

EXECUTIVE SUMMARY

1 INTRODUCTION

PROJECT TITLE:

The project described in this report is
ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR CADANGAN PEMBANGUNAN PERINDUSTRIAN BERSTRATA, KEMUDAHAN MASYARAKAT DAN INFRASTRUKTUR DAN UTILITI SELUAS 217.02 EKAR DI ATAS SEBAHAGIAN LOT 48082, MUKIM KULAI, DAERAH KULAI, JOHOR DARUL TA'ZIM UNTUK TETUAN GOLDEN VALLEY CAPITAL SDN. BHD."
 ~ EIA Phase 3

FIRST SCHEDULE

EIA

INDUSTRIAL ESTATE DEVELOPMENT

[Light and Medium Industry]



PROJECT BACKGROUND

- An EIA and EMP for a **part of Lot 48082 (Phase 1 and Phase 2) cover 295.81 acres (119.7102 hectares)** was approved on 21st January 2025 and 29th July 2025 by Department of Environment, Johor under industrial estate activity.
- However, for the new proposed EIA study (Phase 3) covers 217.02 acres (87.8249 hectares) within part of Lot 48082, comprising light and medium industries (141.68 acres – 65.28%), public facilities (25.61 acres – 11.80%), infrastructure and utilities (49.73 acres – 22.91%).
- Golden Valley Capital Sdn Bhd** as the project proponent for this proposed project and plan to developed industrial estate development project which include the components of industrial, infrastucture and public facilities.



2 INTRODUCTION

PROJECT PROPONENT

Project Initiator	:	Golden Valley Capital Sdn Bhd
Company Address	:	1-23-1 Menara Bangkok Bank Berjaya Central Park, Jalan Ampang 50250 Kuala Lumpur
Telephone	:	03 - 2181 8783
Contact Person	:	Dato' Goh Cheng Huat
Designation	:	Director



EIA CONSULTANT

EIA Consultant Firm	:	Perunding UEP Sdn Bhd (Urban & Environmental Planning Consultant)
Company Address	:	No 50-02, Jalan Pertama 1, Pusat Perdagangan Danga Utama, 81300, Johor Bahru, Johor.
Telephone	:	07 – 550 0501 / 07-550 0502
Fax	:	07 – 550 0503
Contact Person	:	TPr. Abdul Halim Bin Ali Hassan Register No. EIA (DOE) – (CEP-CS 0130)



3 ENVIRONMENTAL LEGISLATION

First Schedule, Activity 17: Industrial Estate Development

- Development of Industrial Estate covering an area of 20 hectares or more

Source: *Environmental Quality (Prescribed Activities) (Environmental Impact Assessment Order 2015)*, *Environmental Quality Act, 1974*

The Environmental Impact Assessment (EIA) is prepared based on Environmental Impact Assessment (EIA) Guideline in Malaysia. Others relevant legislations are to be taken into consideration in the preparation of EIA report.



Follows Environmental Impact Assessment Guidelines in Malaysia, 2016 (EGiM), Department of Environment Malaysia.



Environmental Impact Assessment Guideline for Housing, New Township and Industrial Estate Development 2020, Department of Environment Malaysia



Complies with Akta Kualiti Alam Sekeliling 1974 (AKTA 127), Section 34A.

4 STATEMENT OF NEED



BENEFITS

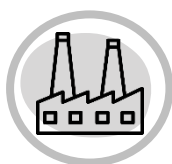
- The development will generate jobs and boost local income
- The land suits industrial use and blends with nearby areas
- A well-planned industrial zone with full infrastructure will attract investors
- The hub will raise nearby property values
- Smart IoT enabled infrastructure will improve efficiency and uptime
- Advanced technology deployment aligns with Industry 4.0 and NIMP 2030 objectives
- New retail, logistics, and services will benefit local communities and support skills
- The project promotes balanced regional growth



JUSTIFICATION

- Malaysia's strategic position and supportive policies make it a strong industrial market
- Golden Valley aims to develop a quality industrial park to support growing manufacturing and IT needs
- The project aligns with current industrial trends and complements surrounding developments
- A well-planned industrial area can raise socio-economic value and living standards
- The development strengthens production and logistics activities
- Overall, it will bring positive economic, social, and environmental benefits

5 PROJECT LOCATION



Location	: Mukim Bukit Batu, Daerah Kulai, Johor Darul Ta'zim
Lot Involved	: A part of Lot 48082
Total Acreage	: EIA Phase 3 only cover 217.02 acres (87.8249 hectares) – A part of Lot 48082 Overall Lot 48082 – 512.83 acres (207.5349 hectares)
Proposed Development	: Industrial Estate Development (Industrial development with public facilities, infrastructure and utilities)

Located within the high development area surrounded by commercial, industrial and residential area which the have the potential to further complement the proposed project.

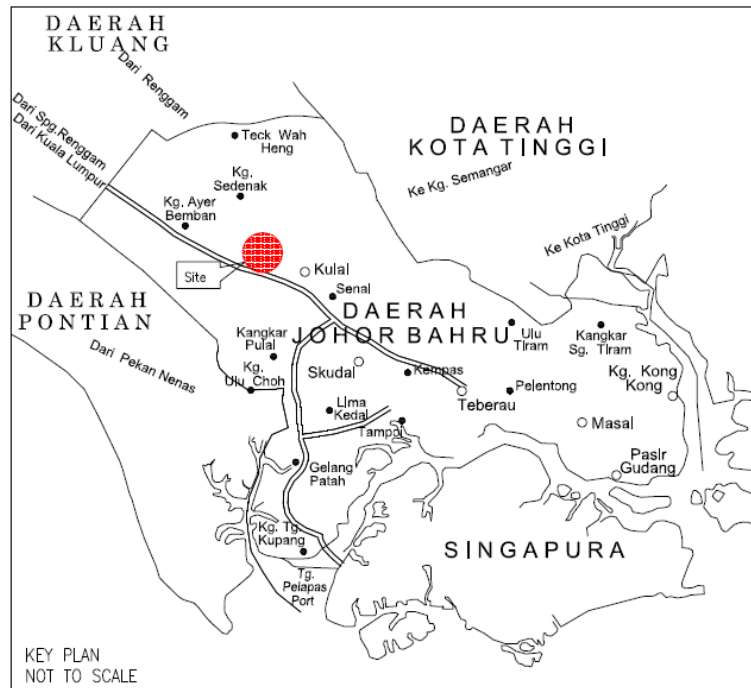
ACCESSIBILITY

- In term of accessibility, the existing highway road of Jalan Besar, Kulai (FT001), serve as a main access to the proposed site. This road links the area with major activity centres, high-density corridors and urban areas.
- The area of study comprises of affected roads of Jalan Besar (FT001), three (3) arm signalize junction Jalan Besar – Jalan Persiaran Tropika and three (3) arms stop junction Jalan Besar – Jalan Besi Utama and Jalan Besar – Jalan Sawit Baru. The proposed accesses mainly to redirect traffic from Jalan Besar (FT001) along main road. It also connects with residential areas such as Taman Scientex Kulai 2, Taman Lagenda Putra and it mounts with several industrial development which include Desa Perindustrian Sri Kulai, Empire Park Kulai, Desa Perindustrian Sri Kulai 2 and others.

Table 1.0: Site Particulars

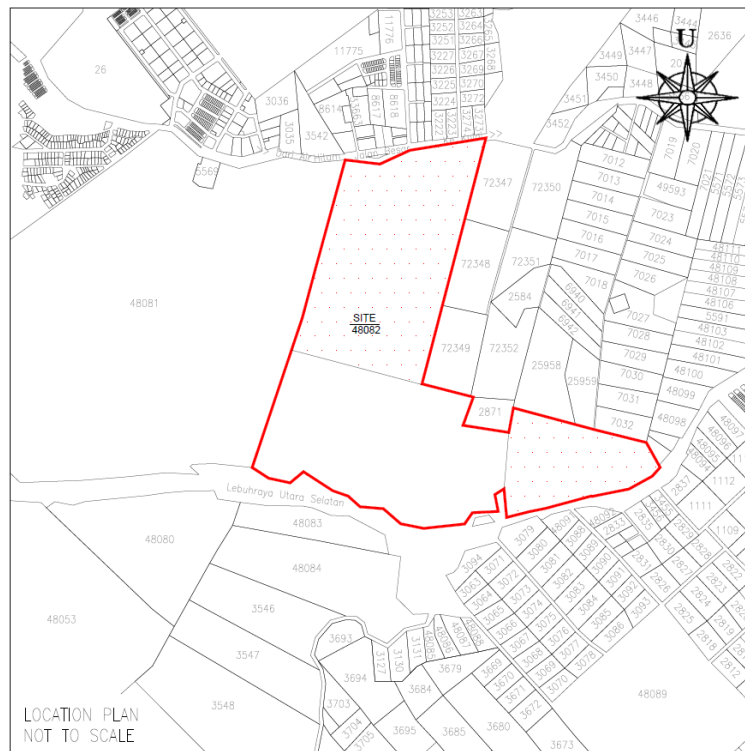
No.	Items	Description
1.	Project Proponent & Land Owner	Golden Valley Capital Sdn Bhd
2.	Address of Project Proponent	1-23-1 Menara Bangkok Bank Berjaya Central Park, Jalan Ampang 50250 Kuala Lumpur
3.	Contact Person	Mr Austin Low Project Manager
4.	Director	Dato' Goh Cheng Huat
5.	Designation	Director
6.	Total Land Acreage	EIA Phase 3 only cover 217.02 acres (87.8249 hectares) - A part of Lot 48082 Overall Lot 48082 - 512.83 acres (207.5349 hectare)
7.	Lot No	A part of Lot 48082
8.	Mukim	Kulai
9.	District	Kulai
10.	State	Johor Darul Ta'zim
11.	Existing Land Use	Oil palm plantation and bushes
12.	Zoning in RTD	Rancangan Tempatan Kulai 2035 BP 1: Bandar Kulai BPK 1.8: Taman Lagenda Putra
13.	Local Authority	Majlis Perbandaran Kulai
14.	Proposed Development	Industrial Estate Development (Industrial development with public facilities, infrastructure and utilities)

Figure 1.0, Figure 2.0 and Figure 3.0 show the Key Plan, Location Plan and Coordinate of site boundary respectively.



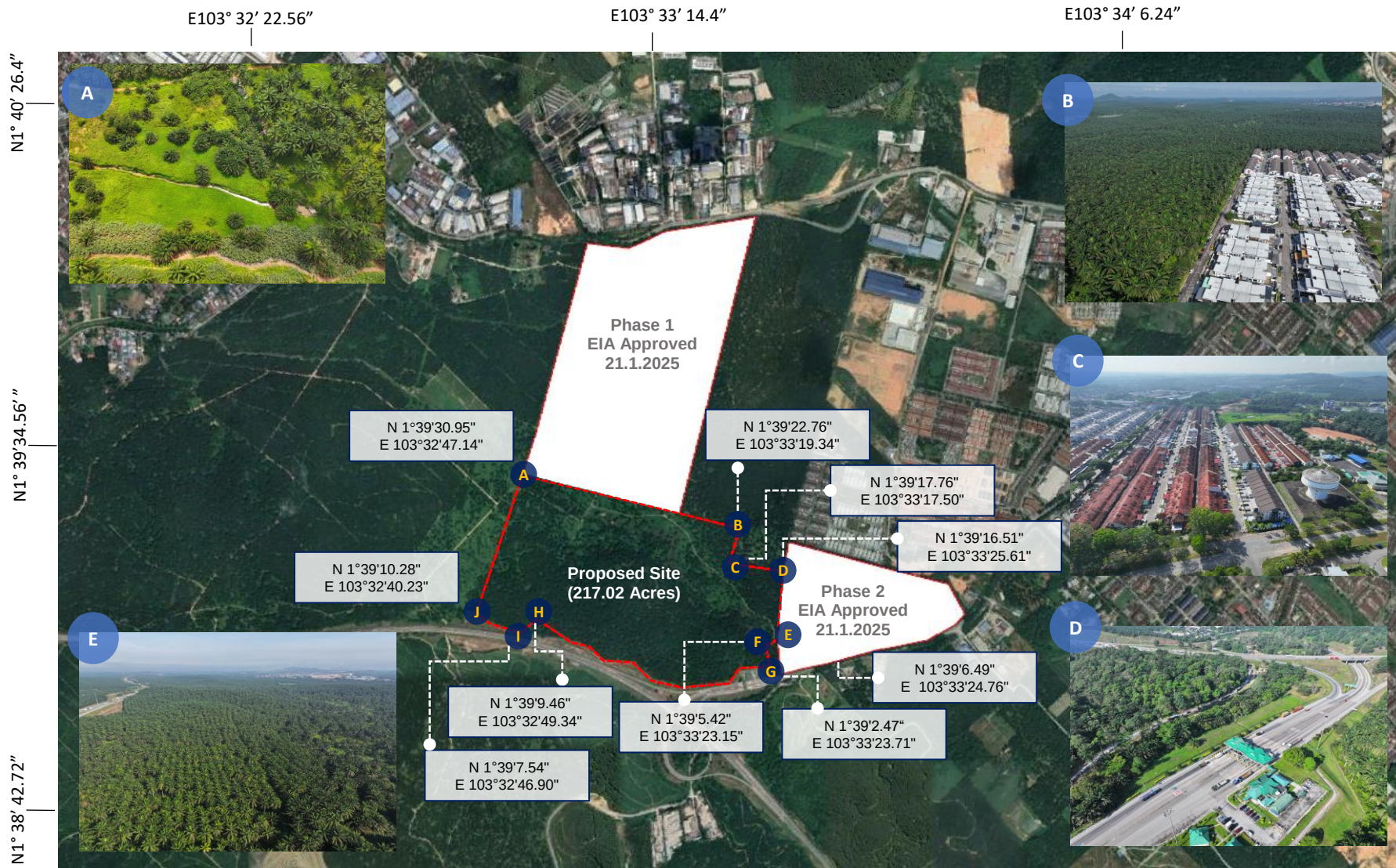
Source: Extract from Drawing No. UEP/PLNG/KML/2025/03 by Perunding UEP Sdn Bhd

