



EXECUTIVE SUMMARY

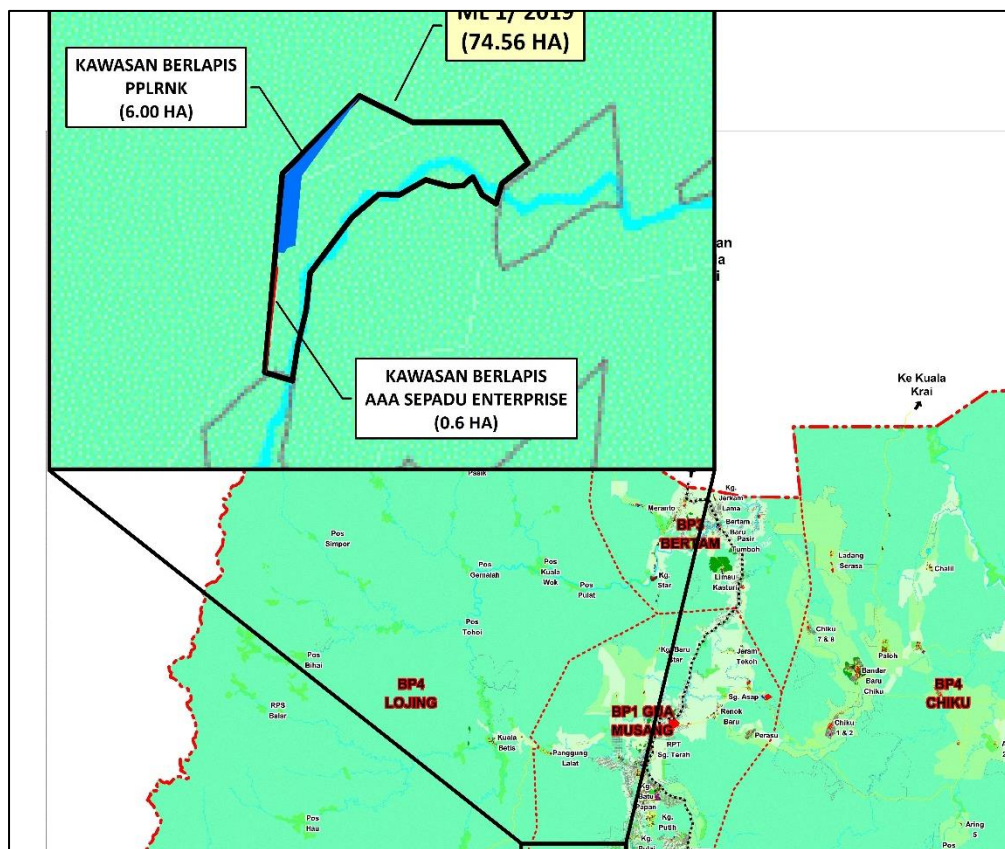
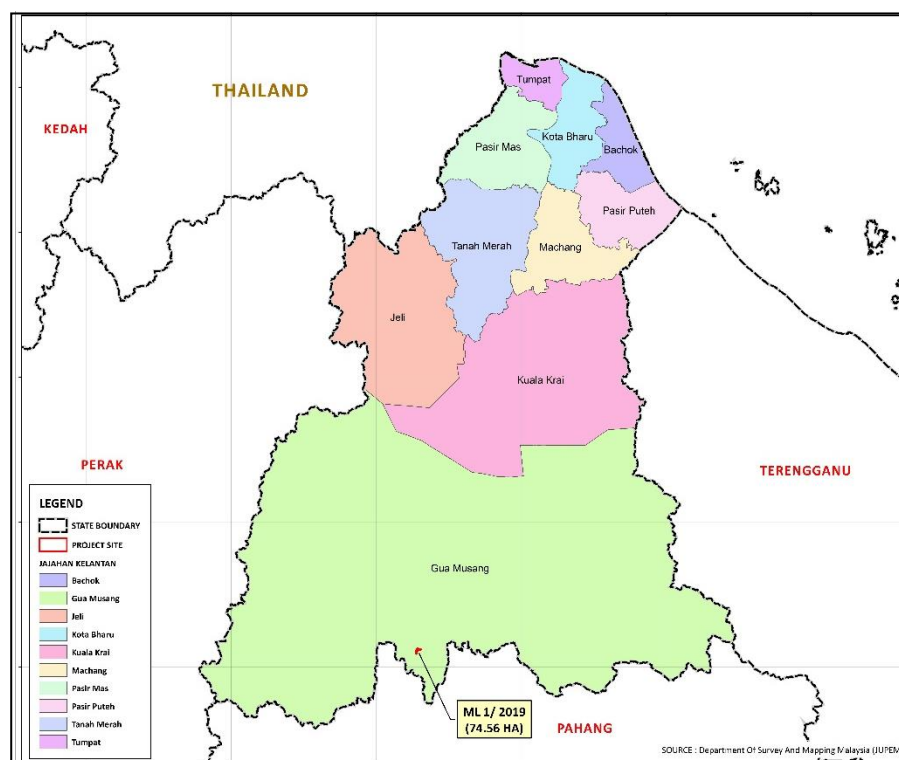
1.0 INTRODUCTION

Project Title:
"PROPOSED GOLD MINING (ALLUVIAL) AT ML1/2019 WITH AN AREA OF 74.56 HECTARES ON LOT 11840 AT HUTAN SIMPAN ULU GALAS, MUKIM PULAI, DAERAH GALAS, JAJAHAN GUA MUSANG, KELANTAN DARUL NAIM".- SCHEDULE 2"

Project Operation:
Gold Ore (Alluvial) Mining Project

Location:
Hutan Simpan Ulu Galas Mukim Pulai, Daerah Galas, Jajahan Gua Musang

Project size:
74.56 hectares




Based on **Rancangan Tempatan Gua Musang 2020 (Pengubahan Kali Ke-6: Bil. 1/2021)** under jurisdiction of PlanMalaysia Kelantan:

Located within **Blok Perancangan (BP) 1.13: Hutan Simpan Ulu Galas**, the zoning for the proposed project area is

FORESTRY

However, mining activity is permissible subject to approval from **state government and relevant authorities**.

