

Ringkasan Eksekutif

TAJUK PROJEK:

Proposed Quarry Operation on Lot 947 Measuring 23.17 ha (57.261 ac) in Panchor Jaya, Mukim Ampangan, District of Seremban, Negeri Sembilan Darul Khusus for Gemencheh Granite Sdn Bhd

PEMEGANG LPS:

Lensa Prisma Sdn Bhd
B-05 & B-06, Plaza Kelana Jaya,
Jalan SS7/13B, Kelana Jaya,
47301 Petaling Jaya, Selangor.

PEMAJU/ OPERATOR KUARI:

Gemencheh Granite Sdn Bhd
KM 22, Jalan Tampin – Gemas,
73200 Gemencheh, Negeri Sembilan.

Tel No. : 06 431 6271
Fax No. : 06 431 6272

PERUNDING EIA:

Green Earth Consultancy and Services Plt
28 Jalan Indah ¼,
Taman Universiti Indah,
43300 Seri Kembangan, Selangor.

Tel No. : 013 3518 102
Fax No. : 03 89381585

KEPERLUAN PERUNDANGAN:

AKTA KUALITI ALAM SEKELILING 1974
Peraturan Kualiti Alam Sekeliling (Aktiviti yang
Ditetapkan) (Penilaian Kesan Kepada Alam
Sekeliling) 2015

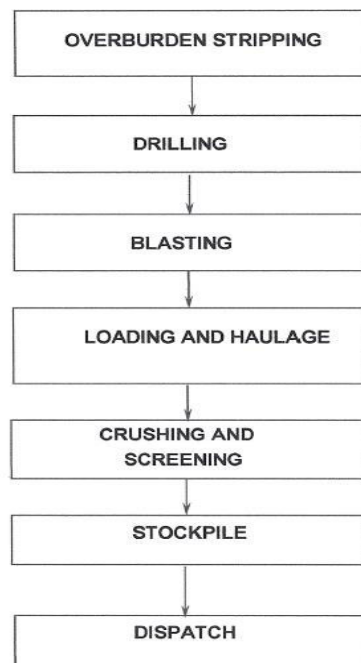
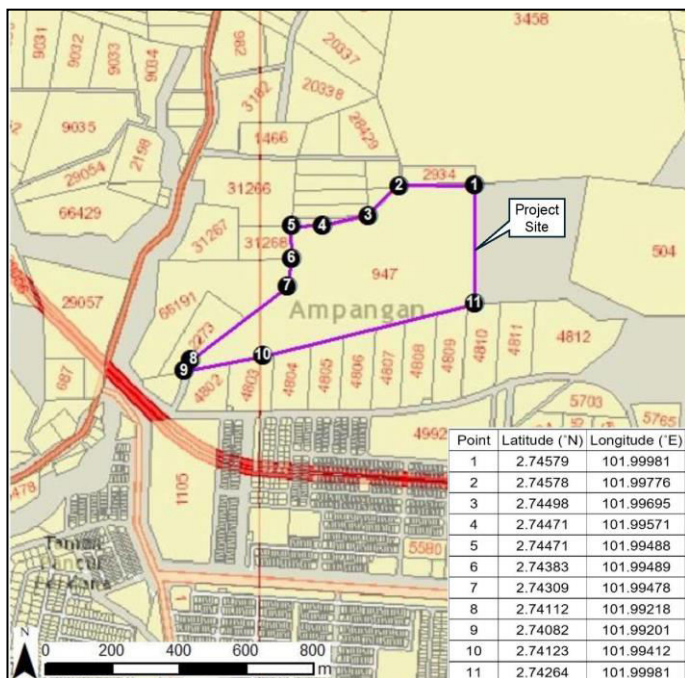
JADUAL PERTAMA
Aktiviti No. 19, Kuari
(Pengkuarian Bahan Batuan)

PENYATAAN KEPERLUAN:

- 1. Meningkatkan Permintaan Pasaran untuk Agregat
- 2. Permintaan dan Penawaran
- 3. Pelan Pembangunan Strategik NS 2045
- 4. Penjanaaan Hasil kepada Negeri dan Negara



CARTA ALIRAN OPERASI PENGKUARIAN

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AKTIVITI PROJEK

Persediaan dan Pembangunan

- 1. Pembersihan tapak
- 2. Pengupasan lapisan tanah penutup (*Overburden removal*)
- 3. Pembangunan muka kuari

Operasi

- 1. Penggerudian dan Peletupan
- 2. Pemuatan dan Pengangkutan
- 3. Penghancuran dan Penyaringan
- 4. Penimbunan stok
- 5. Pengangkutan

PERSEKITARAN SEDIA ADA



Geologi, Tanah & Rupa Bumi

- Geologi: *Acid intrusive rocks*
- Tanah: Siri Tanah Curam dan Rengam-Jerangau
- Rupa bumi: Berbukit (RL70 m hingga RL210 m amsl)



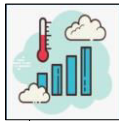
Hidrologi & Saliran

- Tiga rizab sungai warta yang ditemui dalam lingkungan 5-km ialah Sg Batang Penar, Sg Emi dan Sg Paroi
- Tempat pengambilan air Sg Linggi terletak 24 km di hilir tapak Projek



Gunatanah Semasa

- Tapak projek adalah tapak kuari terbengkalai
- Dikelilingi tapak kuari yang aktif, estet kediaman, lot ladang, tanah kosong, hutan simpan kekal, hutan sekunder & perairan dalam radius 5 km