Figure 1.0: Key Plan



Source: Extract from Drawing No. UEP/PLNG/KML/2025/03 by Perunding UEP Sdn Bhd

Figure 2.0: Location Plan



EIA Report Approved 21st January 2025, Reference No. JAS. JHQ.600-2/15/20 (32)
EMP Report Approved 29th July 2025, Reference No. JAS. JHQ.600-2/15/20 (38)

Figure 3.0
Coordinate Of Site Boundary

Scale 0 2.0 KM

Legend

- Previous EIA (Phase 1 & Phase 2)
- Proposed Site (Phase 3)

Source : Google Earth, 2025

Environmental Consultant



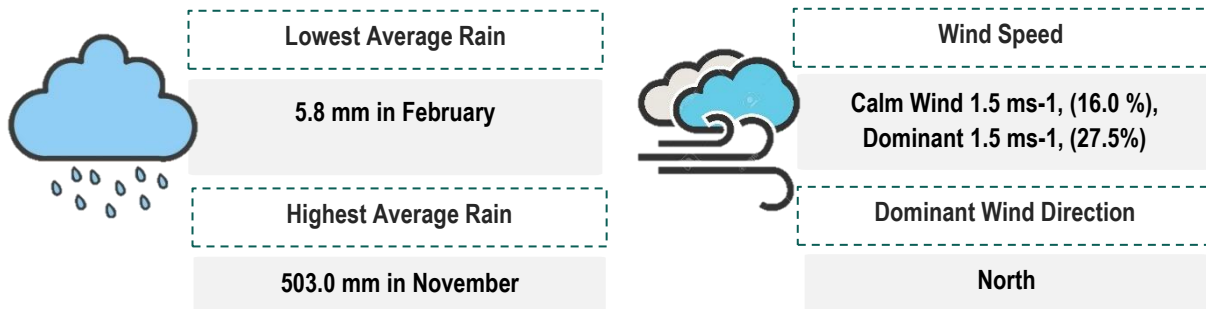
No 50-02, Jalan Pertama 1,
Danga Utama Commercial Centre
81300 Johor Bahru, Johor Darul Takzim
Tel : 07-550 0501 / 550 0502
Fax : 07-550 0503
Email : environment@perundinguep.com
official@perundinguep.com



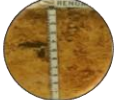
6 EXISTING ENVIRONMENT

CLIMATE AND METEOROLOGY

Climate and meteorological data are obtained from the **Sultan Ismail Meteorological Station, Senai** for wind profile, temperature profile, monthly 24 hour mean relative humidity, monthly rainfall amount and monthly mean daily global radiation.



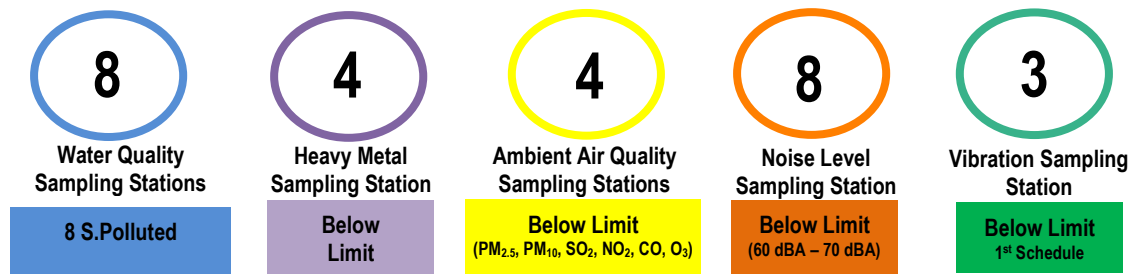
GEOLOGY AND SOIL

Geological Character	Lithology	Soil Series
Mesozoic period era 	Classified as acid intrusives (undifferentiated) refers to igneous rock 	Rengam - Jerangau series 

SLOPE ANALYSIS / SLOPE GRADIENT

Based on the slope acreage involved only for Earthwork Area, approximately **99.40 %** of the site categorized under **Class I (<15°)** which cover approximately **509.76 acre**. Hence, there is no major restriction on developments as it deemed suitable for any proposed development.

ENVIRONMENTAL QUALITY

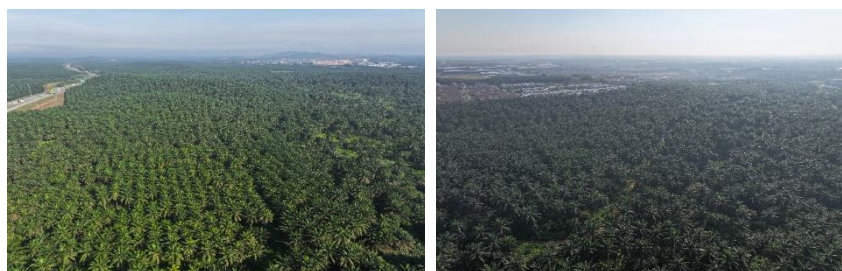


Source: Spectrum Laboratories (Johor) Sdn Bhd, 2025.

Refer Appendix M: Certificate of Analysis (COA) by Spectrum Laboratories (Johore) Sdn Bhd.

BIOLOGICAL – ECOLOGICAL ENVIRONMENT

Currently, the proposed project area is being used for oil palm plantation. There are several flora and fauna that has been found within the proposed area. The diversity of species has been confined to suitable oil palm plantation such as palms trees, and grass species dominate the exposed area.

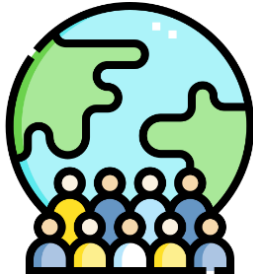


Oil Palm Plantation

SOCIO ECONOMIC/HUMAN ENVIRONMENT

Demographic Profile

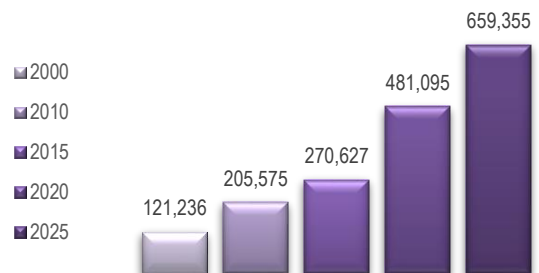
Based on *Rancangan Tempatan Daerah Johor Bahru and Kulai, 2025 (Penggantian)*, the projected total population under Majlis Perbandaran Kulai (MPKu) in 2025 is 659,355 people. Overall, in the year of 2025, the population of Johor Bahru and Kulai Districts by 2025 is expected to **increase to 3,836,865 individuals with KPPT by 4.79% per annum**.



Projected Total Population Under MPKu in 2025

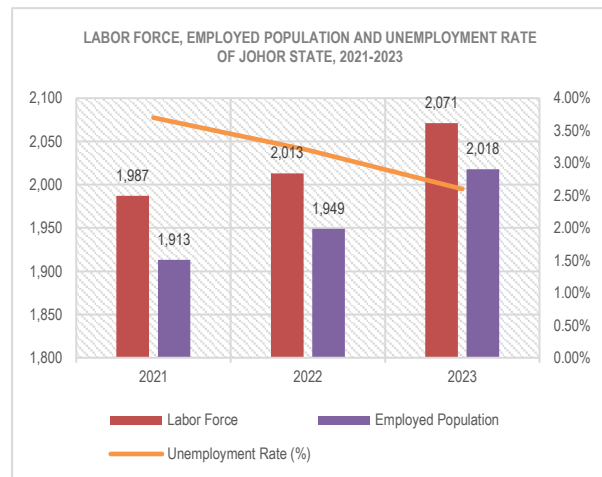
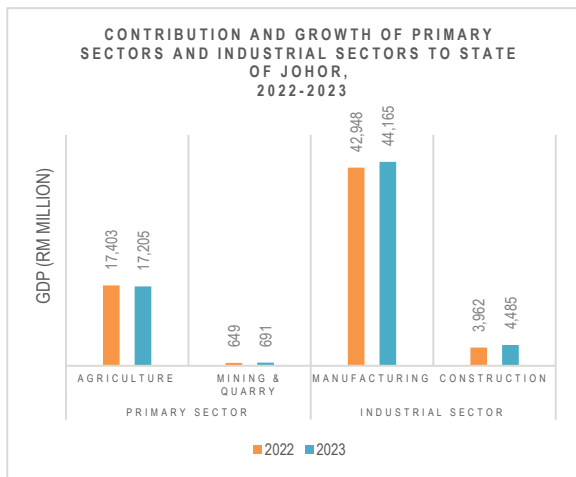
659,355

Projected Targeted Population of Johor Bahru and Kulai District by PBT, 2000 - 2025



Economic and Employment Profile

The **primary sector** in Johor includes agriculture, mining, and quarrying while the **industrial sector** consists of manufacturing and construction. Out of the four (4) main activities across both sectors, manufacturing led in Gross Domestic Product (GDP) performance in contributing RM 42,948 million in 2022 and increasing to RM 44,165 million in 2023.



Referring to the *Laporan Ekonomi Negeri Johor 2023*, labour force in Johor increased to 2071 thousand in 2023. While the employed population increased to 2018 thousand in 2023. The unemployment rate in Johor showed continuous improvement over the three-year period, decreasing by 1.1% from 3.7% in 2021 to 2.6% in 2023. This trend signals stronger job opportunities and ongoing economic recovery.