2.0 PROJECT PROPONENT & ENVIRONMENTAL CONSULTANT

MINING CONTRACTOR (PROJECT PROPONENT)	MINING LEASEHOLDER	MINING OPERATOR	ENVIRONMENTAL CONSULTANT
<p>SYABAS DERAS SDN BHD B-882, Taman Tanah Merah, 17500 Tanah Merah, Kelantan</p> <p>Contact Person: Mr. Chin Tin Tse (Mine Manager)</p> <p>Tel. No.: 019-325 3998</p>	<p>GUGUSAN TIMUR SDN BHD 4706-C, Tingkat 1, Taman Maju, Jalan Long Yunus, 15200 Kota Bharu, Kelantan</p> <p>Contact Person: Mohd Mustaman Bin Che Yusoff (Managing Director)</p> <p>Tel. No.: 09-743812</p>	<p>S.A.H GLOBAL SDN BHD Lot 197-B, Tingkat 1, Seksyen 24, Jalan Sultan Yahya Petra, 15150 Kota Bharu, Kelantan</p> <p>Contact Person: Suhaili Bin Abdul Halim (Director)</p> <p>Tel. No: 013-973 9777</p>	 <p>NILAIMAS SERVICES (001953513-D) No.17, Jalan Equine 10D, Taman Equine, 43300 Seri Kembangan, Selangor</p> <p>Contact Person: Dato' Seri Ts. Hj. Mohd Nawahidudin Bin Mahamad Isa</p> <p>Tel/Fax:03-89409959 / 03-89409958 E-mail: nilaimas@gmail.com</p>

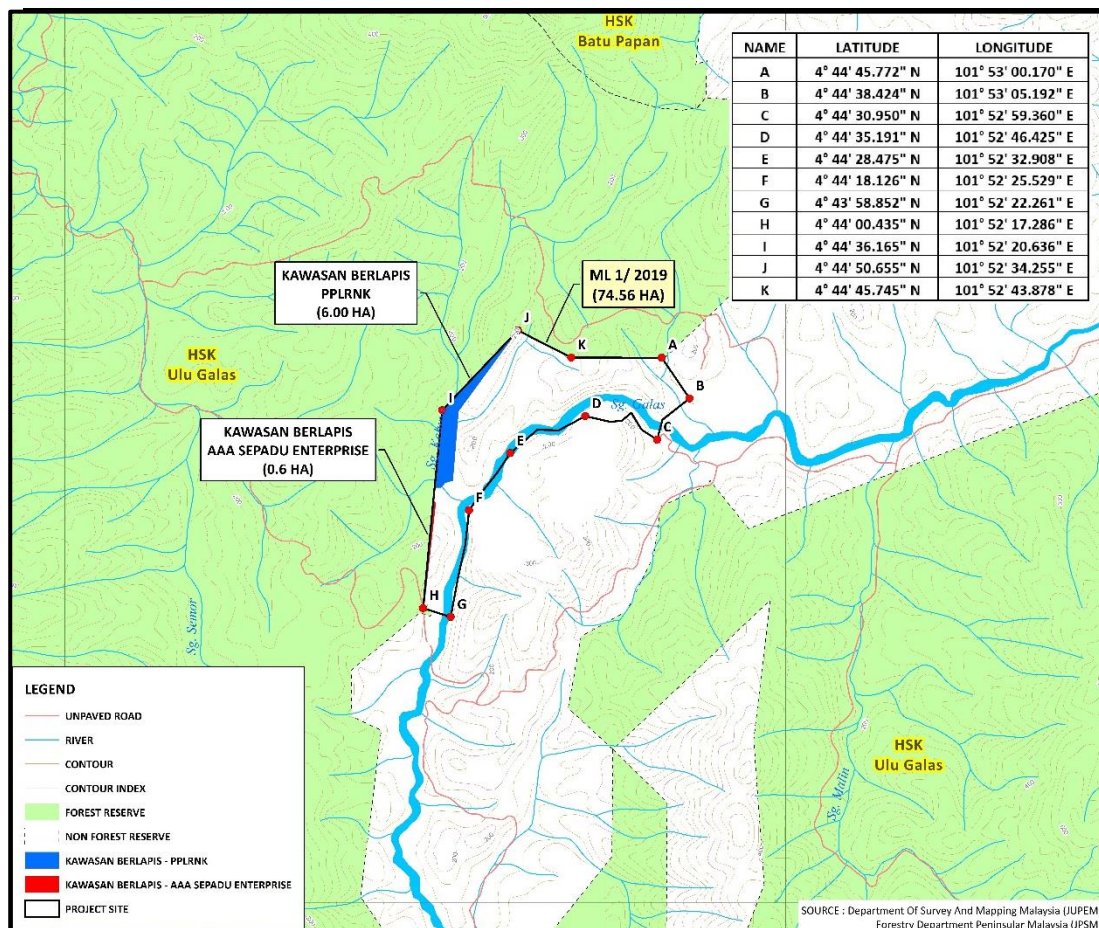
3.0 LEGISLATIVE REQUIREMENTS



Schedule 2: Activity 8 (b):
Mining of Minerals within or adjacent or near to environmentally sensitive area.

Project Initiator is required to submit an EIA report to the Director General of the Department of Environment (DOE) for approval before the project can be granted the permission to commence the operation.

4.0 PROJECT OVERVIEW



Mining Licence (ML):

ML 1/2019

Total area: 74.56 Ha

Mining Life Operational Life:

5.7 Years

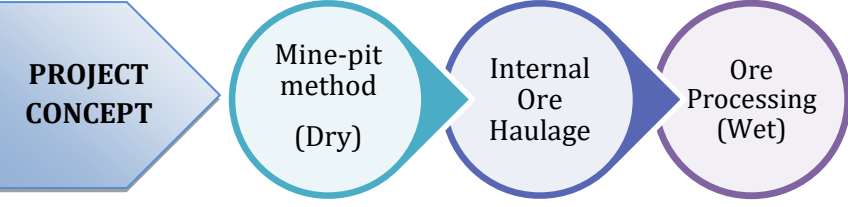
Current Land Use

FORESTRY

Gold Ore Reserves and Mine Operational Life

Estimated Workable Deposit Area	Estimated Gold Reserve (Kg)	Mine Operational Life
7.05 Ha	238.6	5.7 Years

Point	Latitude	Longitude	Point	Latitude	Longitude
A	4° 44' 45.772" N	101° 53' 00.170" E	G	4° 43' 58.852" N	101° 52' 22.261" E
B	4° 44' 38.424" N	101° 53' 05.192" E	H	4° 44' 00.435" N	101° 52' 17.286" E
C	4° 44' 30.950" N	101° 52' 59.360" E	I	4° 44' 36.165" N	101° 52' 20.636" E
D	4° 44' 35.191" N	101° 52' 46.425" E	J	4° 44' 50.655" N	101° 52' 34.255" E
E	4° 44' 28.475" N	101° 52' 32.908" E	K	4° 44' 45.745" N	101° 52' 43.878" E
F	4° 44' 18.126" N	101° 52' 25.529" E			



