air Quality Level	PM ₁₀	100 µg/m³	Malaysia Ambient Air Quality Standard 2020	Subjected to CoA
Noise Quality Level	LAeq, Lmax, Lmin	Day 55 dBA, Night 50dBA	Guidelines for Environmental Noise Limits and Control, 2019	Subjected to CoA
Water Quality Level	TSS	50 mg/L	National Water Quality Standard (NWQS)	Subjected to CoA
	BOD	3 mg/L		
	pH	6.0~9.0		
	Turbidity	250 NTU		
	DO	5~7 mg/L		
	COD	25 mg/L		

EXISTING CONDITIONS



FLORA SPECIES FOUND	FAUNA SPECIES RECORDED
<ul style="list-style-type: none"> <i>Thottea grandiflora</i> <i>Diospyros nutans</i> <i>Grewia laevigata</i> <i>Plocoglossis</i> 	<ul style="list-style-type: none"> Avian: 105 species Mammals: 22 species Herpetofauna: 20 species

EXISTING ENVIRONMENT

NOISE LEVEL RESULT		
Station	Time	Level (dB)
N1	Daytime	21.3
	Nighttime	45.9
N2	Daytime	55.1
	Nighttime	46.9
N3	Daytime	57.2
	Nighttime	48.7
N4	Daytime	59.5
	Nighttime	49.3

AIR QUALITY RESULT (PM10)	PM 10	PM 2.5
A1	27.0	10.0
A2	42.0	22.0
A3	39.0	20.0
A4	35.0	16.0

Station	WQI	Class	Status
WQ1	85.04	II	Clean
WQ2	93.97	I	Clean
WQ3	94.42	I	Clean
WQ4	94.37	I	Clean
WQ5	95.65	I	Clean
WQ6	93.95	I	Clean
WQ7	93.22	I	Clean
WQ8	92.93	I	Clean
WQ9	91.36	II	Clean
WQ10	85.34	II	Clean
WQ11	81.65	II	Clean
WQ12	91.08	II	Clean
WQ13	91.63	II	Clean
WQ14	91.42	II	Clean
WQ15	91.15	II	Clean
WQ16	90.85	II	Clean

LAPORAN PENILAIAN KESAN KEPADA ALAM SEKELILING

RINGKASAN EKSEKUTIF

THE PROPOSED 344.89 HECTARES (852.24 ACRES) OF FOREST PLANTATION DEVELOPMENT IN PART OF COMPARTMENT 133, 134, 135, 136, 137 AND 138 OF BERKELAH FOREST RESERVE, MUKIM LUIT, DISTRICT OF MARAN, PAHANG DARUL MAKMUR



PENGERAK PROJEK

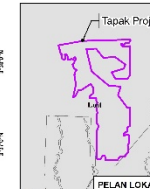
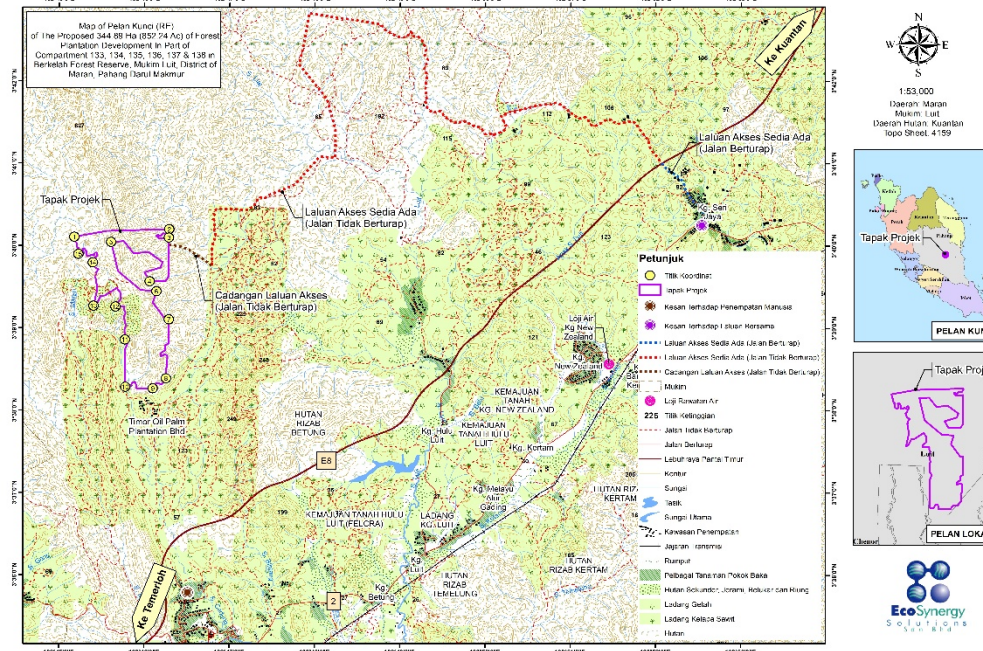
SINAR MAHAWANGSA SDN BHD