7 PROJECT DESCRIPTION

PROJECT CONCEPT AND PROJECT COMPONENT



THE CONCEPT

INDUSTRIAL ESTATE DEVELOPMENT

Develop industrial development enhanced with public facilities, infrastructure and utilities services



THE COMPONENT

- Involves EIA Phase 3 only cover 217.02 acres (87.8249 hectares)
- Involve development of industries (light and medium industry) of 141.68 acres (57.3359 hectares) from the total area with infrastructure and utilities on a part of Lot 48082

PROJECT COMPONENT

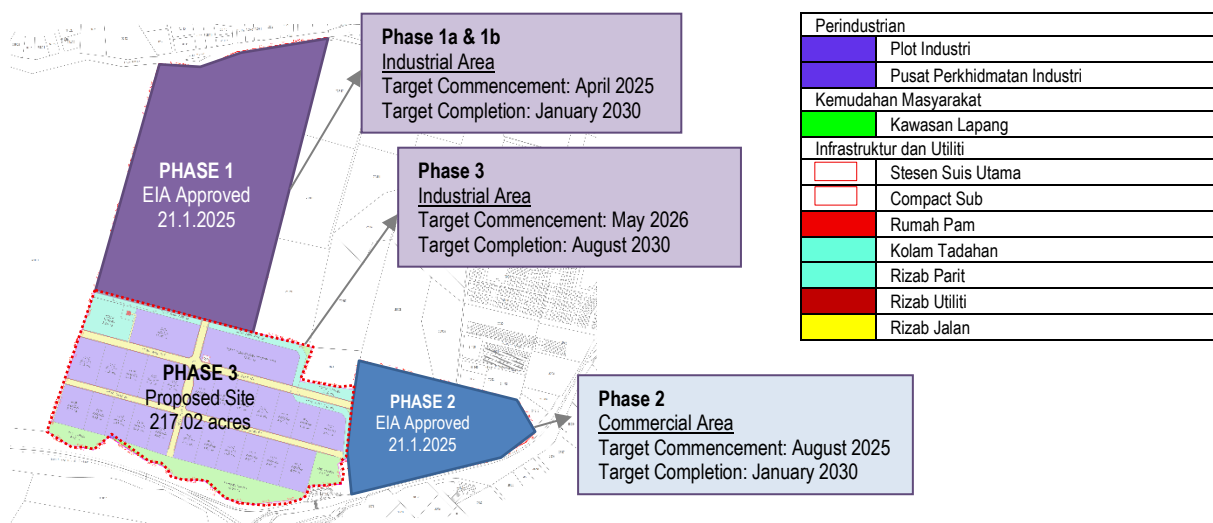


Table 2.0: Component Development Phase 3 – 217.02 acres (87.8249 hectares)

Component Development	Plot	(%)	Area (acres)	%
PERINDUSTRIAN				
Plot Perindustrian	24	80	124.85	57.53
Pusat Perkhidmatan Industri	1	3.33	16.83	7.76
Jumlah Kecil	25	83.33	141.68	65.28
KEMUDAHAN MASYARAKAT				
Kawasan Lapang	-	-	25.61	11.80
Jumlah Kecil	-	-	25.61	11.80
INFRASTRUKTUR DAN UTILITI				
Stesen Suis Utama	1	3.33	0.22	0.10
Compact Sub	1	3.33	0.01	0.005
Rumah Pam	1	3.33	0.10	0.05
Kolam Tadahan	2	6.67	10.60	4.88
Rizab Parit	-	-	11.67	5.38
Rizab Utiliti	-	-	4.58	2.11
Rizab Jalan	-	-	22.55	10.39
Jumlah Kecil	5	16.67	49.73	22.91
Jumlah Keseluruhan	30	100.00	217.02	100.00

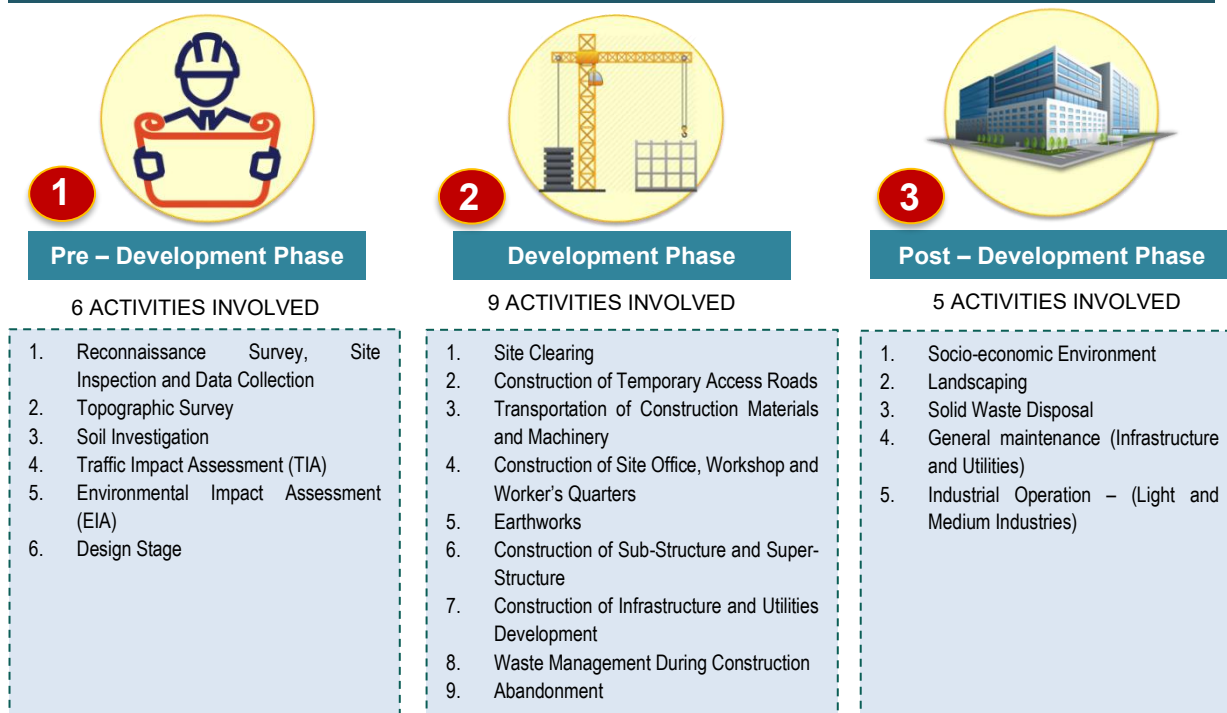
Notes:

Lot 48082 – 217.02 acres (87.8249 hectares)

- EIA Phase 1 and 2: 295.81 acres (119.7102 hectares) - Approved EIA 21.1.2025
- Proposed EIA Phase 3: 217.02 acres (87.8250 hectares)

Source: Extract from Drawing No. UEP/PLNG/KML/2025/03 Perunding UEP Sdn Bhd, 2025.

8 PROJECT ACTIVITIES



9 POTENTIAL IMPACTS AND PROPOSED POLLUTION PREVENTION AND MITIGATION MEASURES (P2M2)

EVALUATION OF IMPACTS / ENVIRONMENTAL ISSUE

The summary of potential impacts, their magnitude of the impact and the proposed pollution prevention and mitigation measures (P2M2) shows in Chapter 8 dan Table P2M2.

1. Soil Erosion and Sedimentation

01

Soil Erosion & Sedimentation

Erosion risk of the site under three conditions

- Existing (undisturbed)
- Earthwork Disturbed (uncontrolled) - no ESC
- Earthwork Disturbed (controlled) - with ESC

The total estimated earthwork volumes are balance as follow:

	Total
Volume of Cut	: 2,905,869.35 m ³
Volume of Fill	: 2,905,869.35 m ³
Export / Import	: 0.00 m ³
Platform Level	: 21.70 m – 30.20 m

The estimated total sediment generated based on USLE:

Condition	Total Soil Loss Assessment for Development Site, A (ton/ha/yr)
Existing (undisturbed)	764.6
Earthwork Disturbed (Uncontrolled)- No ESC	2550.36
Earthwork Disturbed (Controlled)- With ESC	6.37

Summary of Sediment Yield and Suspended Solid:

Sediment Basin	Sediment Yield, Tonnes	TSS, mg/L
SB1	635.06	90.13
SB2	2445.93	347.14
SB3	85.36	12.11

Notes: Earthwork Disturbed (controlled) - With ESC sediment basin + turf

2. Water Quality

- Water pollution is most likely to occur by several main issue during construction period caused by surface run-off, sedimentation and siltation during site clearing and earthwork activities.
- The estimated total sediment loading are further explained in **Chapter 7: Evaluation of Impact**.
- The nearest waterways that might be affected is **Sungai Pontian Besar**.

**Water
Quality**

02

3. Ambient Air Quality, Noise Level and Vibration

- Deterioration of air quality are expected to be cause mainly from generation of dust during earthwork activities, influx of construction vehicle that emits pollutants (dark smoke) into surrounding air and their movement on unpaved roads at construction sites.
- It was estimated that noise level at various distances are generated mostly by heavy machinery activities and also from the influx of vehicles during construction period.

**Air, Noise &
Vibration**

03

4. Safety and Health

- Improper management of construction materials and disused formworks may create breeding sites for rodents and disease vector such as mosquitoes.
- Risk or road-related accidents due to improper maintenance of transportation vehicles.

**Safety &
Health**

04

**Infrastructure &
Utilities**

05

5. Sewage Treatment Plant / Water Reticulation System/Utilities Demand/Solid Waste

- Estimation of utilities demand and waste generated during the operational phase are as per below.

1	2	3	4	5
6,621 PE Population Equivalent	6,750 m ³ /day Domestic Wastewater	8,377,236 litre/day Water Demand	17,041 kg/day Solid Waste	26,330.50 kWMD Electricity Demand

Source:

- C&S Technical Information, Jurutera JRK Sdn Bhd, 2025.
- M&E Load Demand, MEG Consult Sdn Bhd, 2025.
- PE & Utilities Estimation, Perunding UEP Sdn. Bhd., 2025.

6. Industrial Operation

- The proposed industrial development involved a total area of **141.68 acres (57.3359 hectares)** which cover approximately **65.28%** from the overall acreage.
- Involved 24-unit industrial plot comprises of light and medium industry and 1 industrial service centre plot

**Industrial
Operation**

06

LAND DISTURBANCE- POLLUTION PREVENTION & MITIGATION MEASURE PLAN (LD-P2M2) DOCUMENT

- LD – P2M2 document is prepared to address soil erosion and sedimentation at an earlier stage, hence adequate planning and resources are factored in later stages such as design & construction.
- To assist Project Proponent to **review more detail** their construction sequencing and site operation in regards to land disturbing activities which may result in soil erosion and sedimentation.
- Assist site operators involved in the land disturbing activities which include **supervising** overall implementation of LD – P2M2.

The focus of LD-P2M2 document will be on the prevention, mitigation and control of discharge from the development area containing the major pollutant (suspended solids) resulting from the project's land disturbing activities.



- LD-P2M2 document together with LD-P2M2 layout plan detail drawing has been prepared by **Jurutera JRK Sdn. Bhd.**, and verified together with **Certified Professional in Erosion and Sediment Control (CPESC), Mr Joel Lawrence Jayasunthar.**
- An **Environmental Officer** need to be appointed to supervise the LD-P2M2 and BMPs implementation on site throughout the entire project period.
- All **subcontractors** shall be informed of their responsibilities in minimizing the potential for soil erosion and pollution to the rivers.
- The **P2M2** for this proposed project should include: -

P2M2

- Proposed Diversion Channel With Earthbunds at Boundary
- Proposed Stockpile Area
- Proposed Vehicle and Equipment Area
- Proposed Material Storage Area
- Proposed Sediment Basin
- Proposed Check Dam
- Proposed Temporary Water Crossing
- Proposed Sediment Fence
- Proposed Temporary Hoarding Board Line (Length 6240m)
- Proposed Typical Cut/Fill Slope
- Proposed Slope Drainage (Inceptor Drain, Cascade Drain, Toe Drain and Berm Drain)
- Proposed Sediment Fence
- Proposed Drainage Outlet Protection

10 ENVIRONMENTAL MANAGEMENT PLAN FRAMEWORK

GUIDED SELF REGULATION

Self-regulation is an innovative long-term goal set by DOE, to achieve in building up environmental culture among project proponent. Self regulation aims to embrace project proponent with full responsibility and accountability for taking environmentally friendly options, instituting effective pollution prevention measures (P2M2) and demonstration of regulatory compliance of the EIA procedure at all stages of project implementation. In order to embrace Self-Regulation, **environmental mainstreaming tool (EMT)** were introduced. It contains **7 elements/tool** that leads project proponent in implementing a good practice of self regulation for the proposed project.



The 7 elements (EMT) or tool were comprising of:

- Environmental Policy (EP)
- Environmental Budgeting (EB)
- Environmental Monitoring Committee (EMC)
- Environmental Facility (EF)
- Environmental Competency (EC)
- Environmental Reporting and Communication (ERC)
- Environmental Transparency (ET)

Please refer to Chapter 9, for the elaboration of these environmental mainstreaming tool.