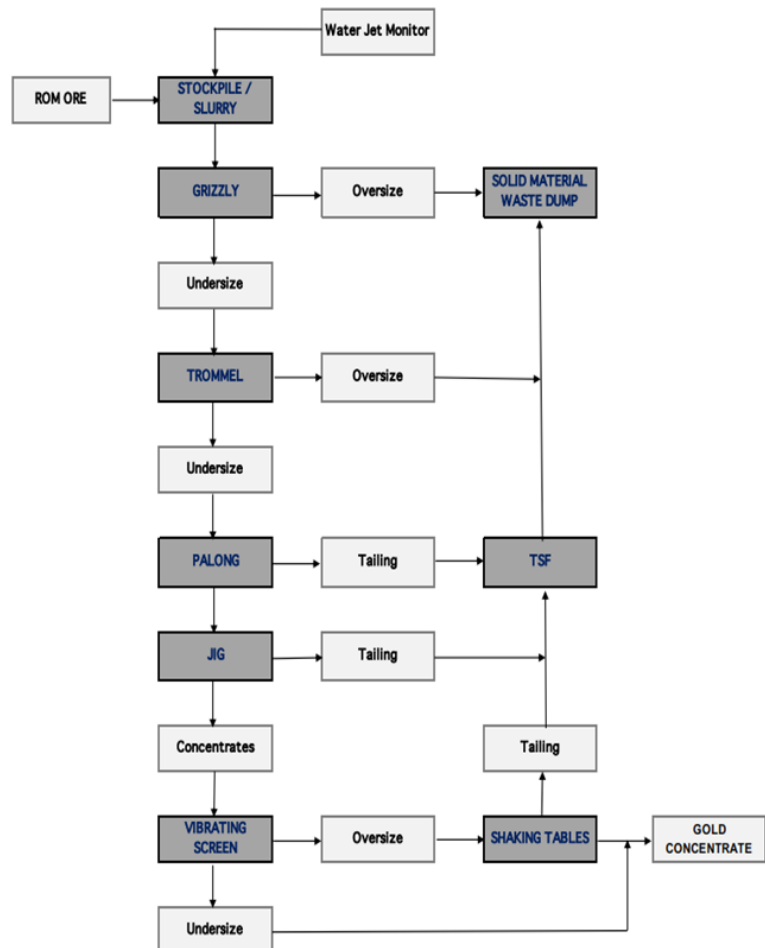
Purposes	Estimated Utilization Area (Ha)
• Mine Excavation Area	7.05
• Mineral Processing Plant	17.83
• Tailing Storage Facility	2.4
• Paydirt Stockpiles	1.0
• Solid Waste Stockpiles Area	2.0
• Mine Office	0.5
• Access/Haul Road	3.0
• ESCP BMPs	1.5
• Workshop	0.5
• Buffer Zone & untouched area	32.12
• Overlapping area (not considered in EIA study)	6.6
TOTAL	74.5



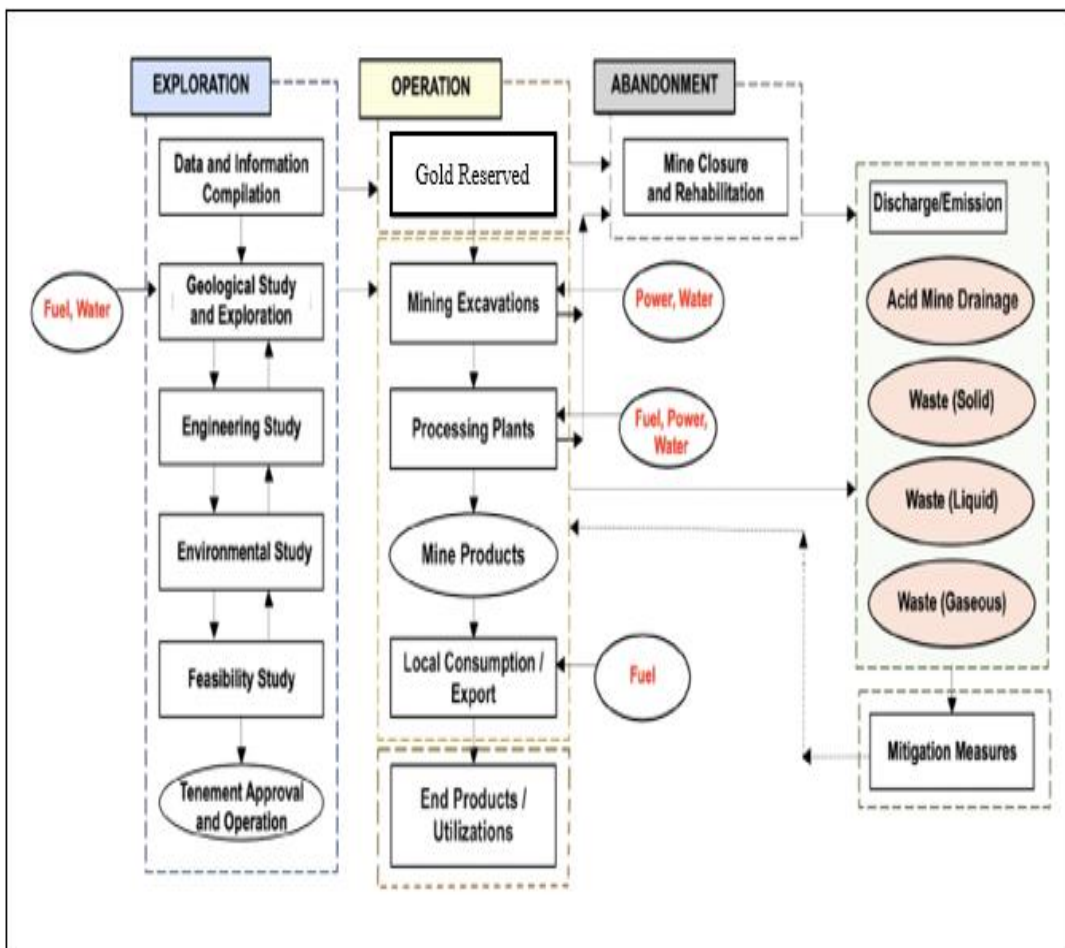
ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

ENVIRONMENTAL IMPACT ASSESSMENT FOR "PROPOSED GOLD MINING (ALLUVIAL) AT ML1/2019 WITH AN AREA OF 74.56 HECTARES ON LOT 11840 AT HUTAN SIMPAN ULU GALAS, MUKIM PULAI, DAERAH GALAS, JAJAHAN GUA MUSANG, KELANTAN DARUL NAIM".