PERUNDING EIA

ECO SYNERGY SOLUTIONS SDN BHD

LOKASI PROJEK



Sumber: Jabatan Utar dan Penilaian Malaysia (JUPPM)

PEMANTAUAN PRESTASI (PM)

Komponen LD-P2M2	Parameter	Syor
Perangkap Kelodak/Kolam Perangkap Mendapan	Penanda Aras Mendapan Kelodak	2/3 kedalaman perangkap kelodak
Parit Perimeter	Prestasi	Selepas hujan (in-situ)
Parit tanah berserta Check Dam	Aras Mendapan	Mengikut syarat kelulusan
Laluan lintasan air sementara atau kekal (pembetung/jambatan)	Struktur & Prestasi	

PEMANTAUAN PEMATUHAN (CM)

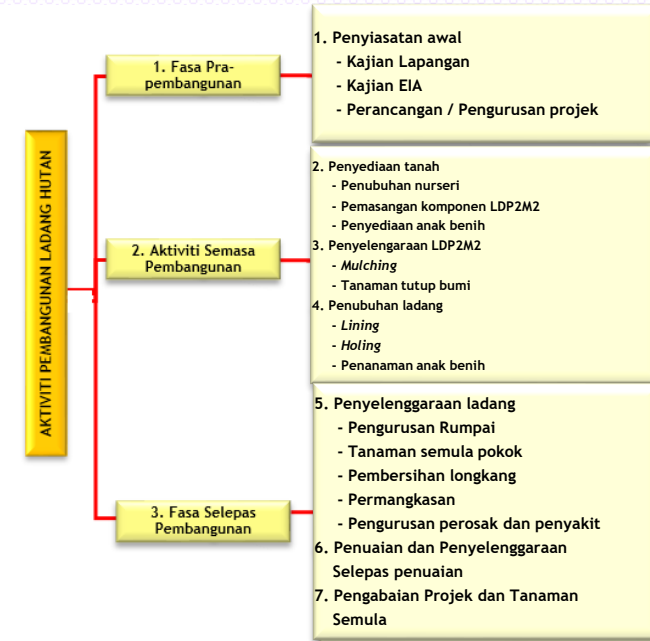
Komponen	Piawaiian	Kekerapan
Bunyi (L _{aeq})	Siang 55 dBA, Malam 50 dBA	Mengikut syarat kelulusan
Kualiti Air	50 mg/L	Mengikut syarat kelulusan
Jumlah Pepejal Terampai	250 NTU	
Kekeruhan	250 NTU	Mengikut syarat kelulusan
Kualiti Udara	100 µg/m ³	

PEMANTAUAN IMPAK (IM)

Impak	Parameter	Had	Piawaiian	Kekerapan
Tahap Kualiti Udara	PM ₁₀	100 µg/m ³	Malaysia Ambient Air Quality Standard 2020	Mengikut syarat kelulusan
Tahap Kualiti Bunyi	LA _{eq} L _{max} L _{min}	Siang 55 dBA, Malam 50 dBA	Guidelines for Environmental Noise Limits and Control, 2019	Mengikut syarat kelulusan
Tahap Kualiti Air	TSS	50 mg/L	National Water Quality Standard (NWQS)	Mengikut syarat kelulusan
	BOD	3 mg/L		
	pH	6.0~9.0		
	Turbidity	250 NTU		
	DO	5~7 mg/L		
	COD	25 mg/L		

KEPERLUAN UNDANG-UNDANG

"Aktiviti 5(e) Perhutanan: Pembangunan ladang hutan yang meliputi kawasan seluas 100 hektar atau lebih tetapi kurang daripada 500 hektar."



- 1. Penyiasatan awal**
 - Kajian Lapangan
 - Kajian EIA
 - Perancangan / Pengurusan projek
- 2. Penyediaan tanah**
 - Penubuhan nurseri
 - Pemasangan komponen LDP2M2
 - Penyediaan anak benih
- 3. Penyelenggaraan LDP2M2**
 - Mulching
 - Tanaman tutup bumi
- 4. Penubuhan ladang**
 - Lining
 - Holing
 - Penanaman anak benih
- 5. Penyelenggaraan ladang**
 - Pengurusan Rumpai
 - Tanaman semula pokok
 - Pembersihan longkang
 - Permangkasan
 - Pengurusan perosak dan penyakit
- 6. Penuaian dan Penyelenggaraan Selepas penuaian**
- 7. Pengabaian Projek dan Tanaman Semula**