Compliance with EIA Approval Conditions:

- Environmental Management Plan (EMP)
- Environmental Audit
- Environmental Monitoring Programme (EMPr)
- Environmental Officer (EO) on Site

PROPOSED MONITORING PROGRAMME (PERFORMANCE MONITORING-PM, IMPACT MONITORING-IM AND COMPLIANCE MONITORING-CM)

Environmental monitoring programme comprises three types of monitoring, namely:

- ✚ Performance Monitoring (PM)
- ✚ Compliance Monitoring (CM)
- ✚ Impact Monitoring (IM)

Performance Evaluation of LD-P2M2 aims to develop a program to monitor how well the BMPs work and to evaluate whether additional BMPs are required. Summary of Performance Monitoring is as follows: -

Table 3.0: Performance Monitoring (PM) - Environmental Control Measures

No.	Location	Control Measures	Frequency Monitoring
1.	Silt Fences	Erosion Control	▪ Daily ▪ Within 24 hours, after heavy rainfall of $\geq 12.5\text{mm}$
2.	Sediment Basin	Erosion and Sediment Control	
3.	Earth Drain	Drainage Control	
4.	Check Dams	Drainage Control	
5.	Close Turfing and spot turfing	Erosion and Sediment Control	
6.	Earth Bank (Earthbund with Earthdrain)	Erosion and Sediment Control	
7.	Diversion Channel	Drainage Control	
8.	Drainage Outlet Protection	Drainage Control	
9.	Temporary Waterway Crossing	Drainage Control	
10.	Hoarding	Erosion, Safety, Air & Noise Barrier	
11.	Wash through	Dust Control	
12.	Access Road	Dust control	
13.	Stockpile area, Vehicle / equipment area, Material storage area, Site office and workers quarters (if any).	Solid Waste, Safety and Health	

Notes:

- Drainage control :- Control of runoff from the construction sites.
- Erosion Control :- Surface protection of exposed soil.
- Sediment Control :- Trapping the sediment within the sites.

Table 4.0: Proposed Compliance Monitoring (CM) and Impact Monitoring (IM) Programme

Component	Parameter/Unit	Frequency Monitoring	Compliance Level	Reporting Requirement	Monitoring Location
Impact Monitoring					
River Water Quality	▪ Temperature, ▪ Dissolved Oxygen (DO), ▪ Biochemical Oxygen Demand (BOD), ▪ Chemical Oxygen Demand (COD), ▪ Total Suspended Solids (TSS), ▪ pH ▪ Ammoniacal ▪ Nitrogen (NH₃-N) ▪ Oil & Grease ▪ Escherichia Coli Count ▪ Turbidity ▪ Faecal Coliform	Monthly	Results will be compared to: • Baseline • National Water Quality Standards for Malaysia (NWQS), Class IIA	Every Three (3) Month	Eight (8) points
River Water Quality (Heavy Metal)	▪ Aluminium, Al (mg/l) ▪ Arsenic, As (mg/l) ▪ Cadmium, Cd (mg/l) ▪ Hexa - Chromium, Cr⁶⁺ (mg/l) ▪ Tri - Chromium, Cr³⁺ (mg/l) ▪ Copper, Cu (mg/l) ▪ Iron, Fe (mg/l) ▪ Lead, Pb (mg/l) ▪ Manganese, Mn (mg/l) ▪ Mercury, Hg (mg/l) ▪ Nickel, Ni (mg/l) ▪ Selenium, Se (mg/l) ▪ Silver, Ag (mg/l) ▪ Tin, Sn (mg/l) ▪ Zinc, Zn (mg/l) ▪ Boron, B (mg/l) ▪ Cyanide, CN (mg/l)	Monthly	Results will be compared to: • Baseline • National Water Quality Standards for Malaysia (NWQS), Class IIA • Environmental Quality (Industrial Effluent) Regulations 2009, Fifth Schedule	Every Three (3) Month	Four (4) points

Component	Parameter/Unit	Frequency Monitoring	Compliance Level	Reporting Requirement	Monitoring Location
Impact Monitoring					
Ambient Air Quality	- PM₁₀ - PM_{2.5} - Sulphur Dioxide, SO₂ - Nitrogen Dioxide, NO₂ - Carbon Monoxide (CO) - Ozone O₃	Monthly	Result will be compared to: - Baseline - Malaysian Ambient Air Quality Standard, 2013 PM ₁₀ : 100 µg/m ³ PM _{2.5} : 35 µg/m ³ SO ₂ : 80 µg/m ³ NO ₂ : 70 µg/m ³ CO : 30 µg/m ³ O ₃ : 180 µg/m ³	Every Three (3) Month	Four (4) points
Noise Level	L_{Aeq}	Monthly	Results will be compared to: - Baseline - DOE's Interim Guidelines for Recommended Permissible Sound Levels by receiving land use new development (Schedule 2)	Every Three (3) Month	Eight (8) points
Vibration Level	Team peak	Monthly	Results will be compared to: - Baseline - The Planning Guideline for vibration limit & control, DOE (Schedule 1 and Schedule 3)	Every Three (3) Month	Three (3) points
Compliance Monitoring					
Sediment basin outlet discharge	Total Suspended Solid (TSS)	Monthly	Results will be compared to: DOE requirement is < 50 mg/l	Every Three (3) Month	Two (2) Sediment Basin

Notes:

- Parameter analysis for Environmental Monitoring shall be conducted by lab that is acknowledge by 'Laboratory Accreditation Scheme of Malaysia' from Department of Standards Malaysia.
- Frequency of monitoring subject to EIA Approval Condition

Table 5.0: Proposed Future Sampling Location for Compliance Monitoring-CM And Impact Monitoring-IM

Environmental Quality	No Stations
Water (River / Drain) IM	8 W1-W8
Water (Heavy Metal) IM	4 HM1-HM4
Air IM	4 A1-A4
Noise IM	8 N1-N8
Vibration IM	3 V1-V3
Sedimen Basin CM	2 SB1-SB2

Source: Perunding UEP Sdn. Bhd, 2025.

11 CONCLUSIONS



FIRST SCHEDULE, ACTIVITY 17: INDUSTRIAL ESTATE DEVELOPMENT

*Development of Industrial Estate covering an area of 20 hectares or more

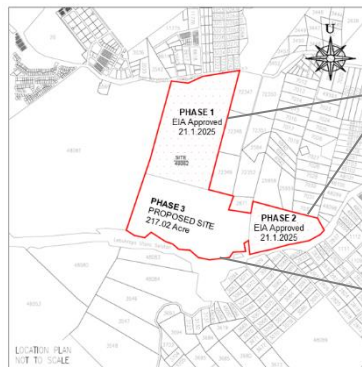
TOTAL LAND AREA

LOT 48082
512.83 acres
(207.5349 hectares)

- Phase 1
- Phase 2
- Phase 3

CONCEPT DEVELOPMENT

- Light and Medium Scale Industry



PREVIOUS EIA PROJECT - PHASE 1 & PHASE 2

Area cover: 295.81 acres (119.7102 hectares)

- EIA 2025 Approved 21st January 2025
- EMP 2025 Approved 29th July 2025

NEW EIA SUBMISSION – PHASE 3

Area cover: 217.02 acres (87.8249 hectares)

- ✚ All those impacts identified shall be mitigated either via engineering approach (temporary access road, sediment basin, etc. or on-site management approach (traffic control, waste minimization, watering method on the surface of gravel roads, etc). As recommend, the project proponent shall be developed the project by phases to reduce the adverse impact to the environment.
- ✚ The assessment carried out in the EIA report has shown with the proper mitigation measures taken from the planning stage until the operational stage of the proposed development.
- ✚ The Environment Management Plan (EMP) shall be concluded once the EIA report has been approved by the DOE Johor requirement.

RINGKASAN EKSEKUTIF

1 PENGENALAN

TAJUK PROJEK:

Tajuk projek di dalam laporan Penilaian Kesan Kepada Alam Sekeliling (EIA) untuk **ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR CADANGAN PEMBANGUNAN PERINDUSTRIAN BERSTRATA, KEMUDAHAN MASYARAKAT DAN INFRASTRUKTUR DAN UTILITI SELUAS 217.02 EKAR DI ATAS SEBAHAGIAN LOT 48082, MUKIM KULAI, DAERAH KULAI, JOHOR DARUL TA'ZIM UNTUK TETUAN GOLDEN VALLEY CAPITAL SDN. BHD.**"
 ~ EIA Fasa 3

JADUAL PERTAMA

EIA

PEMBANGUNAN ESTET INDUSTRI
[Industri Ringan dan Sederhana]



LATAR BELAKANG PROJEK

- Laporan EIA dan EMP bagi sebahagian Lot 48082 (Fasa 1 dan Fasa 2) meliputi keluasan 295.81 ekar (119.7102 hektar) telah diluluskan pada 21hb Januari 2025 dan 29hb Julai 2025 oleh Jabatan Alam Sekitar (JAS) Johor di bawah aktiviti pembangunan estet Perindustrian.
- Walau bagaimanapun, cadangan kajian EIA bagi Fasa 3 ini meliputi 217.02 ekar (87.8249 hektar) dalam sebahagian Lot 48082, yang merangkumi industri ringan dan sederhana (141.68 ekar – 65.28 %), kemudahan awam (25.61 ekar – 11.80 %), infrastruktur dan utility (49.73 ekar – 22.91%).
- Golden Valley Capital Sdn Bhd** sebagai penggerak projek yang dicadangkan ini dan merancang untuk membangunkan projek pembangunan estet perindustrian yang merangkumi komponen perindustrian, infrastruktur dan kemudahan awam.



2 PENGENALAN

PEMAJU PROJEK

Pemaju : Golden Valley Capital Sdn Bhd
 Alamat syarikat : 1-23-1 Menara Bangkok Bank
 Berjaya Central Park, Jalan Ampang
 50250 Kuala Lumpur
 No. Telefon : 03 - 2181 8783
 Pegawai Dihubungi : Dato' Goh Cheng Huat
 Jawatan : Pengarah



PERUNDING EIA

Syarikat Perunding EIA : Perunding UEP Sdn Bhd (Urban & Environmental Planning Consultant)
 Alamat syarikat : No 50-02, Jalan Pertama 1, Pusat Perdagangan Danga Utama, 81300, Johor Bahru, Johor.
 No. Telefon: : 07 – 550 0501 / 07-550 0502
 Faks : 07 – 550 0503
 Pegawai Dihubungi : TPr. Abdul Halim Bin Ali Hassan
 Register No. EIA (DOE) – (CEP-CS 0130)



3 KEPERLUAN PERUNDANGAN

Jadual Pertama, Aktiviti 17: Pembangunan Kawasan Perindustrian

- Pembangunan Kawasan Perindustrian yang meliputi kawasan seluas 20 hektar

Sumber: Perintah Kualiti Alam Sekeliling. (Aktiviti yang Ditetapkan) (Penilaian Kesan kepada Alam Sekeliling) 2015.

Laporan Penilaian Kesan Alam Sekitar (EIA) ini disediakan berdasarkan Garispanduan Penilaian Kesan Alam Sekitar (EIA) Malaysia. Perundangan yang relevan akan dipertimbangkan dalam penyediaan laporan EIA.



Mematuhi Environmental Impact Assessment Guidelines in Malaysia, 2016 (EGiM), Department of Environment Malaysia.