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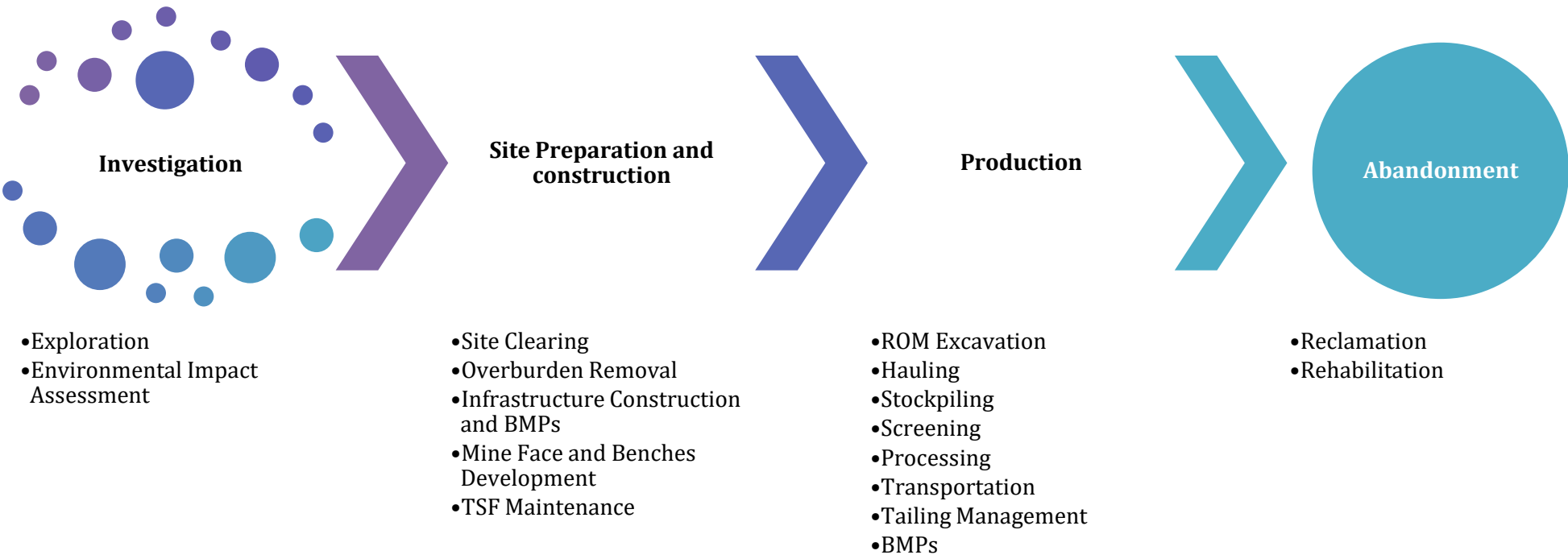


PROPOSED MINING OPERATION



OVERALL MINING OPERATION WITH POSSIBLE IMPACTS

TYPICAL MINING PROJECT ACTIVITIES



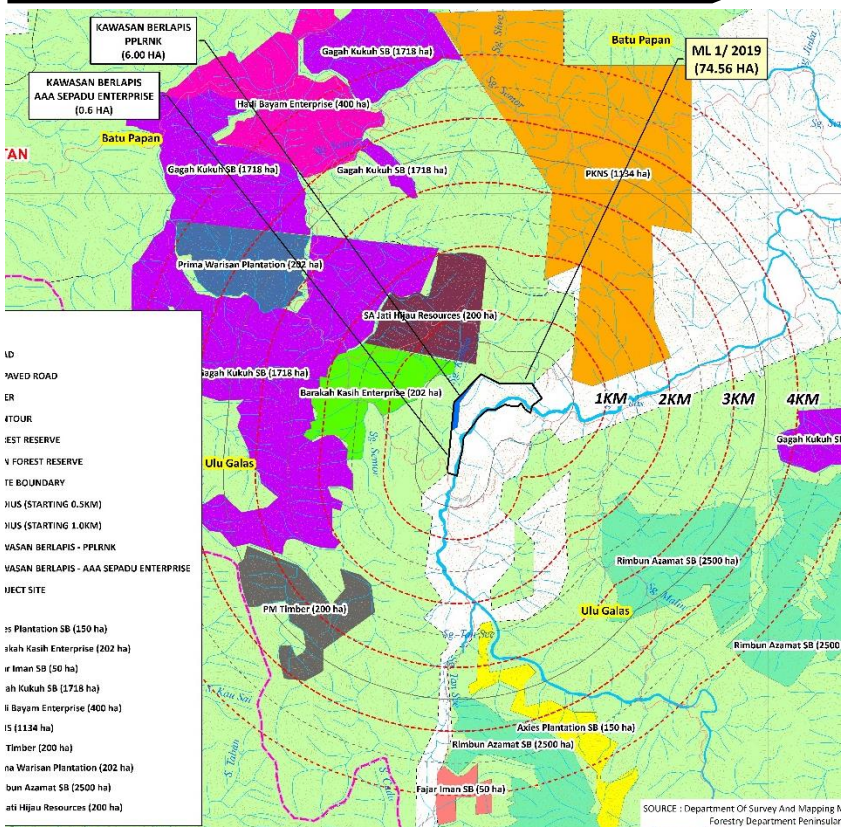
- Exploration
- Environmental Impact Assessment

- Site Clearing
- Overburden Removal
- Infrastructure Construction and BMPs
- Mine Face and Benches Development
- TSF Maintenance

- ROM Excavation
- Hauling
- Stockpiling
- Screening
- Processing
- Transportation
- Tailing Management
- BMPs

- Reclamation
- Rehabilitation

NEIGHBOURING AREAS WITHIN 5-KM RADIUS




LEGEND

- ROAD
- UNPAVED ROAD
- RIVER
- CONTOUR
- FOREST RESERVE
- NON FOREST RESERVE
- STATE BOUNDARY
- RADIUS (STARTING 0.5KM)
- RADIUS (STARTING 1.0KM)
- KAWASAN BERLAPIS - PPLRNK
- KAWASAN BERLAPIS - AAA SEPADU ENTERPRISE
- PROJECT SITE