IMPAK KETARA DAN LANGKAH KAWALAN

IMPAK KETARA	LANGKAH KAWALAN
1) Hakisan dan Pemendapan Tanah	<ul style="list-style-type: none"> Penjadualan pembangunan Tanaman tutup bumi
2) Mengurangkan Kedalaman Sungai dan Kapasiti Parit	<ul style="list-style-type: none"> Sediakan perangkap kelodak dan kolam perangkap mendapan Kekalkan zon penampungan
3) Menurunkan Tahap Kualiti Air	<ul style="list-style-type: none"> Larangan pembakaran terbuka Menyediakan tong sampah Pendekatan pengkomposan sisa Sediakan tempat penyimpanan yang selamat
Penjanaan Sisa	<ul style="list-style-type: none"> Larangan pembakaran terbuka
a) Sisa biojisim	<ul style="list-style-type: none"> Menyediakan tong sampah
b) Sisa pepejal	<ul style="list-style-type: none"> Pendekatan pengkomposan sisa
c) Buangan terjadual	<ul style="list-style-type: none"> Sediakan tempat penyimpanan yang selamat
1) Pemecahan habitat	<ul style="list-style-type: none"> Pembangunan berfasa dan terarah
2) Konflik Manusia-Hidupan Liar	<ul style="list-style-type: none"> Pengurusan strategi konflik manusia-hidupan liar Laporan sebarang kejadian Larangan pemburuan haram Papan tanda larangan buru atau perangkap hidupan liar
Penurunan Tahap Kualiti Udara	<ul style="list-style-type: none"> Menyembur air di atas jalan Letakkan crusher run pada jalan tidak berturap
Pencemaran bunyi	<ul style="list-style-type: none"> Penggunaan mesin senyap. Penggunaan Personal Protection Equipment (PPE) di tapak projek. Kekerapan penyelenggaraan mesin.
Kacau Ganggu Ketika Pengabaian Projek	<ul style="list-style-type: none"> Sediakan Pelan Pengabaian Projek Pasang papan tanda amaran Alihkan semua kenderaan di dalam tapak Projek Mulakan langkah kawalan persekitaran Pemeriksaan yang kerap

- 01 Tapak projek terletak di Sebahagian Kompartmen 133, 134, 135, 136, 137 dan 138 di Hutan Simpan Berkelelah, Mukim Luit, Pahang Darul Makmur.
- 02 Bandar terdekat ialah Bandar Maran lebih kurang ±15.9 km dari tapak projek
- 03 Cadangan projek adalah pembangunan ladang hutan seluas 344.89 hektar.
- 04 Kawasan penempatan terdekat ialah Kampung Berkat, Kampung Ulu Luit, Kampung Orang Asli Batu 55 dan Kampung Seri Jaya terletak kira-kira ±4.28 km, ±5.04 km, ±4.00 km dan ±11.90 km dari sempadan tapak projek.

LALUAN AKSES

Kawasan tapak projek boleh diakses dari Bandar Maran melalui Route 2 sejauh ±15.90 km
 Kemudian, belok kiri ke simpang Sri Jaya dan jalan terus sejauh ±1.60 km
 Jalan akses ke tapak projek boleh dilalui melalui jalan balak lama dan jalan masuk yang dicadangkan sejauh ±20.64 km and ±1.06 km



- Burung:** 105 spesies
- Mamalia:** 22 spesies
- Amphibia/ Reptilia:** 20 spesies

PERSEKITARAN SEDIA ADA

KUALITI BUNYI			Stesen	WQI	Kelas	Status	
N1	Siang	21.3	WQ1	85.04	II	Bersih	
	Malam	45.9	WQ2	93.97	I	Bersih	
N2	Siang	55.1	WQ3	94.42	I	Bersih	
	Malam	46.9	WQ4	94.37	I	Bersih	
N3	Siang	57.2	WQ5	95.65	I	Bersih	
	Malam	48.7	WQ6	93.95	I	Bersih	
N4	Siang	59.5	WQ7	93.22	I	Bersih	
	Malam	49.3	WQ8	92.93	I	Bersih	
KUALITI UDARA	PM 10	PM 2.5	WQ9	91.36	II	Bersih	
			WQ10	85.34	II	Bersih	
	A1	27.0	10.0	WQ11	81.65	II	Bersih
	A2	42.0	22.0	WQ12	91.08	II	Bersih
	A3	39.0	20.0	WQ13	91.63	II	Bersih
	A4	35.0	16.0	WQ14	91.42	II	Bersih
				WQ15	91.15	II	Bersih
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