EXECUTIVE SUMMARY

FIRST SCHEDULE ENVIRONMENTAL IMPACT ASSESSMENT (EIA)
CADANGAN OPERASI KUARI DI ATAS LOT 366, 1101, 1102 SEBAGAI TAMBAHAN KEPADA OPERASI KUARI SEDIA ADA YANG TELAH DILULUSKAN DI MUKIM 4, SEBERANG PERAI SELATAN, PULAU PINANG.

Project Proponent:
ASAS DUNIA BERHAD

Address: Wisma Asas, 228, Lebuh Chulia 10200 Pulau Pinang.

Contact Person: Mr. Khairin Nidzar bin Othman (Project Proponent)

EIA Consultant:
Green Acres Environment PLT.

Address: Bay Avenue K-9-2, Lorong Bayan Indah 2, 11900, Bayan Lepas, Penang.

Contact Person: Ms. Ng Ling Pheng (Lead EIA Consultant)

Tel/Fax: 04 - 630 9968 / 04 - 630 9969

Legal Requirement:

Activity 19 Quarry: Quarrying of Rock Material.

Statement of Need:

Objective:

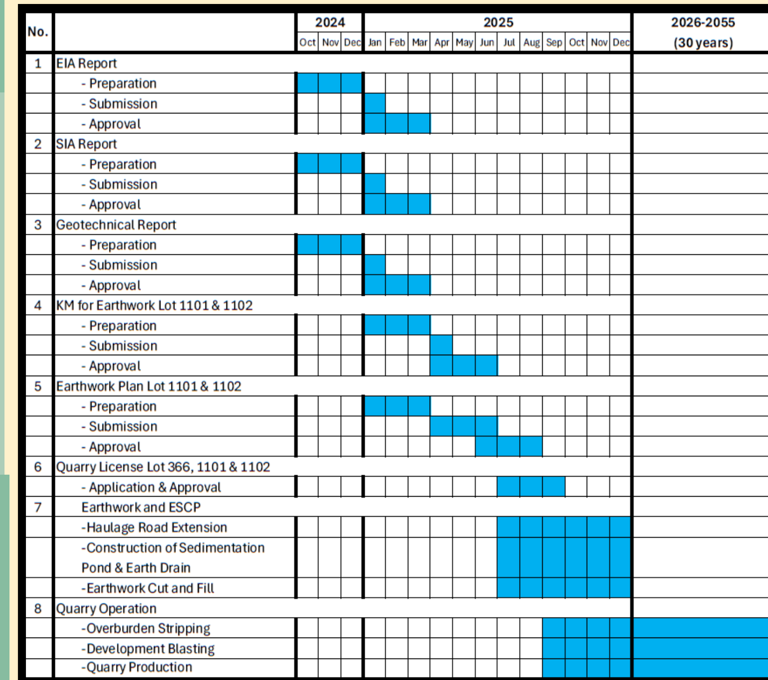
- To develop a quarry scheme that conforms to designated land use plans and is compatible with the surrounding land uses.
- To create employment opportunities to the people of the Seberang Perai Selatan in the field of quarry and industry.
- To optimize the use of available land in terms of land value and realize the full potential of the site in accordance with the type of use permitted.
- To create a circular economy between the quarry and the construction industry to fulfill the local demand of affordable quarry products.

Existing Environment:

During the preliminary site visit for EIA on Sep 2024, the proposed project site is a Secondary Forest disrupted by agricultural activities such as durian and rubber plantation.

Project Description:

- The proposed project is an active quarry with an EIA Approval operating since 2009, while the land parcel of Lot 366, Lot 1101, & Lot 1102 is a vacant land pending for EIA submission and approval.
- The total land area of the proposed site is **95.40 hectares (235.7385 acres or 954,000 m²)**.



- The proposed earthwork is expected to start on **July 2025** and ends on **January 2026**.
- Quarry operation for **Lot 366, Lot 1101 and Lot 1102**, is expected to **start concurrently with earthwork** on **September 2025** and ends approximately on the **Year 2055**.

Lot	Total Area of Economically Viable Reserve Deposit for Extraction, m^2	Total Depth, m	Estimated Tonnage, MT
Lot 366	56,000	227	6.8 mil
Lot 1101	30,000	107	1.7 mil
Lot 1102	28,000	199	2.9 mil
TOTAL	**114,000**		**11.4 mil**

- Estimated available reserve in the project area of **Lot 366, Lot 1101, and Lot 1102** is approximately **11.4 million metric tons (mil MT)** based on the identified areas and the proposed final working level of 18 meters and slope deduction of approximately 80%.