Developer

- Axies Plantation SB (150 ha)
- Barakah Kasih Enterprise (202 ha)
- Fajar Iman SB (50 ha)
- Gagah Kukuh SB (1718 ha)
- Hadi Bayam Enterprise (400 ha)
- PKNS (1134 ha)
- PM Timber (200 ha)
- Prima Warisan Plantation (202 ha)
- Rimbun Azamat SB (2500 ha)
- SA Jati Hijau Resources (200 ha)

No.	Developer	Project Category	Area (Hectares)
1.	Gagah Kukuh SB	Forest Estate	127.71 ha / 1718 ha
2.	Gagah Kukuh SB	Forest Estate	1033.75 ha / 1718 ha
3.	Gagah Kukuh SB	Forest Estate	28.04 ha / 1718 ha
4.	Gagah Kukuh SB	Forest Estate	258.92 ha / 1718 ha
5.	Gagah Kukuh SB	Forest Estate	368.80 ha / 1718 ha
6.	Rimbun Azamat SB	Forest Estate	364.18 ha / 2500 ha
7.	Rimbun Azamat SB	Forest Estate	771.54 ha / 2500 ha
8.	Rimbun Azamat SB	Forest Estate	394.85 ha / 2500 ha
9.	PKNS	Oil Palm Estate	1157.11 ha
10.	PM Timber	Forest Estate	198.33 ha
11.	Hadi Bayam Enterprise	Forest Estate	403.20 ha
12.	Barakah Kasih Enterprise	Forest Estate	200.13 ha
13.	SA Jati Hijau Resources	Forest Estate	200.38 ha
14.	Fajar Iman SB	Forest Estate	49.91 ha
15.	Axies Plantation SB	Plantation	150.06
16.	Prima Warisan Plantation	Plantation	201.06
17.	PPLRNK	Forest Estate	6.0 ha

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5.0 EXISTING ENVIRONMENT

LANDUSE

- The project site is zoned as **forestry** area and located within **non-reserved Hutan Ulu Galas**.
- As of **25th April 2018**, **74.56 hectares** of land in **Hutan Simpan Ulu Galas** were officially **declassified** as **Permanent Reserved Forest** under the **National Forestry Act 1984**.
- Landuse activity within **5 km radius** shows there are **no aboriginal settlements** located nearby of project site
- Mining activities are permissible subject to approval from the state government and relevant authorities.

TOPOGRAPHY

- Hilly terrain with contour lines from **139 m** to **289 m** with major slope of **Class II (5° - 15°) 33.74 ha (33.74%)**.
- Proposed project site was **declassified** as a **part of Hutan Simpan Ulu Galas**.
- The project site is mainly drained towards **Sungai Kelantan**.

CLIMATE

- Meteorology station selected is Lembaga Kemajuan Kelantan Selatan station.
- Mean monthly relative humidity ranges from **64.5%** to **87.7%**.
- Monthly mean temperature range from **27.8°C** to **35.3°C**.
- The wind is calm with mean speeds of **0.8m/s**.
- The highest monthly rainfall was recorded in **April 2021** with value **119.7 mm/month**.

WATER INTAKE & AIR TANDAK

- There are only **one** water intakes being monitored for this project.
- Limau Kasturi Water Intake** located of about **42.60 km** downstream of the project site.

WATER QUALITY

- Sixteen (16)** sampling points to be compared to NWQS Class IIB.
- A total of **fourty-six (46)** parameters were analysed for each sample, consisting of physical, organics, inorganics, metals and major cations, and microbiological compounds.

GEOLOGY AND HYDROGEOLOGY

- Comprised **70%** of **Limestone** and **30%** **sedimentary rocks** (sandstone, volcanic rocks: tuffaceous & rhyolite)
- Geology investigation was conducted by thoroughly study a total of ten rock exposures (SDGW1A - SDGW4A).
- The measured groundwater levels were generally between **1.45** and **2.71 meters** below ground surface, denoting the levels of between **143.5** and **175.9 meters** above mean sea level (a.m.s.l).
- The groundwater quality of all monitoring wells has the index score ranging from **89.65 - 98.52** and was categorised according to NGWQI as **Good to Excellent**.

GEOCHEMISTRY

- ABA classifications based on sulphide (S) concentration: **9 samples** as **Non-Acid Forming (NAF)**, **1 sample (SDGW2D)** as **Potentially Acid Forming (PAF)**.
- Low sulphide concentrations in samples reduce the likelihood of acid generation
- ANC/MPA ratio <1 indicates potential for acid production: only **1 (SDGDW2D) samples meets this criterion**

AMBIENT AIR, GAS NOISE & VIBRATION

- 3 Ambient air, gas, noise and vibration samples taken at the sensitive receptors surrounding the project area.
- 3 Sample of gases at the project site were analysed which include SO₂, NO₂, O₂ and CO.
- PM_{2.5} and PM₁₀, and all gas parameters were compared with MAAQS.
- Noise results were compared with **Recommended Permissible Sound Level (Laeq) First Schedule Recommended Permissible Sound Level (Laeq) By Receiving Land Use For New Development – Suburban Residential (Medium Density), Recreational**
- Vibration result were compared with **Recommended Vibration Limits For Human Response And Annoyance For Continuous (2nd Schedule) and Intermittent Vibrations (3rd Schedule)**
- All monitoring result **comply** with the standard by DOE

TRAFFIC

- The main entrance to this proposed project is **8.97 km (unpaved road)** from main road **Jalan Kg. Pulai-Kuala Tuang (D241)** to **Jalan Negeri (D29)**.
- External transportation** for export purposes is expected to be **minimal** and will be conducted under stringent security measures in collaboration with the enforcement unit of the local authority.
- Consequently, a **Traffic Impact Assessment (TIA) study is deemed unnecessary**, as the impact on the external route is negligible.