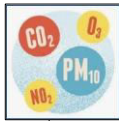
Iklim

- Station: Kuala Pilah (2014–2024)
- Suhu : 26.1 – 27.2 °C
- Hujan tahunan: 1396.2 mm (min) (2014) & 2548.2 mm (max) (2017)
- Kelembapan (min tahunan): 80.2% (2016, max) & 84.7% (2022, min)
- Angin: 14.1% BL & S



Kualiti Air

- Dijalankan pada: Jul 16, 2024
- 8 stesen: W1 – W8
- WQI: W1-W2, W7 & W8 (Bersih) W3-W6 (Sedikit tercemar)



Kualiti Udara

- Dijalankan pada: Jul 4-7, 2024
- 3 stesen: A1 – A3
- Semua parameter dalam had MAAQS 2020



Parasa Bunyi

- Dijalankan pada: Jul 4 -7, 2024
- 3 stesen: N1 – N3
- Semua stesen mematuhi tahap bunyi yang disyorkan oleh JAS



Persekitaran Biologi

- Kajian dijalankan pada: Aug & Sept 2024
- Penemuan: Tumbuhan: 111 spesies Mamalia: 12 spesies Burung: 52 spesies Reptilia & Amfibia: 20 spesies

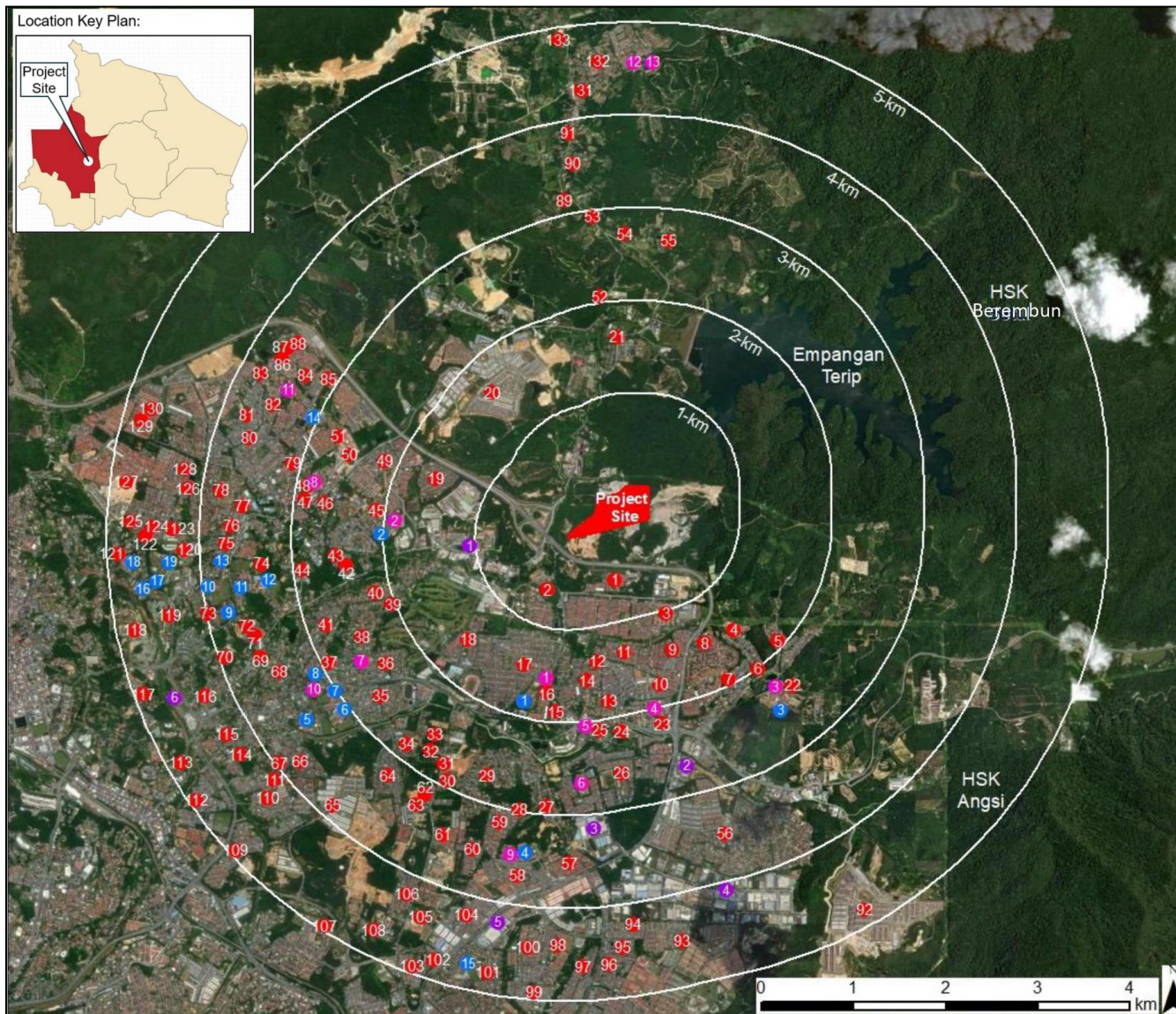


Kajian Socio

- Jumlah responden: 136
- Setuju: 30.2%
- Tidak setuju: 31.6%
- Tiada pendapat: 38.2%

GUNATANAH SEMASA DALAM 5-KM RADIUS DARI TAPAK PROJEK

Location Key Plan:



Legend:

List of Industrial Areas: ●

- 1 Kawasan Perusahaan Pantai
- 2 Kawasan Perindustrian Taman Tasik Jaya
- 3 Taman Perindustrian Senawang
- 4 Kawasan Perusahaan Senawang Baru
- 5 Taman Komersil Senawang
- 6 Betaria Business Centre

List of Residential Areas: ●

- 1 Taman Panchor Jaya
- 2 Taman Palma Jaya Perdana
- 3 Taman Panchong Jaya Fasa 4
- 4 Taman Jemerlang Indah
- 5 Taman Zamrud
- 6 Kg Panchor
- 7 Perumahan Rakyat Panchor
- 8 Taman Bukit Margosa
- 9 Taman Sri Telawi
- 10 Taman Ampangan
- 11 Taman Manong
- 12 Flat Cengal Utama
- 13 Kg Sekolah
- 14 Taman Cengal Utama
- 15 Flat Casurina
- 16 Kg Tok Dagang
- 17 Taman Paroi Jaya
- 18 Taman Pinggiran Golf
- 19 Taman Warisan Puteri
- 20 Bandar Warisan Puteri
- 21 Kg Sungai Terip
- 22 Kg Melayu Panchor
- 23 Kg Baharu Paroi
- 24 Desajaya Villa Apartment
- 25 Kg Paroi
- 26 Taman Tasik Jaya
- 27 Kg Sentosa
- 28 Taman Seri Bayu
- 29 Kg Sentosa Jaya
- 30 Taman Melati Indah
- 31 Taman Bougainville Idaman
- 32 Taman Sri Negeri
- 33 Taman Sri Landak
- 34 Taman Bukit Setia
- 35 Taman Dato Wan
- 36 Golf Height
- 37 Taman Shukor
- 38 Kg Baharu Gedong Lalang
- 39 Kg Sungai Pupoh
- 40 Kg Jiboi Baru
- 41 Kg Bahagia Jiboi
- 42 Taman Kayu Manis
- 43 Rumah Rakyat Sikamat 2
- 44 Kg Ujong Pasir
- 45 Taman Perwira
- 46 Rumah Rakyat Sikamat 1
- 47 Kg Baru Sikamat
- 48 Kg Seri Sikamat
- 49 Taman Ampangan Jaya
- 50 Taman Seremban Putra
- 51 Taman Kiara Indah
- 52 Kg Dato Wong Seng Chow
- 53 Kg Jerlang
- 54 Kg Kuala Jerlang
- 55 Kg Bukit Kubot
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- 80 Taman Desa Rhu
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- 98 Taman Satria
- 99 Taman Alamanda
- 100 Taman Desa Melor
- 101 Taman Marida
- 102 Taman Lily
- 103 Taman Sri Kasih
- 104 Taman Rasa Sayang
- 105 Taman Setia Hati
- 106 Taman Guru Melayu
- 107 Taman Kian Kee
- 108 Taman Rashidah Utama
- 109 Taman Birdara
- 110 Taman Dusun Setia
- 111 Taman Nyior
- 112 Taman Dusun Nyior
- 113 Taman Bukit Nona
- 114 Taman Purbia
- 115 Taman Lee Sui Joo
- 116 Taman Murugesu
- 117 Kg Tekir
- 118 Taman Dellinia
- 119 Taman Desa Manggis
- 120 Taman Pinang Gading
- 121 Kg Bukit Merbah
- 122 Kg Merbah Indah
- 123 Taman Tunku Kurshiah
- 124 Taman Indah
- 125 Taman Temiang Jaya
- 126 Taman Rashidah Indah
- 127 Taman Bukit Sarimbun
- 128 Taman Sullana
- 129 Taman Pulau Impian
- 130 Taman Bukit Coral
- 131 Kg Baru Pantai
- 132 Kg Pantai
- 133 Kg Denai

List of Educational Facilities:

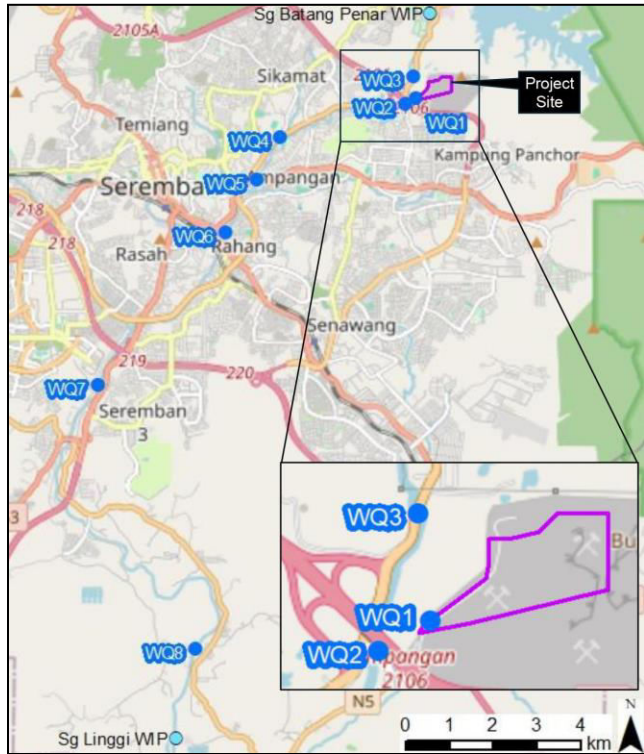
Primary Level: ●

- 1 SK Taman Paroi Jaya
- 2 SK Taman Warisan Puteri
- 3 SK Panchor
- 4 SJK(C) Kampung Baru Paroi
- 5 SK Paroi
- 6 SK Taman Tasik Jaya
- 7 SK King George V
- 8 SJK(C) Kampung Seri Sikamat
- 9 SK Taman Seri Pagi
- 10 SK Ampangan
- 11 SK Sikamat
- 12 SK Pantai
- 13 SJK(C) Kampung Baru Pantai