Environmental Impact Assessment Guideline for Housing, New Township and Industrial Estate Development 2020, Jabatan Alam Sekitar Malaysia



Mematuhi Akta Kualiti Alam Sekeliling 1974 (AKTA 127), Seksyen 34A

4 PERNYATAAN KEPERLUAN



MANFAAT

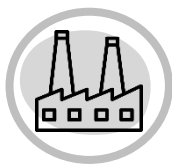
- Pembangunan ini akan menjana peluang pekerjaan dan meningkatkan pendapatan penduduk setempat
- Kawasan tanah ini sesuai untuk kegunaan perindustrian dan selaras dengan pembangunan di kawasan sekitar
- Zon perindustrian yang dirancang dengan baik serta dilengkapi infrastruktur lengkap akan menarik minat pelabur
- Hab ini berpotensi meningkatkan nilai hartanah di kawasan sekitarnya
- Infrastruktur pintar berasaskan IoT akan meningkatkan kecekapan operasi dan kebolehpercayaan sistem
- Penggunaan teknologi canggih adalah selaras dengan aspirasi industri 4.0 dan objektif NIMP 2030
- Pembangunan sektor runcit, logistik dan perkhidmatan baharu akan memberi manfaat kepada komuniti setempat serta menyokong pembangunan kemahiran
- Projek ini menggalakkan pertumbuhan wilayah yang lebih seimbang



JUSTIFIKASI

- Kedudukan strategik Malaysia serta dasar sokongan kerajaan menjadikannya sebuah pasaran Perindustrian yang kukuh
- Golden Valley bertujuan membangunkan taman perindustrian berkualiti bagi menyokong keperluan sektor pembuatan dan teknologi maklumat yang semakin berkembang
- Projek ini selaras dengan trend perindustrian semasa serta melengkapi pembangunan di kawasan sekitarnya
- Kawasan perindustrian yang dirancang dengan baik berpotensi meningkatkan nilai sosioekonomi dan taraf hidup masyarakat
- Pembangunan ini akan memperkukuh aktiviti pengeluaran dan logistik
- Secara keseluruhan, projek ini dijangka membawa manfaat ekonomi, sosial dan alam sekitar yang positif

5 LOKASI PROJEK



✚	Lokasi	: Mukim Bukit Batu, Daerah Kulai, Johor Darul Ta'zim
✚	Lot Terlibat	: Sebahagian Lot 48082
✚	Keluasan Keseluruhan	: EIA Fasa 3 meliputi 217.02 ekar (87.8249 hektar) di sebahagian Lot 48082 Jumlah keseluruhan Lot 48082 ialah 512.83 ekar (207.5349 hektar)
✚	Cadangan Pembangunan	: Pembangunan Estet Perindustrian (Pembangunan Perindustrian bersama kemudahan awam, infrastruktur dan utiliti)

Terletak di dalam kawasan pembangunan tinggi yang dikelilingi oleh kawasan komersial, perindustrian dan kediaman yang berpotensi untuk melengkapkan lagi projek yang dicadangkan.

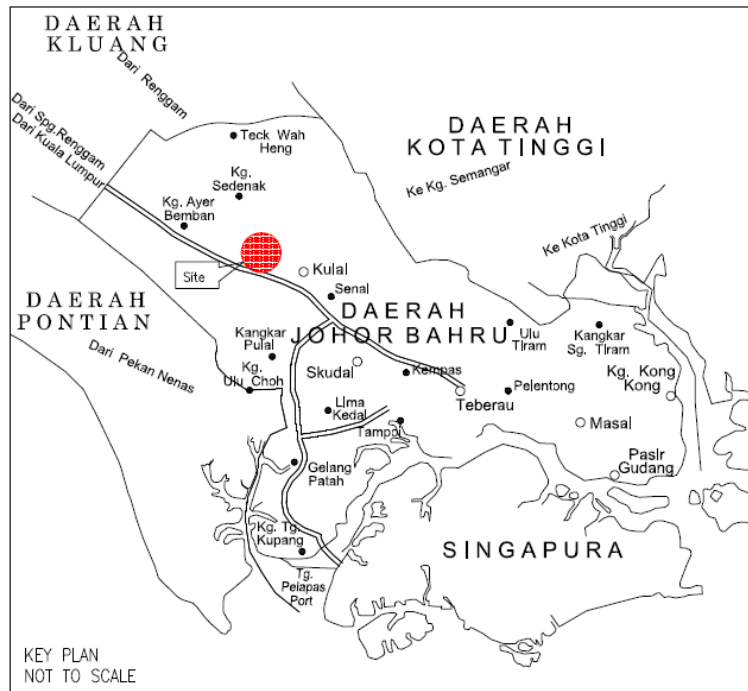
KEBOLEHCAPAIAN

- Dari segi kebolehcapaian, jalan lebuhraya sedia ada Jalan Besar, Kulai (FT001), berfungsi sebagai akses utama ke tapak cadangan. Jalan ini menghubungkan kawasan dengan pusat aktiviti utama, koridor berkepadatan tinggi dan kawasan bandar.
- Kawasan kajian terdiri daripada jalan yang terjejas iaitu Jalan Besar (FT001), tiga persimpangan isyarat Jalan Besar – Jalan Persiaran Tropika dan tiga persimpangan henian iaitu Jalan Besar – Jalan Besi Utama dan Jalan Besar – Jalan Sawit Baru. Cadangan akses terutamanya untuk mengubah hala lalu lintas dari Jalan Besar (FT001) sepanjang jalan utama. Ia juga menghubungkan dengan kawasan perumahan seperti Taman Scientex Kulai 2, Taman Lagenda Putra dan ia meningkat dengan beberapa pembangunan perindustrian termasuk Desa Perindustrian Sri Kulai, Empire Park Kulai, Desa Perindustrian Sri Kulai 2 dan lain-lain.

Jadual 1.0: Keterangan Tapak

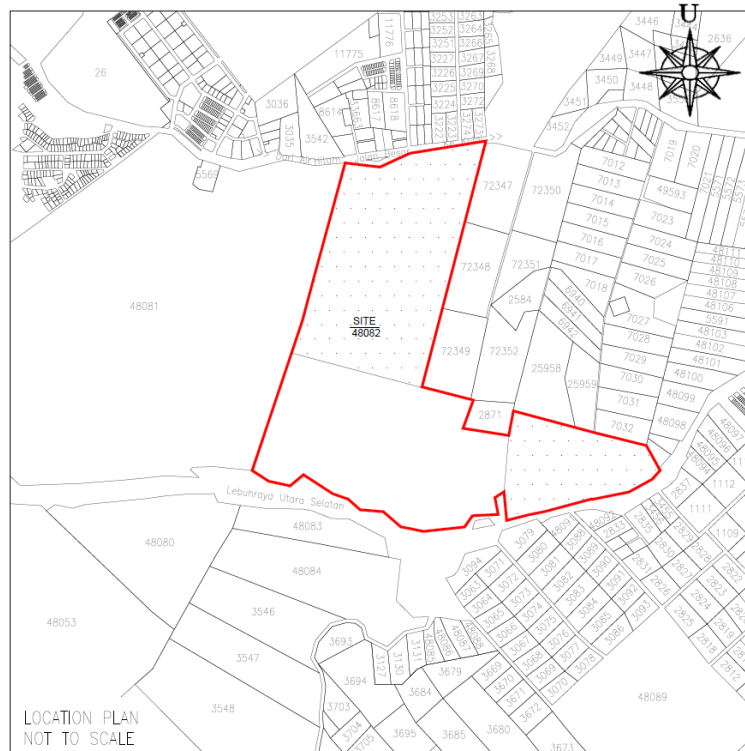
No.	Perkara	Keterangan
1.	Penggerak Projek & Pemilik Tanah	Golden Valley Capital Sdn Bhd
2.	Alamat Syarikat Penggerak Projek	1-23-1 Menara Bangkok Bank Berjaya Central Park, Jalan Ampang 50250 Kuala Lumpur
3.	Pihak Untuk Dihubungi	Mr Austin Low Pengurus Projek
4.	Pengarah	Dato' Goh Cheng Huat
5.	Jawatan	Pengarah
6.	Luas Keseluruhan Tanah	EIA Fasa 3 meliputi 217.02 ekar (87.8249 hektar) di sebahagian Lot 48082 Jumlah keseluruhan Lot 48082 ialah 512.83 ekar (207.5349 hektar)
7.	No. Lot	Sebahagian Lot 48082
8.	Mukim	Kulai
9.	Daerah	Kulai
10.	Negeri	Johor Darul Ta'zim
11.	Tanah Sedia Ada	Kawasan kelapa sawit dan semak samun
12.	Zon Perancangan di dalam RTD	Rancangan Tempatan Kulai 2035 ✚ BP 1: Bandar Kulai ✚ BPK 1.8: Taman Lagenda Putra
13.	Pihak Berkuasa Tempatan	Majlis Perbandaran Kulai
14.	Cadangan Pembangunan	Pembangunan Estet Perindustrian (Pembangunan Perindustrian bersama kemudahan awam, infrastruktur dan utiliti)

Rajah 1.0, Rajah 2.0 and Rajah 3.0 menunjukkan Pelan Utama, Pelan Lokasi dan Koordinat sempadan tapak masing-masing.



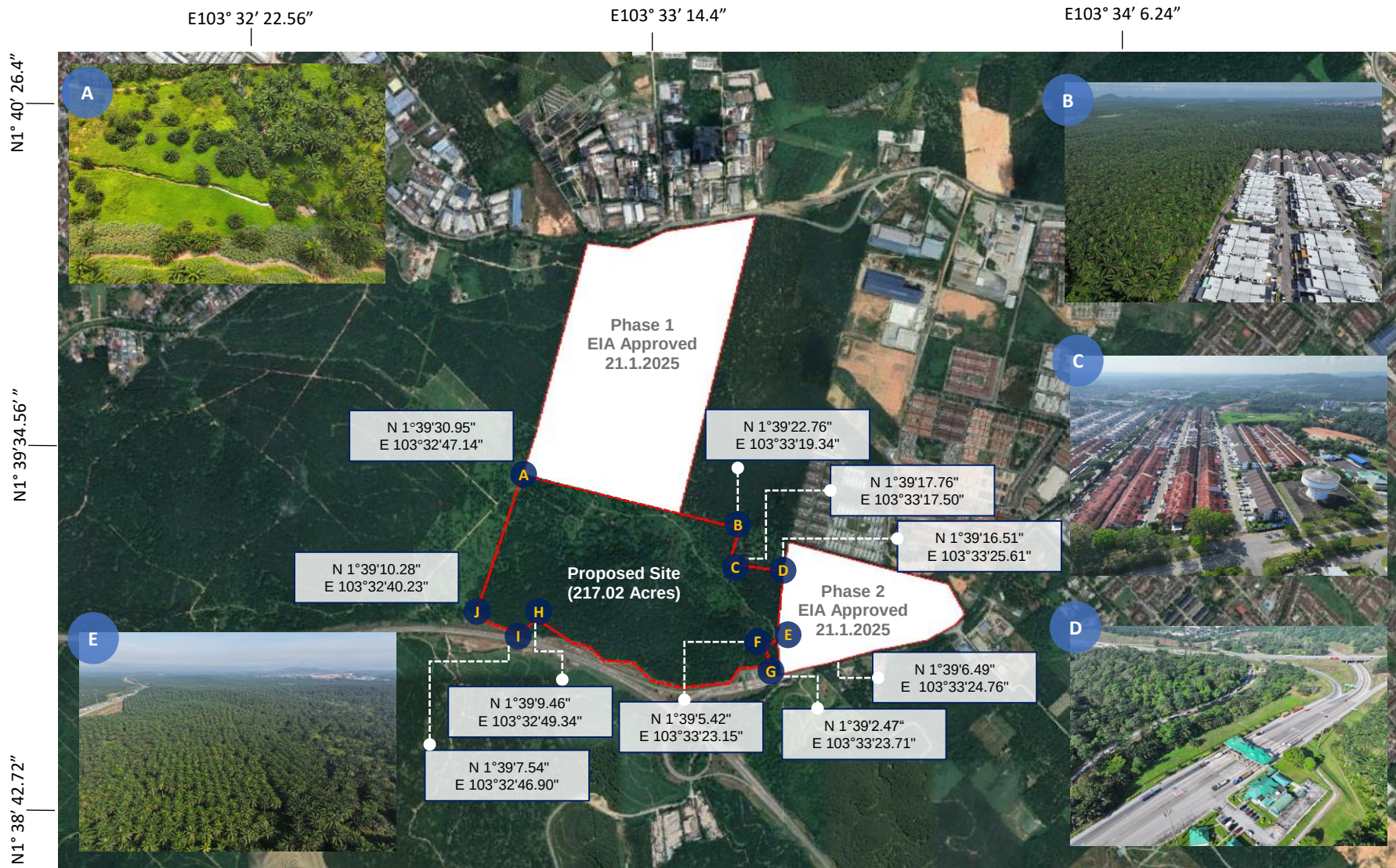
Sumber: Ekstrak Pelan No. UEP/PLNG/KML/2025/03 by Perunding UEP Sdn Bhd