ECOLOGY

- The site is located inside of the **Main Range (Banjaran Titiwangsa) CFS Forest Complex** but **outside of CFS Linkages and Greater Taman Negara**.
- Dipterocarpaceae** and **Sapotaceae** are the largest families with the both families represented represented by **29** and **14 species** respectively in this survey.
- Camera traps were installed at **five locations (5)** within the project area for 2 months (60 days): **16th of March 2023 to the 23rd of May 2023**.
- 13 species** of **mammals** from **11 families** including wildlife; **1 critically Endangered species (Panthera Tigris)**, **4 Endangered species (Capricornis sumatraensis, Rusa unicolor, Symphalangus syndactylus and Tapirus indicus)** and **2 Vulnerable species (Elephas maximus and Helarctos malayanus)** were recorded in this survey track.
- A total of **100 species** from **34 families** of birds were recorded at the survey sites with **83 bird species** were listed as totally protected and **6 species** are protected under the **Wildlife Conservation Act 2010 [Act 716]**, while another **11 bird species** were not listed under the act.
- 1 Endangered species (EN): Chloropsis cochinchinensis** & **3 Vulnerable (VU) species: Buceros rhinoceros, Arachnothera longirostra & Argusianus argus** were recorded
- 24 species** with **8 families** of **herpetofauna** were recorded at the proposed project site
- Only **1 species** from *Cyprinidae* family was recorded for aquatic in downstream of Galas River: **Mystacoleucus marginatus**

SOCIO-ECONOMY

- 51 respondents** were involved from Kg. Pulai and Bandar Gua Musang settlements discovered within 10 km radius ZOI.
- Includes questionnaire survey, Focus Group Discussion (FGD) and informal conversations.
- Large majority of **74.5% respondents did agree** with the proposed Project as it was perceived by the communities that the project would contribute more towards business and employment opportunities to the locals.

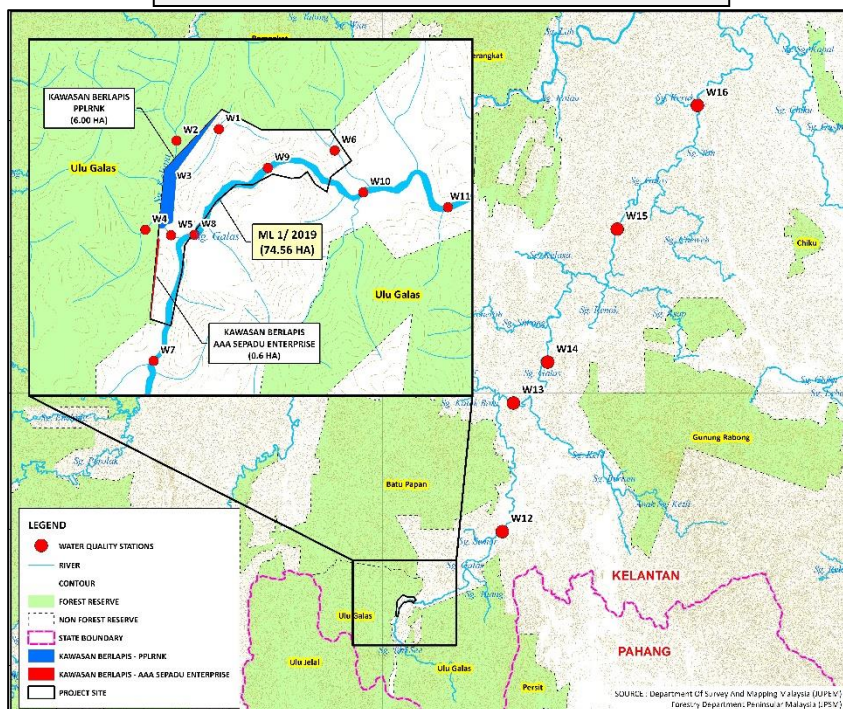


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LOCATION OF WATER SAMPLING STATION