Secondary Level: ●

- 1 SMK Pendeta Za'ba
- 2 SMK Warisan Puteri
- 3 SMK Panchor
- 4 SMK Seri Pagi
- 5 SM Teknik Tuanku Jaafar
- 6 Kolej Vokasional Ampangan
- 7 SMK Seri Ampangan
- 8 SMA Dato' Kiana Petra Maamor
- 9 SMK Dato' Haji Mohd Redza
- 10 Maktab Perguruan Raja Melewar
- 11 SMK Tunku Ampuan Durah
- 12 SM Sains Tuanku Munawir
- 13 Institut Pendidikan Guru Kampus Raja Melewar
- 14 Kolej Tafe Seremban
- 15 SMK Senawang
- 16 SMKA Sheikh Hj Mohd Said
- 17 SM Sains Tuanku Aishah Rohani
- 18 SM Dato' Sheikh Ahmad
- 19 Kolej Tunku Khursiah

GUNATANAH SEMASA DALAM 500-M RADIUS DARI TAPAK PROJEK



LOKASI PENSAMPELAN DASAR KUALITI



PENILAIAN IMPAK DAN LANGKAH TEBATAN (FASA OPERASI)

**HAKISAN TANAH & PEMENDAPAN, DAN PENCEMARAN AIR**

Impak:

- Kenaikan tahap TSS dan kekeruhan di Sg Batang Penar dan Sg Linggi

P2M2:

- Bina *earth bund* di sempadan tapak
- Bina sistem saluran dan lembangan sedimen
- Kekalkan tumbuh-tumbuhan sebagai zon penanaman

**OPERASI PELETUPAN (GEGARAN ARAS TANAH, PARAS BUNYI & BATU TERBANG)**

Impak:

- Gegaran aras tanah, letupan udara dan batu terbang

P2M2:

- Gunakan system letupan yang mesra alam
- Jauhkan arah muka kuari dari kawasan sensitif
- Gunakan *shortfirer* dan *chargeman* yang layak dan berlesen untuk kerja letupan

**OPERASI PENGHANCURAN (KUALITI UDARA)**

Impak:

- Punca pencemaran udara dan kurangkan jarak penglihatan

P2M2:

- Pastikan batu lembap pada semua peringkat operasi penghancuran
- Pasang muncung semburan air di kawasan pelepasan habuk
- Tanam pokok di sepanjang sempadan tapak

**PERSEKITARAN BIOLOGI**

Impak:

- Kehilangan dan kemerosotan kepada habitat flora dan fauna

P2M2:

- Larang pembakaran biojisim yang boleh menjejaskan komuniti flora dan habitat berdekatan
- Lantik pegawai untuk menangani dan mengurus perkara berkaitan habitat dan isu lain mengenai hidupan liar

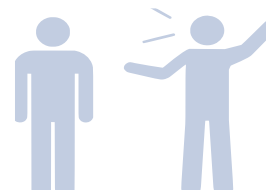
**TRAFIK DAN PENGANGKUTAN**

Impak:

- Kemalangan akibat peningkatan bilangan penggunaan jentera berat di atas jalan raya

P2M2:

- Hadkan aktiviti pengangkutan pada waktu siang dan waktu 'off-peak'
- Guna laluan trafik yang kurang sesak untuk aktiviti pengangkutan

**SOSIO-EKONOMI**

Impak:

- Penjanaaan peluang perniagaan dan pekerjaan
- Peningkatan kadar jenayah

P2M2:

- Cegah konflik dengan masyarakat setempat

**PENGURUSAN SISA**

Impak:

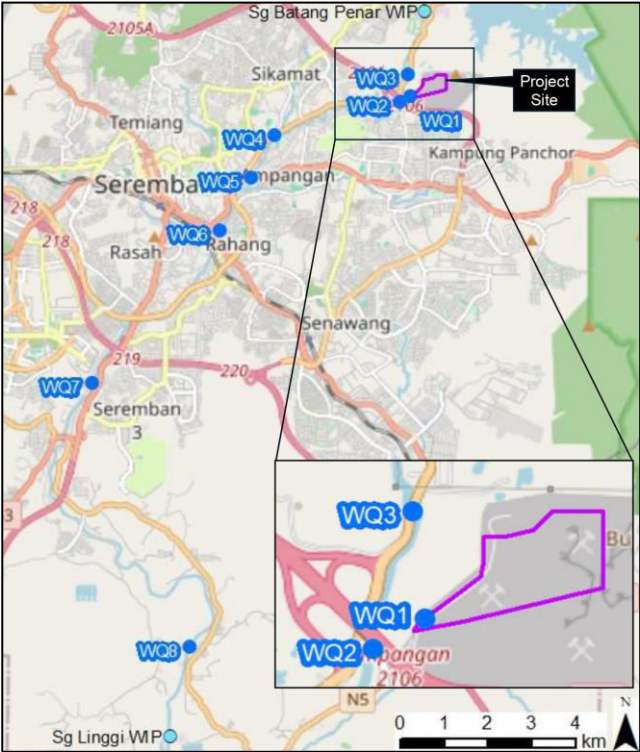
- Penjanaaan sisa

P2M2:

- Lantik orang yang berwibawa untuk uruskan buangan terjadual
- Laksanakan pembersihan tapak mengikut fasa
- Larang pembakaran terbuka

PROGRAM PEMANTAUAN

Komponen	Lokasi	Parameter & Kekerapan Pensampelan
PEMANTAUAN PRESTASI		
P2M2 untuk Kawalan Hakisan dan Sedimen	Semua cadangan BMPs dalam LD-P2M2	- Parameter: Ketersediaan BMP, reka bentuk struktur, fungsi dan rekod penyelenggaraan - Kekerapan: Setiap kali hujan melebihi paras bacaan 12.5 mm
PEMANTAUAN PEMATUHAN		
Kualiti Kelodak	Di tempat pelepasan ST1	- Parameter: TSS dan Kekeruhan - Kekerapan: Setiap bulan
PEMANTAUAN IMPAK		
Kualiti Air	W1 hingga W8	- Parameter: pH, DO, BOD₅ at 20⁰, COD, TSS, An, O&G, Total Coliform, As, Cd, Cr (IV), Cr (III), Cu, Fe, Hg, Mn, Ni, Pb, Sn dan Zn - Kekerapan: Setiap bulan
Kualiti Udara Ambien	A1 hingga A3	- Parameter: PM₁₀, PM_{2.5}, SO₂, NO₂, CO dan O₃ - Kekerapan: Setiap bulan
Paras Bunyi	N1 hingga N3	- Parameter: LA_{eq}, LA_{max}, LA_{min}, LA₁₀, LA₅₀ dan LA₉₀ - Kekerapan: Setiap bulan
Getaran Aras Tanah	V1 hingga V3	- Parameter: Getaran Aras Tanah - Kekerapan: Setiap bulan



Executive Summary

PROJECT TITLE:

Proposed Quarry Operation on Lot 947 Measuring 23.17 ha (57.261 ac) in Panchor Jaya, Mukim Ampangan, District of Seremban, Negeri Sembilan Darul Khusus for Gemencheh Granite Sdn Bhd

TOL HOLDER:

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B-05 & B-06, Plaza Kelana Jaya,
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47301 Petaling Jaya, Selangor.

PROJECT PROPONENT /
QUARRY OPERATOR:

Gemencheh Granite Sdn Bhd
KM 22, Jalan Tampin – Gemas,
73200 Gemencheh, Negeri Sembilan.

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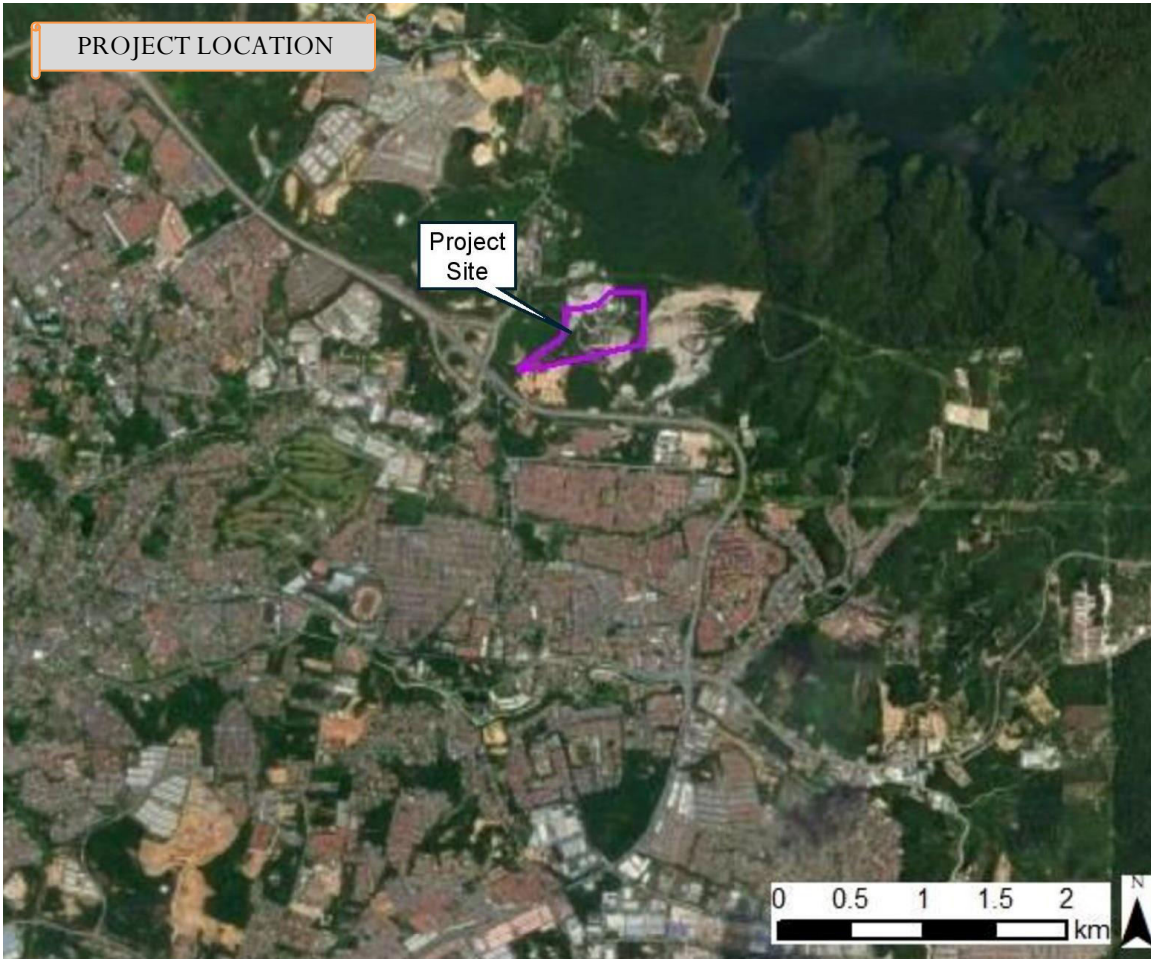
LEGISLATIVE REQUIREMENT:

ENVIRONMENTAL QUALITY ACT 1974
Environmental Quality (Prescribed Activities)
(Environmental Impact Assessment) Order 2015

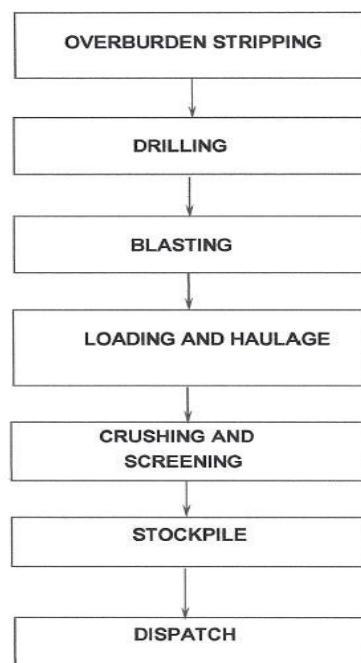
FIRST SCHEDULE
Activity No. 19, Quarry
(Quarrying of rock material)

STATEMENTS OF NEED:

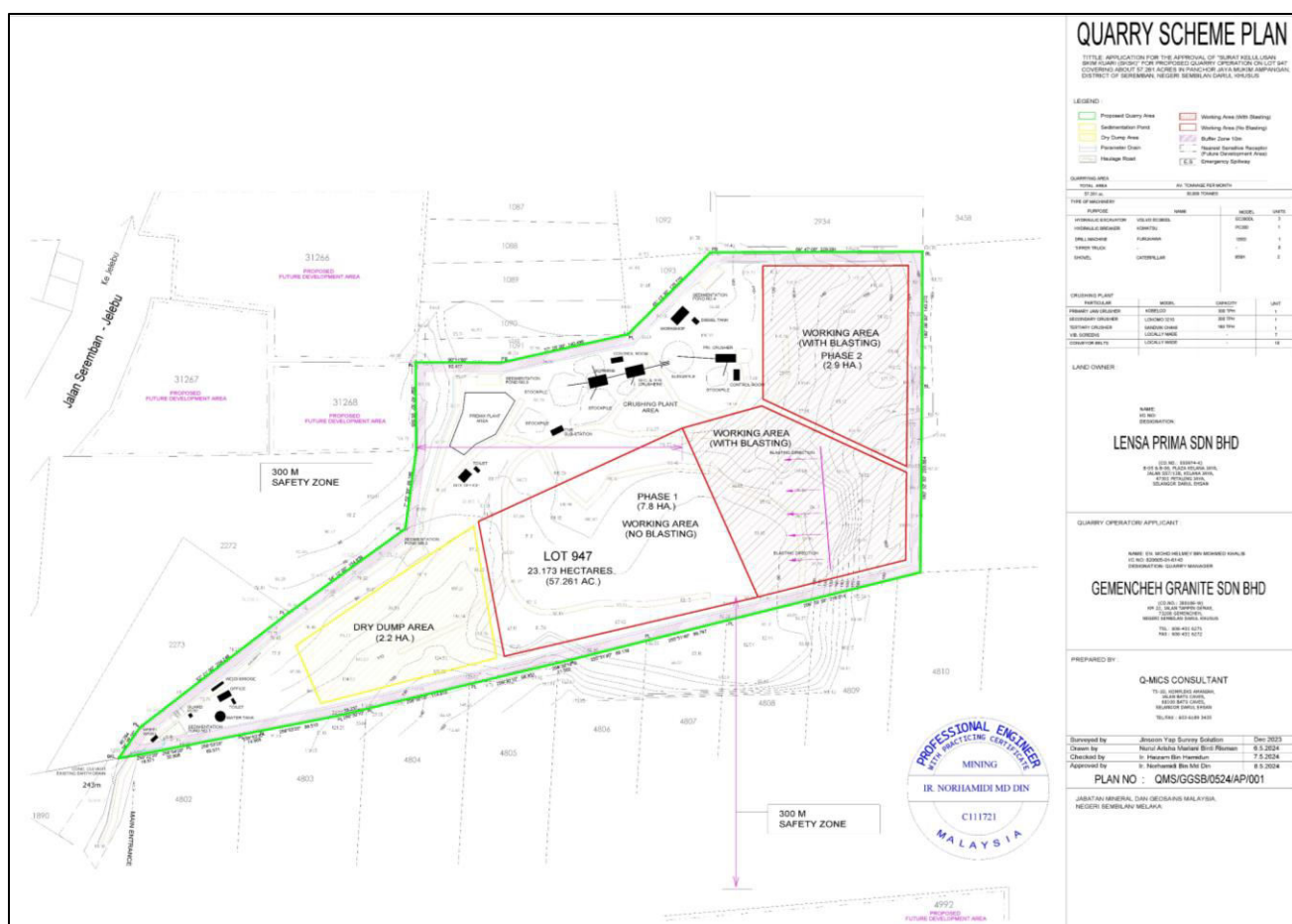
- 1. Increasing Market Demand for Aggregates
- 2. Demand and Supply
- 3. NS 2045 Strategic Development Plan
- 4. Revenue Generation to the State & Country