Project Location and Sensitive Receptor:

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Project Activities:
Investigation & Exploration

- Site Investigation
- Site Exploration
- Geological Studies

Quarry Development

- Site Clearing
- Extension of Haulage Road
- Construction of Drainage System
- Construction of Sediment Pond
- Overburden Removal and Transportation
- Earthwork
- Preparation of Working Platform

Quarry Operation and Production

- Drilling
- Blasting
- Crushing
- Screening
- Stockpiling
- Transportation

Quarry Abandonment

- Rehabilitation

Impact Monitoring:

Monitoring Station	Parameter	Frequency	Limit
Water Quality W1, W2, W3, W4, W5, W6, W7, & W8 and Z1, Z2, Z3, Z4, Z5	**During Quarry Development and Operation:** pH COD,mg/l BOD5,mg/l DO,mg/l TSS,mg/l O&G,mg/l NH3,mg/l E.coli, Count/100ml Turbidity, NTU Temperature	Monthly	Class III, National Water Quality Standard
Air Quality A1, A2, A3, A4 & A5	**During Quarry Development and Operation:** PM_{10}, $PM_{2.5}$	Monthly	PM_{10} = 100µg/m^3 $PM_{2.5}$ = 35µg/m^3
Noise Level N1	**During Quarry Development and Operation:** Leq dB(A) Day & Night	Monthly	**Industrial Zones** Day = 75dB(A) Night = 75dB(A)
N2, N4			**Suburban and Urban Residential, Mixed** Development Day = 65dB(A) Night = 60dB(A)
N3, N5			**Low Density Residential, Noise Sensitive Receptors, Institutional (School, Hospital, Worship)** Day = 60dB(A) Night = 55dB(A)
Vibration Level V1, V2, V3	**During Quarry Development and Operation:** Peak Particle Velocity, PPV measured in Vertical Directions	Monthly	**Industrial** 0.8 mm/s to 1.6 mm/s (R=8 to R=16)
V5			**Vibration Sensitive Facilities** 0.1mm/s (R=1)
V4, V6			**Residential** 0.2 mm/s (R=2)

Performance Monitoring: Quarry Development & Operation

Location	Item to be monitored	Frequency	Limit	Remark
Sediment Basin	Turbidity, TSS Silt Depth	Weekly & After Rain > 12.5mm	250 NTU, 50mg/l >50%	In-situ by EO
Check Dams	Condition		NIL	EO, Visual
Silt Fence				
Perimeter Drainage				
Overall site	All	Weekly or Monthly	BMPs	EO to report during Site Meeting

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Impact and Mitigation Measure:

Impact	Mitigation Measure
Soil Erosion and Sedimentation	Cut and fill was balance as best practicable. **751,776.00 m³** will most probably be reuse on site and either sold or exported.
	ESCP designed comply with MSMA2 and shall be approved by DID.
	ESCP component constructed on site before earthwork started.
Flood Risk	One sedimentation pond are designed to cater peak flow during quarry development & operation. Perimeter Earth Drain at the Project Boundary will be connected to the sediment pond and maintained throughout the quarry lifespan.
	Sedimentation Pond and Earth Drain designed as per MSMA2.
Water Pollution	Toilet as per MOH/SPAN requirement is provided.
	ESCP shall be maintained regularly with BMPs such as silt fence, check dam, vegetation & mulching. EO to prepare a site log book for daily record.
	Manage Scheduled Waste as per Environmental Quality (Scheduled Waste) Reg 2005.
Air Pollution	Install enclosure systems at conveyor belts to minimize dust dispersion during the transport and handling of products.
	Limit vehicle speed.
	Carry out surface water spraying of access road
Noise Pollution	Avoid blasting during early morning, late afternoon, and evening to prevent temperature inversion, which can amplify noise.
	Use noise barriers, such as hoarding and existing vegetation, as a temporary noise barrier during quarry operations.
	Maintain quarry machinery and keep acoustic doors closed.
Vibration Impact	Blasting activity to be scheduled to only 2 Days per week from 12am - 2pm with the amount of explosive fixed at 37kg per delay for primary blasting.
	The vibration limit from blasting shall be adhered to recommended guideline limit of 5mm/s peak particle velocity at the vertical direction by DOE and JMG.

Impact	Mitigation Measure
Solid Waste	Provide proper and adequate solid waste bins and implement an effective waste collection and disposal system at the site. Solid waste shall be collected by licensed contractors and disposed at Pulau Burung Sanitary Landfill.
Sewage	Provide adequate portable toilets for the work force at the quarry site in compliance with MBSP/SPAN/MOH requirements. The number of toilets provided shall be increased in tandem with the increase of workers on site.
	Ensure portable toilets are maintained by contractors licensed by SPAN in accordance with a preventative maintenance schedule. Prompt replace any damaged or malfunctioning toilets to prevent sewage leaks and spills.
Social Impact	All mitigation measures stated in the Social Impact Management Plan and Social Impact Assessment Report must be applied.
Blasting Impact	Blasting works inclusive of drilling, charging and blasting is supervised by registered shotfirer and competent personnel.
	Prepare blast design including the size of maximum instantaneous. charges and detonating sequence to minimize environmental effects
	Monitor the blast to provide feedback for future blast designs and to study the impact to the adjacent interest.
Road & Traffic impact	All mitigation measures in the report shall be applied.
	Safety signage and trained flagman to be provided at the site entrance.
	All trucks transporting quarry products and overburden on public road shall be covered.
	The main access road shall be surfaces with aggregate, paved with tarmac or pavement blocks.