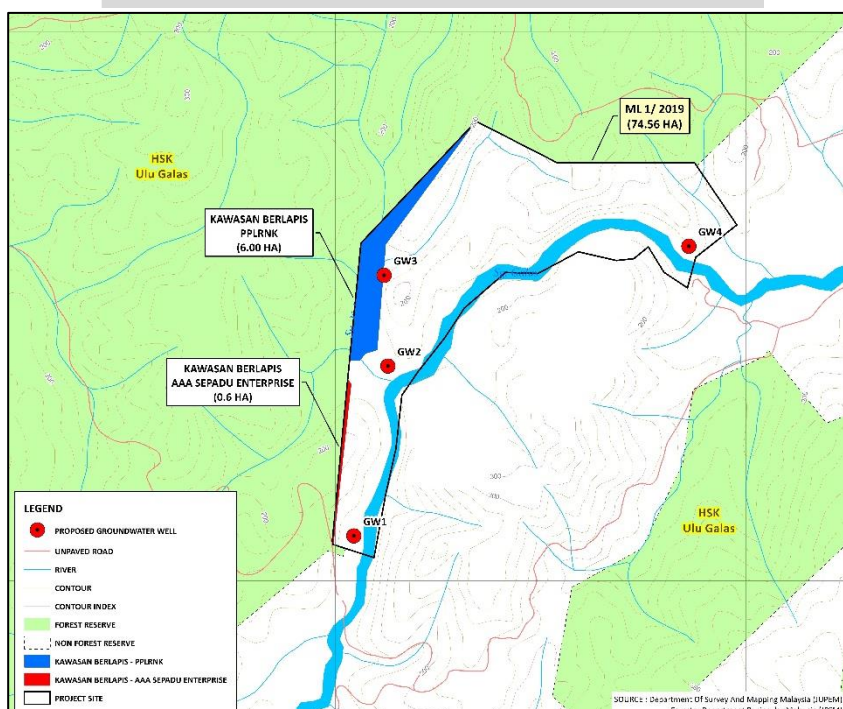


NATIONAL WATER QUALITY STANDARDS FOR MALAYSIA

PARAMETER	UNIT	CLASS				
		I	IIA/IIB	III*	IV	V
Al	mg/l	↑	-	(0.06)	0.5	↑
As	mg/l		0.05	0.4 (0.05)	0.1	
Ba	mg/l		1	-	-	
Cd	mg/l		0.01	0.01* (0.001)	0.01	
Cr (VI)	mg/l		0.05	1.4 (0.05)	0.1	
Cr (III)	mg/l		-	2.5	-	
Cu	mg/l		0.02	-	0.2	
Hardness	mg/l		250	-	-	
Ca	mg/l		-	-	-	
Mg	mg/l		-	-	-	
Na	mg/l		-	-	3 SAR	LEVELS ABOVE
K	mg/l		-	-	-	
Fe	mg/l		1	1	1 (Leaf) 5 (Others)	LEVELS ABOVE
Pb	mg/l		0.05	0.02* (0.01)	5	
Mn	mg/l	N	0.1	0.1	0.2	
Hg	mg/l	A	0.001	0.004 (0.0001)	0.002	
Ni	mg/l	T	0.05	0.9*	0.2	
Se	mg/l	U	0.01	0.25 (0.04)	0.02	
Ag	mg/l	R	0.05	0.0002	-	
Sn	mg/l	A	-	0.004	-	
U	mg/l	L	-	-	-	
Zn	mg/l		5	0.4*	2	
B	mg/l	L	1	(3.4)	0.8	LEVELS ABOVE
Cl	mg/l	E	200	-	80	
Cl2	mg/l	V	-	(0.02)	-	
CN	mg/l	E	0.02	0.06 (0.02)	-	
F	mg/l	L	1.5	10	1	
NO2	mg/l	O	0.4	0.4 (0.03)	-	
NO3	mg/l	R	7	-	5	
P	mg/l	A	0.2	0.1	-	
Silica	mg/l	B	50	-	-	
SO4	mg/l	S	250	-	-	
S	mg/l	A	0.05	(0.001)	-	
CO2	mg/l	B	-	-	-	
Gross-α	Bq/l	S	0.1	-	-	
Gross-β	Bq/l	E	1	-	-	
Ra-226	Bq/l	T	<0.1	-	-	
Sr-90	Bq/l	U	<1	-	-	
CCE	µg/l	R	500	-	-	
MBAS/BAS	µg/l	L	500	5000 (200)	-	
O & G (Mineral)	µg/l	O	40; N	N	-	
O & G (Emulsified Edible)	µg/l	R	7000; N	N	-	
PCB	µg/l	A	0.1	6 (0.05)	-	
Phenol	µg/l	B	10	-	-	
Aldrin/Dieldrin	µg/l	S	0.02	0.2 (0.01)	-	
BHC	µg/l	E	2	9 (0.1)	-	
Chlordane	µg/l	T	0.08	2 (0.02)	-	
t-DDT	µg/l	U	0.1	(1)	-	
Endosulfan	µg/l	R	10	-	-	
Heptachlor/Epoxide	µg/l	L	0.05	0.9 (0.06)	-	
Lindane	µg/l	O	2	3 (0.4)	-	
2,4-D	µg/l	R	70	450	-	
2,4,5-T	µg/l	L	10	160	-	
2,4,5-TP	µg/l	O	4	850	-	
Paraquat	µg/l	V	10	1800	-	

PARAMETER	UNIT	CLASS					
		I	IIA	IIB	III	IV	V
Ammoniacal Nitrogen	mg/l	0.1	0.3	0.3	0.9	2.7	> 2.7
Biochemical Oxygen Demand	mg/l	1	3	3	6	12	> 12
Chemical Oxygen Demand	mg/l	10	25	25	50	100	> 100
Dissolved Oxygen	mg/l	7	5 - 7	5 - 7	3 - 5	< 3	< 1
pH	-	6.5 - 8.5	6 - 9	6 - 9	5 - 9	5 - 9	-
Colour	TCU	15	150	150	-	-	-
Electrical Conductivity*	µS/cm	1000	1000	-	-	6000	-
Floatables	-	N	N	N	-	-	-
Odour	-	N	N	N	-	-	-
Salinity	ppt	0.5	1	-	-	2	-
Taste	-	N	N	N	-	-	-
Total Dissolved Solid	mg/l	500	1000	-	-	4000	-
Total Suspended Solid	mg/l	25	50	50	150	300	300
Temperature	°C	-	Normal + 2	-	Normal + 2	-	-
Turbidity	NTU	5	50	50	-	-	-
Faecal Coliform**	count/100 ml	10	100	400	5000	5000	-
Total Coliform	count/100 ml	100	5000	5000	(20000) ^a	(20000) ^a	> 50000

LOCATION OF GROUNDWATER SAMPLING STATION



Well No.	Coordinate		Ground Level (m.a.s.l.)	Well Depth (m)	Water Depth (m)	Water Level (m.a.s.l.)
	Latitude	Longitude				
GW1	4° 43' 57.90" N	101° 52' 20.40" E	159	10.2	2.52	156.5
GW2	4° 44' 01.50" N	101° 52' 21.00" E	156	9.65	2.71	153.3
GW3	4° 44' 05.70" N	101° 52' 20.70" E	178	10	2.12	175.9
GW4	4° 44' 34.70" N	101° 52' 58.60" E	145	10	1.45	143.5

GWQI	Category	Potential Use
0 - 15	Polluted	Investigation needed before use
16 - 39	Slightly polluted	Irrigation
40 - 69	Moderate	Raw water / Industrial use
70 - 89	Good	Potential for drinking, SUBJECT to compliance of all parameters listed under MOH Drinking Water Quality Standards
>90	Excellent	High quality water for all purpose, SUBJECT to compliance of respective water quality standards stipulated for the intended use

Groundwater concentration values were compared with two (2) Malaysian Environmental Standards

- Groundwater Quality Standards and Quality Index (GWQI). Department of Environment Malaysia.
- Recommended Raw Water Quality Criteria from the Ministry of Health, Malaysia

MALAYSIA AMBIENT AIR QUALITY STANDARDS

Pollutants	Averaging Time	Ambient Air Quality Standard		
		IT-1 (2015) µg/m ³	IT-2 (2018) µg/m ³	Standard (2020) µg/m ³
Particulate Matter with the size of less than 10 micron (PM ₁₀)	1 Year	50	45	40
	24 Hour	150	120	100
Particulate Matter with the size of less than 2.5 micron (PM _{2.5})	1 Year	35	25	15
	24 Hour	75	50	35
Sulfur Dioxide (SO ₂)	1 Hour	350	300	250
	24 Hour	105	90	80
Nitrogen Dioxide (NO ₂)	1 Hour	320	300	280
	24 Hour	75	75	70
Ground Level Ozone (O ₃)	1 Hour	200	200	180
	8 Hour	120	120	100
Carbon Monoxide (CO)	1 Hour	35	35	30
	8 Hour	10	10	10

LIMITING SOUND LEVELS FOR NEW DEVELOPMENT AREAS (SCHEDULE 1)

- **Noise Level**
The Planning Guidelines for Noise Limits and Control Third Edition, 2019
➢ First Schedule Recommended Permissible Sound Level (L_{aeq}) By Receiving Land Use For New Development – Suburban Residential (Medium Density), Recreational
- **Vibration Level**
Guidelines for Environmental Vibration Limit and Control, Third Edition, 2021
➢ Vibration Limits for Continuous Vibrations (Industrial Landuse): 0.8 mm/s to 1.6 mm/s for daytime and nighttime
➢ Vibration Limits for Intermittent Vibrations (Industrial Landuse): 3.2 mm/s for daytime and nighttime