Rajah 1.0: Pelan Kunci



Sumber: Ekstrak Pelan No. UEP/PLNG/KML/2025/03 by Perunding UEP Sdn Bhd

Rajah 2.0: Pelan Lokasi



EIA Report Approved 21st January 2025, Reference No. JAS. JHQ.600-2/15/20 (32)
 EMP Report Approved 29th July 2025, Reference No. JAS. JHQ.600-2/15/20 (38)

Rajah 3.0

Koordinat Bagi Sempadan Tapak



Legend

- Previous EIA (Phase 1 & Phase 2)
- Proposed Site (Phase 3)

Source : Google Earth, 2025

Environmental Consultant



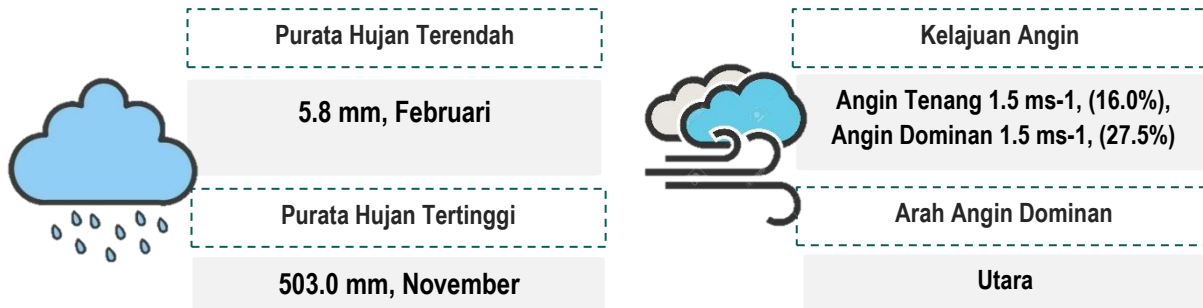
No 50-02, Jalan Pertama 1,
 Danga Utama Commercial Centre
 81300 Johor Bahru, Johor Darul Takzim
 Tel : 07-550 0501 / 550 0502
 Fax : 07-550 0503
 Email : environment@perundinguep.com
official@perundinguep.com



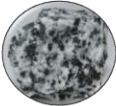
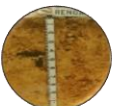
6 KEADAAN PERSEKITARAN SEDIA ADA

IKLIM DAN METEOROLOGI

Data iklim dan meteorologi diperoleh daripada **Stesen Meteorologi Sultan Ismail, Senai** merangkumi profil angin, profil suhu, purata kelembapan relatif 24 jam bulanan, jumlah hujan bulanan dan purata radiasi global harian bulanan.



TANAH DAN GEOLOGI

Ciri Geologi	Litologi	Siri Tanah
Era Mesozoik 	Dikelas sebagai "<i>acid intrusives (undifferentiated)</i>" merujuk kepada batuan igenus jenis asid 	Siri Tanah: Rengam - Jerangau 

ANALISIS KECERUNAN

Berdasarkan daripada analisis kecerunan bagi kawasan terlibat kerja tanah, anggaran sekitar **99.40%** daripada kawasan cadangan dikategorikan di bawah Kelas I (<15°) yang meliputi kawasan seluas **509.76 ekar**. Oleh itu, cadangan pembangunan ini tidak mempunyai halangan pembangunan besar dan sesuai untuk dibangunkan.

KUALITI ALAM SEKITAR

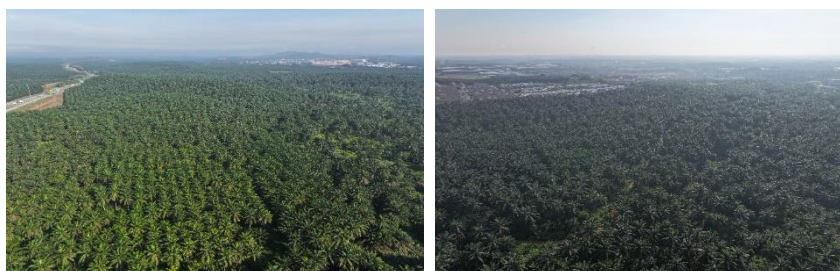


Sumber: Spectrum Laboratories (Johor) Sdn Bhd, 2025.

Rujuk Appendix M: Certificate of Analysis (COA), Spectrum Laboratories (Johore) Sdn Bhd.

PERSEKITARAN BIOLOGIKAL- EKOLOGIKAL

Keadaan semasa tapak cadangan projek adalah ladang kelapa sawit. Berdasarkan kaji selidik yang dijalankan, terdapat sebilangan flora dan fauna yang dikenalpasti di dalam kawasan cadangan pembangunan. Kepelbagaian spesis yang dikenalpasti di kawasan kajian didapati adalah yang sering dijumpai di kawasan aktiviti semasa iaitu kelapa sawit dan rumput.

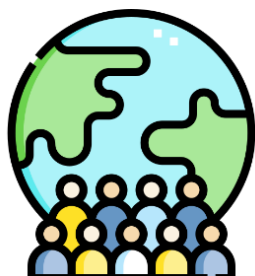


Ladang Kelapa Sawit

SOSIO EKONOMI / ALAM SEKITAR MANUSIA

Profil Demografi

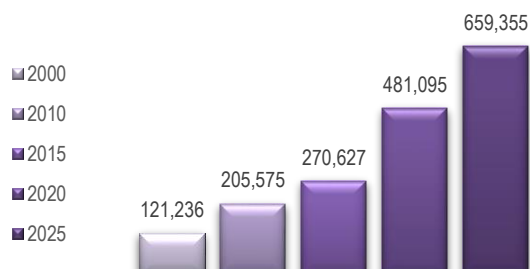
Berdasarkan **Rancangan Tempatan Daerah Johor Bahru dan Kulai, 2025 (Penggantian)**, jumlah penduduk yang diunjurkan di bawah pentadbiran Majlis Perbandaran Kulai (MPKu) pada tahun 2025 adalah seramai 659,355 orang. Secara keseluruhan, pada tahun 2025, penduduk Daerah Johor Bahru dan Kulai menjelang 2025 dijangka **meningkat kepada 3,836,865 individu dengan KPPT sebanyak 4.79% setahun**.



Unjuran Jumlah Penduduk di bawah MPKu pada tahun 2025

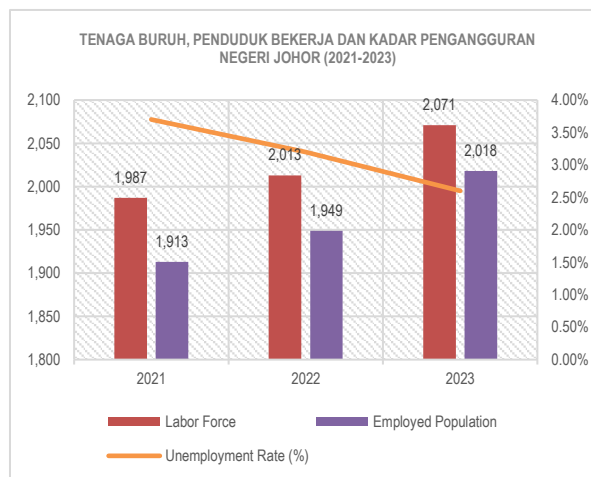
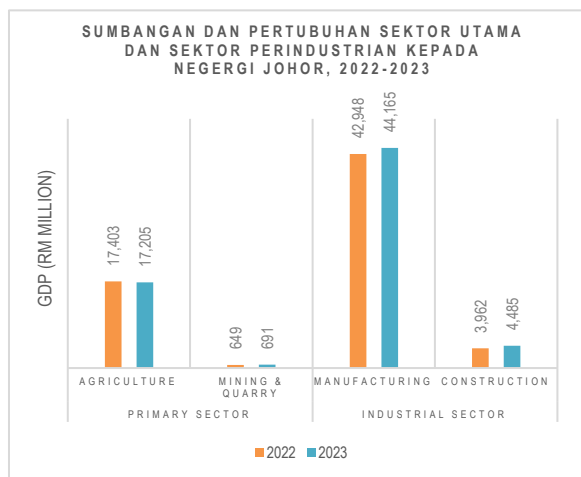
659,355

Unjuran Sasaran Penduduk bagi Daerah Johor Bahru dan Kulai mengikut PBT, 2000 - 2025



Ekonomi dan Profil Pekerjaan

Sektor utama di Johor merangkumi pertanian, perlombongan, dan kuari manakala **sektor perindustrian** terdiri daripada pembuatan dan pembinaan. Daripada empat (4) aktiviti utama di kedua-dua sektor, pembuatan mendahului prestasi Keluaran Dalam Negara Kasar (KDNK) dalam menyumbang RM 42, 948 juta pada 2022 dan meningkat kepada **RM 44,165 juta pada 2023**.



Merujuk kepada **Laporan Ekonomi Negeri Johor 2023**, tenaga buruh di Johor meningkat kepada 2071,000 pada tahun 2023. Manakala penduduk bekerja meningkat kepada 2018,000 pada tahun 2023. Kadar pengangguran di Johor menunjukkan peningkatan berterusan dalam tempoh tiga tahun, menurun sebanyak 1.1% daripada 3.7% pada tahun 2023. Ini menunjukkan tren menandakan peluang pekerjaan yang lebih kukuh dan pemulihan ekonomi yang berterusan.

7 KETERANGAN PROJEK

KONSEP PROJEK DAN KOMPONEN PROJEK



KONSEP

PEMBANGUNAN ESTET PERINDUSTRIAN

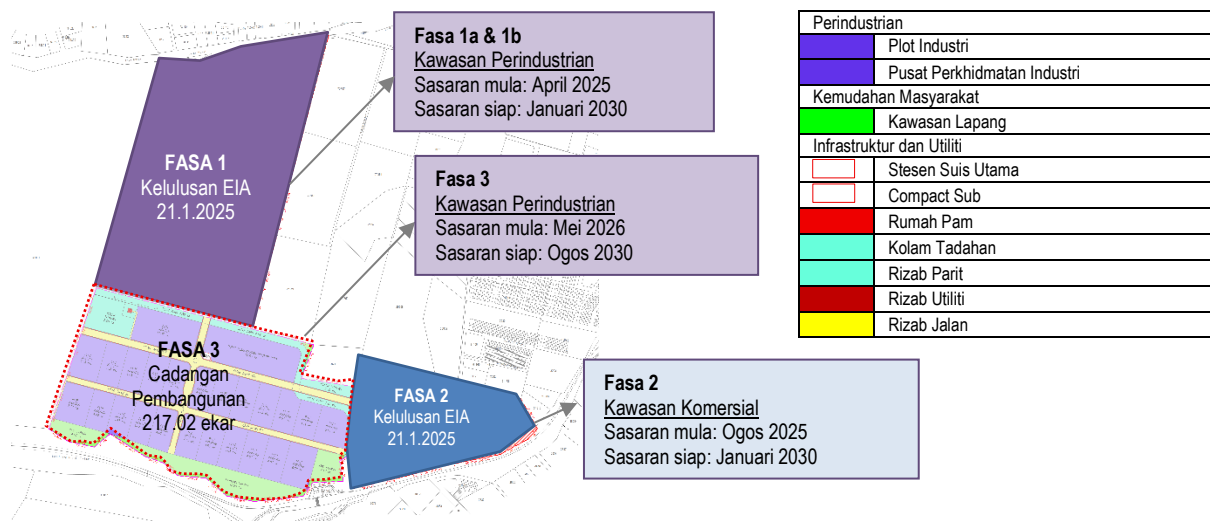
Membangunkan pembangunan perindustrian yang diperkasakan dengan kemudahan awam, infrastruktur dan perkhidmatan utiliti.