FLOWCHART OF QUARRYING OPERATION



QUARRY SCHEME PLAN



PROJECT ACTIVITIES

Preparation and Development

- 1. Site clearing
- 2. Overburden removal
- 3. Quarry face development

Operational

- 1. Drilling and Blasting
- 2. Loading and Hauling
- 3. Crushing and Screening
- 4. Stockpiling
- 5. Transportation

EXISTING ENVIRONMENT



Geology, Soil & Terrain

- Geology: Acid intrusive rocks
- Soil: Steepland (*Tanah Curam*) & Rengam-Jerangau series
- Terrain: Hilly (RL70 m to RL210 m amsl)



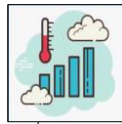
Hydrology & Drainage

- Three gazette river reserves found within 5-km are Sg Batang Penar, Sg Emi and Sg Paroi
- Sg Linggi water intake point is located 24 km downstream of Project site



Existing Landuse

- Project site is an abandoned quarry site
- Surrounded by an active quarry site, residential estates, plantation lots, vacant land, permanent forest reserves, secondary forests & waters within a 5-km radius



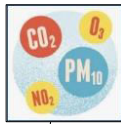
Climate

- Station: Kuala Pilah (2014–2023)
- Temp: 26.1–27.2°C
- Annual rainfall: 1396.2 mm (min) (2014) & 2548.2 mm (max) (2017)
- Humidity (annual mean): 80.2% (2016, max) & 84.7% (2022, min)
- Wind: 14.1% NW & S



Water Quality

- Conduct on: Jul 16, 2024
- 8 stations: W1 – W8
- WQI: W1 - W2, W7 & W8 (Clean) W3 to W6 (Slightly Polluted)



Air Quality

- Conduct on: Jul 4-7, 2024
- 3 stations: A1 – A3
- All parameters within the limit of MAAQS 2020



Noise Level

- Conduct on: Jul 4-7, 2024
- 3 stations: N1 – N3
- All stations comply with DOE recommended permissible sound levels



Biological Environment

- Conducted survey: Aug & Sept 2024
- Findings: Plants: 111 species Mammals: 12 species Birds: 52 species Reptiles & Amphibians: 20 species



Socio Survey

- Total respondents: 136
- Agree: 30.2%
- Disagree: 31.6%
- No opinion: 38.2%

CURRENT LANDUSE WITHIN 5-KM RADIUS FROM PROJECT SITE

Location Key Plan:



Legend:

List of Industrial Areas: ●

- 1 Kawasan Perusahaan Pantai
- 2 Kawasan Perindustrian Taman Tasik Jaya
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- 41 Kg Bahagia Jiboi
- 42 Taman Kayu Manis
- 43 Rumah Rakyat Sikamat 2
- 44 Kg Ujong Pasir
- 45 Taman Perwira
- 46 Rumah Rakyat Sikamat 1
- 47 Kg Baru Sikamat
- 48 Kg Seri Sikamat
- 49 Taman Ampangan Jaya
- 50 Taman Seremban Putra
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- 98 Taman Satria
- 99 Taman Alamanda
- 100 Taman Desa Melor
- 101 Taman Marida
- 102 Taman Lily
- 103 Taman Sri Kasih
- 104 Taman Rasa Sayang
- 105 Taman Setia Hati
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List of Educational Facilities:

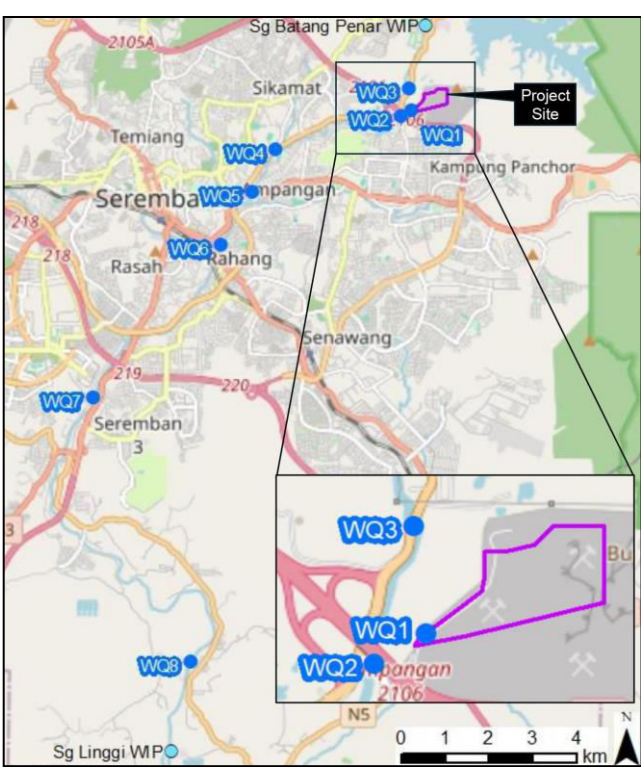
Primary Level: ●

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- 4 SJK(C) Kampung Baru Paroi
- 5 SK Paroi
- 6 SK Taman Tasik Jaya
- 7 SK King George V
- 8 SJK(C) Kampung Seri Sikamat
- 9 SK Taman Seri Pagi
- 10 SK Ampangan
- 11 SK Sikamat
- 12 SK Pantai
- 13 SJK(C) Kampung Baru Pantai