6.0 ENVIRONMENTAL ASSESSMENT MATRIX

Environmental Component	Project Activity																						
	Investigation			Site Preparation and Development								Operation and Production							Closure/Exit				
	Field Reconnaissance	Exploration, Site Surveying and Mapping	Soil Investigations (Drilling and Sampling)	Environmental Assessment	Establish Access Road	Boundary Demarcation and Positioning	Provision of Buffer Areas Within Site	Mobilization of Workforce	Transport of Equipment and Supplies	Site Clearing and Biomass Removal	Infrastructure Construction (Haulage Road and Working Platform)	Improvement to drainage system	Installation of Crushers or Processing Plant	Waste Disposal	Clearing of Quarries/Mines Site Involving Vegetation Clearing	Overburden Stripping and Waste Disposal	Digging and Hauling	Excavation and Extraction which may involve Crushing	Loading and Transportation of Excavated Materials	Processing and Stockpiling	Tailing Management and Waste Disposal	Site-Restoration (Back-filling, Compaction and Topsoiling of the excavated area)	Rehabilitation Works
<p>Note:</p> <p>(S) – Short term (+) – Beneficial (L) – Long-term (-) – Negative</p> <p>(1) – Little (N) – No impact Significance</p> <p>(2) – Significant (X) – No mitigation measure needed</p> <p>(3) – Very significant (/) – Mitigation measure required</p>																							
Land																							
Landforms	N	N	/	N	/	/	/	1	X	/	/	1	/	/	/	/	/	/	1	1	/	/	/
Soil Profiles	N	N	N	N	/	2	/	X	X	/	2	1	1	1	/	/	/	/	1	1	1	/	/
Soil Composition	N	N	/	N	/	1	/	X	X	3	2	1	1	/	/	/	/	/	1	1	/	/	/
Slope Stability	N	N	/	N	/	/	/	X	X	/	/	/	/	/	/	/	/	/	2	3	/	/	/
Subsidence and Compaction	N	N	/	N	/	1	/	X	X	/	/	1	2	/	/	/	/	/	1	1	1	/	/
Seismicity	N	N	N	N	1	1	X	X	X	1	2	1	1	X	1	1	/	/	1	1	1	/	/
Flood Plains/Swamp	N	N	/	N	/	1	/	X	X	/	/	/	/	/	/	/	/	/	1	2	/	/	/
Landuse	N	N	N	N	/	1	/	X	X	3	2	1	/	/	/	/	/	/	1	1	/	/	/
Engineering and Mineral Resources	N	N	/	N	/	1	/	X	X	2	3	/	/	/	/	/	/	/	1	1	/	/	/
Buffer Zones	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	1	1	/	/	/
Surface Water																							
Shoreline	N	N	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Bottom Interface	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Flow Variation	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Water Quality	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Drainage Pattern	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Water Balance	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Flooding	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Existing Use	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Groundwater																							
Water Table	N	N	/	N	1	1	1	1	1	/	/	/	/	/	/	/	/	/	1	/	/	/	/
Flow Regime	N	N	/	N	1	1	1	1	1	/	/	/	/	/	/	/	/	/	1	/	/	/	/
Water Quality	N	N	/	N	1	1	1	1	1	/	/	/	/	/	/	/	/	/	1	/	/	/	/
Recharge	N	N	/	N	1	1	1	1	1	/	/	/	/	/	/	/	/	/	1	/	/	/	/
Aquifer Characteristics	N	N	/	N	1	1	1	1	1	/	/	/	/	/	/	/	/	/	1	/	/	/	/
Existing Use	N	N	/	N	1	1	1	1	1	/	/	/	/	/	/	/	/	/	1	/	/	/	/
Atmosphere																							
Air Quality	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Air Flow	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Climate Change	N	N	1	N	1	1	1	3	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Visibility	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Noise																							
Intensity	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Duration	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Frequency	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Biological Resources																							
Terrestrial Vegetation	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Terrestrial Wildlife	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Other Terrestrial Fauna	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Fish	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Other Aquatic/Marine Flora	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Terrestrial Habitats	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Terrestrial Communities	N	N	/	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Aquatics Habitats	N	N	/	N	/	/	/	/	1	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Aquatics Communities	N	N	/	N	/	/	/	/	1	/	/	/	/	/	/	/	/	/	1	/	/	/	+
Estuarine Habitats	N	N	1	N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	+
Estuarine Communities	N	N	1	N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	+
Marine Habitats	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Marine Communities	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Human Health and Safety																							
Physical Safety	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Physiological Wellbeing	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Parasitic Disease	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Communicable Disease	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Physiological Disease	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Social Economic																							
Employment	N	N	N	N	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
Housing	N	N	N	N	X	X	X	X	X	/	/	X	/	/	/	/	/	/	/	/	/	/	+
Utilities	N	N	N	N	X	X	X	X	X	/	/	1	/	/	/	/	/	/	/	/	/	/	+
Amenities	N	N	N	N	X	X	X	X	X	/	/	X	/	/	/	/	/	/	/	/	/	/	X
Property and Settlement	N	N	N	N	X	X	X	X	X	/	/	X	/	/	/	/	/	/	/	/	/	/	+
Aesthetic and Cultural																							
Landforms	N	N	N	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Biota	N	N	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Wilderness	N	N	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	+
Water Quality	N	N	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Atmospheric Quality	N	N	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
Climate	N	N	N	N	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	+
Tranquillity	N	N	N	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Sense of Community	N	N	N	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+
Community Structure	N	N	N	N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	N
Man-made Object	N	N	N	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N
Historic Places or Structure	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Religious Places or Structure	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Landscape	N	N	N	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	+







7.0 ENVIRONMENTAL MANAGEMENT PLAN (EMP)

Typical EIA Approval Conditions

Report Frequency

To be submitted starting from land clearing stage until the cessation of the mining operation	
<ul style="list-style-type: none"> Compliance Form EIA 1-18 & 2-18 	Every 3 months
To be submitted starting from land clearing stage until the cessation of the mining operation	
<ul style="list-style-type: none"> Surface water quality Total Suspended Solid (Discharge from silt traps/ sediment basins/Tailing Pond) Ambient air quality Ambient noise level 	Every Month
To be submitted before the commencement of earthwork	
<ul style="list-style-type: none"> EMP 	Before earthwork
To be submitted before the commencement of earthwork	
<ul style="list-style-type: none"> ESCP 	Before Earthwork

LD-P2M2			
	➔	Sediment Basin/ Retention Pond	
		Waterway Crossing	←
	➔	Temporary Earth Drain	
		Check Dams	←
	➔	Geo Bags	
		Biomass Waste Area	←
	➔	Tailing Ponds	
		Buffer Area	←
BMPs			
	➔	Scheduled waste management	
		Fogging	←
	➔	Monitoring sampling	
		Storage Area	←
	➔	Water Browser	
		Desilting	←