KOMPONEN

- Melibatkan EIA Fasa 3 yang hanya merangkumi 217.02 ekar (87.8249 hektar)
- Melibatkan pembangunan industri (industri ringan dan sederhana) seluas 141.68 ekar (57.3359 hektar) daripada jumlah keluasan, beserta infrastruktur dan utiliti pada sebahagian Lot 48082

KOMPONEN PROJEK



Jadual 2.0: Komponen Pembangunan Fasa 3 – 217.02 ekar (87.8249 hektar)

Komponen Pembangunan	Plot	(%)	Luas (ekar)	%
PERINDUSTRIAN				
Plot Perindustrian	24	80	124.85	57.53
Pusat Perkhidmatan Industri	1	3.33	16.83	7.76
Jumlah Kecil	25	83.33	141.68	65.28
KEMUDAHAN MASYARAKAT				
Kawasan Lapang	-	-	25.61	11.80
Jumlah Kecil	-	-	25.61	11.80
INFRASTRUKTUR DAN UTILITI				
Stesen Suis Utama	1	3.33	0.22	0.10
Compact Sub	1	3.33	0.01	0.005
Rumah Pam	1	3.33	0.10	0.05
Kolam Tadahan	2	6.67	10.60	4.88
Rizab Parit	-	-	11.67	5.38
Rizab Utiliti	-	-	4.58	2.11
Rizab Jalan	-	-	22.55	10.39
Jumlah Kecil	5	16.67	49.73	22.91
Jumlah Keseluruhan	30	100.00	217.02	100.00

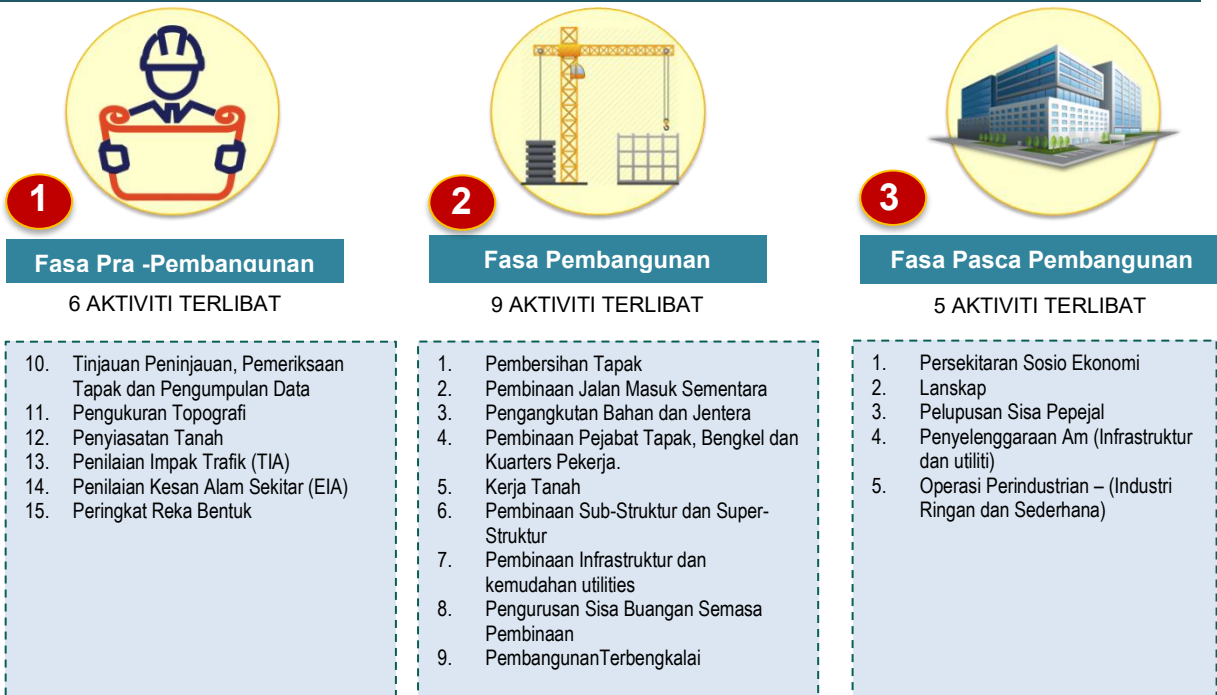
Nota:

Lot 48082 – 217.02 ekar (87.8249 hektar)

- EIA Fasa 1 dan Fasa 2: 295.81 ekar (119.7102 hektar) – Kelulusan EIA pada 21.1.2025
- Cadangan EIA Fasa 3: 217.02 ekar (87.8250 hektar)

Sumber: Ekstrak Pelan No. UEP/PLNG/KML/2025/03 by Perunding UEP Sdn Bhd

8 AKTIVITI PROJEK



9 KESAN POTENSI DAN CADANGAN LANGKAH PENCEGAHAN SERTA MITIGASI PENCEMARAN (P2M2)

POTENSI IMPAK DAN LANGKAH KAWALAN

Ringkasan potensi impak, magnitud kesan dan pencegahan pencemaran serta langkah-langkah pencegahan yang dicadangkan (P2M2) di nyatakan di dalam Bab 8 dan Jadual P2M2.

1. Hakisan Tanah dan Sedimentasi

01

Hakisan Tanah & Sedimentasi

Risiko hakisan tapak di bawah tiga keadaan

- Sedia ada (tidak terganggu)
- Kerja Tanah Terganggu (tidak terkawal) - tiada ESC
- Kerja Tanah Terganggu (terkawal) - dengan ESC

Jumlah anggaran isipadu kerja tanah adalah seperti berikut:

	Jumlah
Isipadu pemotongan	: 2,905,869.35 m ³
Isipadu pengisian	: 2,905,869.35 m ³
Import / Eksport	: 0.00 m ³
Aras Tapak	: 21.70 m – 30.20 m

Jumlah anggaran kehilangan tanah berdasarkan perkiraan model USLE:

Keadaan	Jumlah Kehilangan Tanah di Tapak, A (ton/ha/yr)
Sedia ada (tidak terganggu)	764.6
Kerja Tanah Terganggu (tidak terkawal) - tiada ESC	2550.36
Kerja Tanah Terganggu (terkawal) - dengan ESC	6.37

Jumlah Sediment Yield & Suspended Solid:

Sediment Basin	Sediment Yield, Tonnes	TSS, mg/L
SB1	635.06	90.13
SB2	2445.93	347.14
SB3	85.36	12.11

Nota: Kerja Tanah Terganggu (terkawal) - dengan ESC

2. Kualiti Air

- Pencemaran air boleh berlaku disebabkan beberapa aktiviti semasa aktiviti pembinaan, antaranya daripada air larian permukaan, sedimentasi dan siltasi semasa aktiviti pembersihan tapak dan aktiviti kerjetanah.
- Jumlah janaan pepejal terampai diterangkan lebih lanjut dalam **Bab 7: Jangkaan Impak**.
- Sungai yang berhampiran tapak yang berpotensi terkesan adalah **Sungai Pontian Besar**.

Kualiti Air Sungai

02

3. Kualiti Udara Ambien, Paras Bunyi dan Gegeran

- Penurunan kualiti udara ambien boleh disebabkan oleh peningkatan janaan debu/ habuk semasa aktiviti kerja tanah, peningkatan jumlah kenderaan pembinaan yang mengeluarkan asap hitam dan pergerakan kenderaan di jalan yang tidak berturap.
- Dijangkakan peningkatan paras bunyi dan gegeran dijana daripada aktiviti kenderaan berat dan peningkatan jumlah kenderaan pembinaan.

Udara, Bunyi dan Gegeran

03

4. Keselamatan dan Kesihatan

- Pengurusan bahan binaan yang tidak betul dan bekas acuan yang tidak digunakan boleh mewujudkan tapak pembiakan tikus dan pembawa penyakit seperti nyamuk.
- Risiko kemalangan jalan raya juga dijangka daripada aktiviti penyelenggaraan dan pengangkutan bahan binaan.

Kesihatan dan Keselamatan

04

Infrastruktur dan Kemudahan

05

5. Loji Rawatan Kumbahan / Sistem Retikulasi Air/Permintaan Kemudahan/Pengurusan Sisa Pepejal

- Jangkaan permintaan utiliti daripada semasa fasa operasi adalah sebagaimana berikut.

1	2	3	4	5
6,621 PE	6,750 m ³ /hari	8,377,236 liter/hari	17,041 kg/hari	26,330.50 kwMD
Populasi Setara	Olahan Kumbahan	Keperluan Air	Sisa Pepejal	Bekalan Elektrik

Sumber:

- C&S Technical Information, Jurutera JRK Sdn Bhd, 2025.
- M&E Load Demand, MEG Consult Sdn Bhd., 2025.
- PE & Utilities Estimation, Perunding UEP Sdn. Bhd., 2025.

6. Operasi Industri

- Cadangan pembangunan Perindustrian melibatkan keluasan keseluruhan **141.68 ekar (57.3359 hektar)** yang merangkumi kira-kira **65.28%** daripada jumlah keluasan.
- Ia melibatkan 24 lot industri yang terdiri daripada industri ringan dan sederhana serta 1 lot pusat perkhidmatan industri.

Operasi Industri

06

GANGGUAN TANAH – LANGKAH PENCEGAHAN DAN MITIGASI PENCEMARAN (LD-P2M2)

- Dokumen LD – P2M2** disediakan untuk mengenalpasti isu hakisan tanah dan sedimentasi di peringkat awal, yang boleh membantu secara praktikal dalam proses perancangan dan penggunaan sumber semasa peringkat reka bentuk dan pembinaan.
- Dokumen** ini juga membantu Penggerak Projek dalam mengenal pasti dengan lebih terperinci kesan pembangunan yang dicadangkan akibat daripada aktiviti kacau ganggu tanah semasa peringkat pembinaan.
- Dokumen** ini juga membantu operator tapak dan individu kompeten dalam proses implementasi komponen P2M2 yang disyorkan.

Objektif penyediaan dokumen LD-P2M2 ini lebih terarah dalam menyediakan kaedah pencegahan, mitigasi dan kawalan discaj daripada tapak cadangan pembangunan yang merangkumi bahan pencemar utama (pepejal terampai) yang disebabkan oleh aktiviti kacau ganggu tanah.



- Dokumen LD-P2M2 dan pelan LD-P2M2 disediakan oleh **Jurutera JRK Sdn. Bhd.**, dan di verifikasi oleh **Certified Professional in Erosion and Sediment Control (CPESC), Mr Joel Lawrence Jayasunthar**.
- Pegawai Kompeten Alam Sekitar** hendaklah dilantik untuk mengurus-selia pemasangan dan penyelenggaraan komponen P2M2 dan BMPs sepanjang fasa pembangunan projek.
- Semua **sub-kontraktor** perlu diberi pengetahuan berkenaan keperluan P2M2 dalam usaha mengurangkan potensi hakisan tanah yang mencemarkan sungai.
- Komponen **P2M2** bagi cadangan pembangunan ini merangkumi:

P 2 M 2

- | | |
|--|--|
| 1. Cadangan Pagar Sedimen | 10. Cadangan <i>Temporary Waterway Crossing</i> |
| 2. Papan Tanda Projek | 11. Cadangan Stesen Basuhan dan Jet Air |
| 3. Cadangan Garisan Papan Pagar Sementara | 12. Cadangan Jalan Akses Sementara |
| 4. Saliran Bertingkat (<i>Cascade Drain</i>) | 13. Cadangan Semua Cerun hendaklah Ditumbuhi Rumput Segera |
| 5. Cadangan Saliran Tanah dengan Bendungan Semak | 14. Cadangan Kawasan <i>Stockpile Area</i> |
| 6. Cadangan Saluran Tanah dengan Saliran Tanah | 15. Cadangan Kawasan Kenderaan dan Peralatan |
| 7. Cadangan Kolam Sedimen Kering | 16. Cadangan Kawasan Penyimpanan Bahan |
| 8. Cadangan <i>Check Dam</i> | 17. Cadangan <i>Gate and Bar Drop</i> |
| 9. Cadangan Kawalan Liat (<i>Silt Control</i>) | 18. Cadangan <i>Paving Interlock</i> |

10 RANGKA PELAN PENGURUSAN ALAM SEKITAR (EMP)**PENGAWALAN KENDIRI BERPANDUAN**

Pematuhan sendiri adalah matlamat jangka panjang inovatif yang telah ditetapkan oleh Jabatan Alam Sekitar (JAS), bagi mewujudkan etika pembudayaan alam sekitar kalangan penggerak projek. Pematuhan sendiri ini bertujuan untuk mengarusperdanakan tanggungjawab penggerak projek untuk melaksanakan langkah-langkah pencemaran (P2M2) yang berkesan dan bagi memastikan pemuatan syarat-syarat lulus EIA di peringkat pelaksanaan projek. Ianya mengandungi tujuh (7) elemen yang membantu penggerak projek dalam melaksanakan amalan pematuhan sendiri untuk projek yang ingin dimajukan.