Secondary Level: ●

- 1 SMK Pendeta Za'ba
- 2 SMK Warisan Puteri
- 3 SMK Panchor
- 4 SMK Seri Pagi
- 5 SM Teknik Tuanku Jaafar
- 6 Kolej Vokasional Ampangan
- 7 SMK Seri Ampangan
- 8 SMA Dato' Kiana Petra Maamor
- 9 SMK Dato' Haji Mohd Redza
- 10 Maktab Perguruan Raja Melewar
- 11 SMK Tunku Ampuan Durah
- 12 SM Sains Tuanku Munawir
- 13 Institut Pendidikan Guru Kampus Raja Melewar
- 14 Kolej Tafe Seremban
- 15 SMK Senawang
- 16 SMKA Sheikh Hj Mohd Said
- 17 SM Sains Tuanku Aishah Rohani
- 18 SM Dato' Sheikh Ahmad
- 19 Kolej Tunku Khursiah

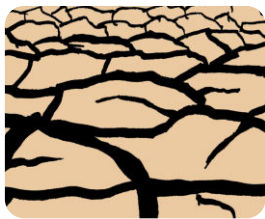
CURRENT LANDUSE WITHIN 500-M RADIUS FROM PROJECT SITE



BASELINE SAMPLING POINTS

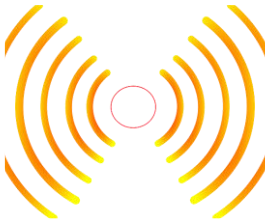


IMPACT ASSESSMENT & MITIGATION MEASURES (OPERATIONAL PHASE)



SOIL EROSION & SEDIMENTATION, AND WATER POLLUTION

- Impact:
- Increase TSS and Turbidity concentrations in Batang Penar & Sg Linggi
- P2M2:
- Construct earth bund at site perimeter
 - Construct drainage system and sediment basins
 - Preserve vegetation buffer as buffer zone



BLASTING OPERATION (GROUND VIBRATION, NOISE LEVEL & FLYROCK)

- Impact:
- Ground vibration, air blast and flyrock
- P2M2:
- Use environmentally friendly blast initiation system
 - Plan quarry face direction away from sensitive area
 - Only use qualified and licensed shortfirer and chargeman in blasting



CRUSHING OPERATION (AIR QUALITY)

- Impact:
- Cause air pollution and reduced visibility around the plant
- P2M2:
- Keep rock moist at all stages of rock crushing operation
 - Install water spray nozzles at dust emission points
 - Plant trees along the boundary of Project area



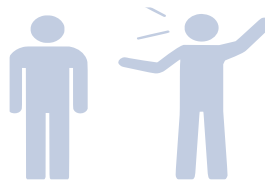
BIOLOGICAL ENVIRONMENT

- Impact:
- Loss and degradation of habitats of flora and fauna
- P2M2:
- Strictly no burning of biomass which may jeopardize the flora community and nearby habitat
 - Appoint wildlife officer to address and manage matters related to habitat and other issues on wildlife



TRAFFIC AND TRANSPORTATION

- Impact:
- Accidents due to increase in mobile heavy machinery movement
- P2M2:
- Limit transportation only to daytime and preferably during off-peaks traffic hours
 - Coordination for selection of routes with lighter traffic for transportation activity



SOCIO-ECONOMIC

- Impact:
- Creation of business and job opportunities
 - Increase in crime rate
- P2M2:
- Prevent conflict with local community



WASTE MANAGEMENT

- Impact:
- Waste generation
- P2M2:
- Appoint competent person to manage scheduled waste
 - Implement site clearing by phases
 - Prohibit open burning

MONITORING PROGRAMME

Component	Location	Parameter & Sampling Frequency
PERFORMANCE MONITORING		
P2M2 for Erosion and Sediment Control	All BMPs proposed in the LD-P2M2	- Parameter: BMP availability, structure design, functionality and maintenance record - Frequency: On every rain event greater than 12.5 mm
COMPLIANCE MONITORING		
Sediment Quality	At the discharge point of ST1	- Parameter: TSS and Turbidity - Frequency: Monthly
IMPACT MONITORING		
Water Quality	W1 to W8	- Parameter: pH, DO, BOD₅ at 20⁰, COD, TSS, An, O&G, Total Coliform, As, Cd, Cr (IV), Cr (III), Cu, Fe, Hg, Mn, Ni, Pb, Sn and Zn - Frequency: Monthly
Ambient Air Quality	A1 to A3	- Parameter: PM₁₀, PM_{2.5}, SO₂, NO₂, CO and O₃ - Frequency: Monthly
Noise Level	N1 to N3	- Parameter: LA_{eq}, LA_{max}, LA_{min}, LA₁₀, LA₅₀ and LA₉₀ - Frequency: Monthly
Ground Vibration Level	V1 to V3	- Parameter: Ground Level Vibration - Frequency: Monthly