7 elemen (EMT) atau alat terdiri daripada:

- Environmental Policy (EP)*
- Environmental Budgeting (EB)*
- Environmental Monitoring Committee (EMC)*
- Environmental Facility (EF)*
- Environmental Competency (EC)*
- Environmental Reporting and Communication (ERC)*
- Environmental Transparency (ET)*

Sila rujuk **Chapter 9: Environmental Management Plan** bagi penerangan lanjut elemen pematuhan sendiri ini.

**Pematuhan terhadap Syarat Kelulusan EIA:**

- Environmental Management Plan (EMP)**
- Environmental Audit**
- Environmental Monitoring Programme (EMPr)**
- Environmental Officer (EO) on Site**

CADANGAN PROGRAM PEMANTAUAN**(PEMANTAUAN PRESTASI -PM, PEMANTAUAN IMPAK-IM DAN PEMANTAUAN PEMATUHAN-CM)**

Program pemantauan alam sekitar merangkumi tiga jenis pemantauan iaitu:

- ✚ Pemantauan Prestasi (*Performance Monitoring, PM*)
- ✚ Pemantauan Pematuhan (*Compliance Monitoring, CM*)
- ✚ Pemantauan Kesan (*Impact Monitoring, IM*)

Penilaian Prestasi LD-P2M2 bertujuan untuk membangunkan program bagi memantau keberkesanan Amalan Terbaik Pengurusan (BMPs) dan menilai sama ada BMP tambahan diperlukan. Ringkasan Pemantauan Prestasi adalah seperti berikut:

Jadual 3.0: Pematuhan Prestasi (PM) – Langkah Kawalan Alam Sekitar

No.	Location	Control Measures	Frequency Monitoring
1.	<i>Silt Fences</i>	Kawalan Hakisan	▪ Setiap Hari ▪ Tempoh 24 jam selepas kejadian hujan $\geq 12.5\text{mm}$
2.	Lembangan sedimen	Kawalan Hakisan dan Mendapan	
3.	Parit Tanah	Kawalan Saliran	
4.	<i>Check Dams</i>	Kawalan Saliran	
5.	<i>Close Turfing and spot turfing</i>	Kawalan Hakisan dan Mendapan	
6.	Ban tanah (<i>Earthbund with earthdrain</i>)	Kawalan Hakisan dan Mendapan	
7.	<i>Diversion Channel</i>	Kawalan Saliran	
8.	Kawalan saliran keluar (<i>Drainage Outlet Protection</i>)	Kawalan Saliran	
9.	Laluan Air Sementara (<i>Temporary Waterway Crossing</i>)	Kawalan Saliran	
10.	<i>Hoarding</i>	Kawalan Hakisan, Udara, Bunyi dan Keselamatan	
11.	<i>Wash through</i>	Kawalan Debu	
12.	Jalan Masuk (<i>Access Road</i>)	Kawalan Debu	
13.	Kawasan Penyimpanan Bahan Binaan, Kawasan Kenderaan Dan Peralatan, Ruang Pejabat Dan Kuarters Pekerja	Sisa Pepejal Keselamatan dan Kesihatan	

Nota:

- Kawalan Saliran :- Kawalan saliran berpunca daripada tapak pembangunan.
- Kawalan Hakisan :- Perlindungan permukaan tanah yang terdedah.
- Kawalan Mendapan :- Memerangkap sedimen(mendapan) di dalam tapak.

Jadual 4.0: Cadangan Pemantauan Pematuhan (CM) dan Program Pemantauan Impak (IM)

Komponen	Parameter/Unit	Kekerapan Pemantauan	Tahap Pematuhan	Keperluan Laporan	Lokasi Pemantauan
Kesan Pemantauan					
Tahap Kualiti Air Sungai	▪ Temperature, ▪ Dissolved Oxygen (DO), ▪ Biochemical Oxygen Demand (BOD), ▪ Chemical Oxygen Demand (COD), ▪ Total Suspended Solids (TSS), ▪ pH ▪ Ammoniacal ▪ Nitrogen ($\text{NH}_3\text{-N}$) ▪ Oil & Grease ▪ Escherichia Coli Count ▪ Turbidity ▪ Faecal Coliform	Bulanan	Keputusan akan dibandingkan dengan: • Garisdasar <i>National Water Quality Standards for Malaysia (NWQS), Class IIA</i>	Setiap (3) bulan	Lapan (8) stesen
Tahap Kualiti Air Sungai (Logam Berat)	▪ Aluminium, Al (mg/l) ▪ Arsenic, As (mg/l) ▪ Cadmium, Cd (mg/l) ▪ Hexa – Chromium, Cr^{6+} (mg/l) ▪ Tri – Chromium, Cr^{3+} (mg/l) ▪ Copper, Cu (mg/l) ▪ Iron, Fe (mg/l) ▪ Lead, Pb (mg/l) ▪ Manganese, Mn (mg/l) ▪ Mercury, Hg (mg/l) ▪ Nickel, Ni (mg/l) ▪ Selenium, Se (mg/l) ▪ Silver, Ag (mg/l) ▪ Tin, Sn (mg/l) ▪ Zinc, Zn (mg/l) ▪ Boron, B (mg/l) ▪ Cyanide, CN (mg/l)	Bulanan	Keputusan akan dibandingkan dengan: • Kajian garis dasar • <i>National Water Quality Standards for Malaysia (NWQS), Class IIA</i> • <i>Environmental Quality (Industrial Effluent) Regulations 2009, Fifth Schedule</i>	Setiap Tiga (3) Bulan	Empat (4) stesen

Komponen	Parameter/Unit	Kekerapan Pemantauan	Tahap Pemantauan	Keperluan Laporan	Lokasi Pemantauan
Kesan Pemantauan					
Tahap Kualiti Udara	- PM₁₀ - PM_{2.5} - Sulphur Dioxide, SO₂ - Nitrogen Dioxide, NO₂ - Carbon Monoxide (CO) - Ozone O₃	Bulanan	Keputusan akan dibandingkan dengan - Kajian garis dasar - Malaysian Ambient Air Quality Standard, 2013 PM₁₀ : 100µg/m³ PM_{2.5} : 35 µg/m³ SO₂ : 80 µg/m³ NO₂ : 70 µg/m³ CO : 30 µg/m³ O₃ : 180 µg/m³	Setiap Tiga (3) Bulan	Empat (4) stesen
Tahap Bunyi	L_{Aeq}	Bulanan	Keputusan akan dibandingkan dengan - Kajian garis dasar - Garis Panduan Interim JAS untuk Aras Bunyi Maksimum yang dibenarkan berdasarkan (Jadual 2)	Setiap Tiga (3) Bulan	Lapan (8) stesen
Paras Gegeran	Peak	Bulanan	Keputusan akan dibandingkan dengan - Kajian garis dasar - Garis Panduan Perancangan untuk had getaran & kawalan, DOE (Jadual 1 dan Jadual 3)	Setiap Tiga (3) Bulan	Tiga (3) stesen
Pematuhan Pemantauan					
Discaj Kolam Perangkap Mendap	Total Suspended Solid (TSS)	Bulanan	Keputusan akan dibandingkan dengan: Syarat JAS ialah < 50 mg/l	Setiap Tiga (3) Bulan	Dua (2) kolam perangkap

Nota:

- Analisis parameter untuk Pemantauan Alam Sekitar hendaklah dijalankan oleh makmal yang diiktiraf oleh 'Skim Akreditasi Makmal Malaysia' daripada Jabatan Standard Malaysia.
- Kekerapan pemantauan tertakluk kepada Syarat Kelulusan EIA.

Jadual 5.0: Cadangan Stesen Pemantauan untuk Pemantauan Pematuhan (CM) dan Pemantauan Impak (IM)

Kualiti Alam Sekitar	No Stations
Air (Sungai/Longkang) IM	8 W1-W8
Air (Logam Berat) IM	4 HM1-HM4
Udara IM	4 A1-A4
Bunyi IM	8 N1-N8
Paras Gegeran IM	3 V1-V3
Kolam Perangkap Mendap CM	2 SB1-SB2

Sumber: Perunding UEP Sdn Bhd, 2025.

11 KESIMPULAN



JADUAL SATU, AKTIVITI 17: PEMBANGUNAN KAWASAN PERINDUSTRIAN

*Pembangunan Kawasan Perindustrian yang meliputi keluasan 20 hektar atau lebih

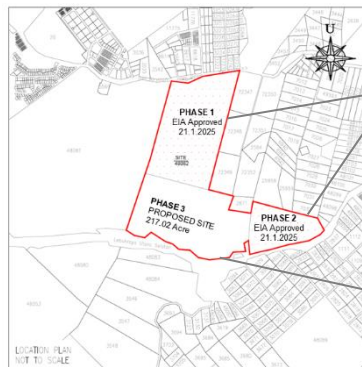
JUMLAH KELUASAN TANAH

LOT 48082
512.83 ekar
(207.5349 hektar)

 Fasa 1
 Fasa 2
 Fasa 3

KONSEP PEMBANGUNAN

 Industri Skala Ringan dan Sederhana



PROJEK EIA SEBELUM INI – FASA 1 & FASA 2

Keluasan: 295.81 ekar (119.7102 hektar)

- EIA 2025 Diluluskan 21 Januari 2025
- EMP 2025 Diluluskan 29 Julai 2025

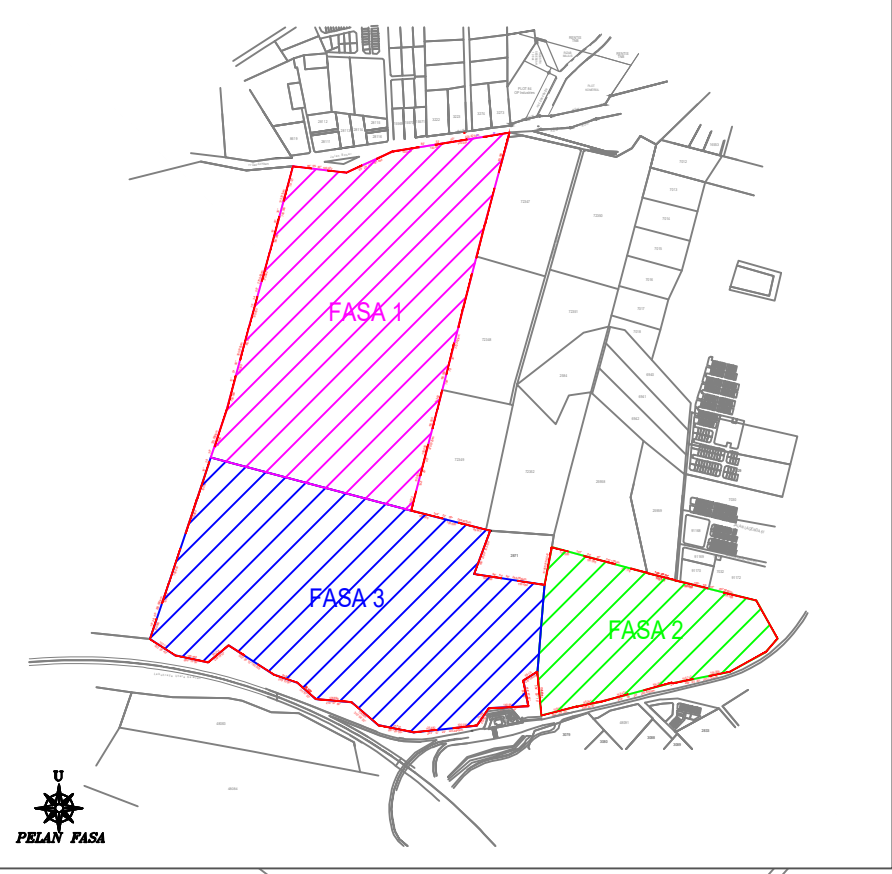
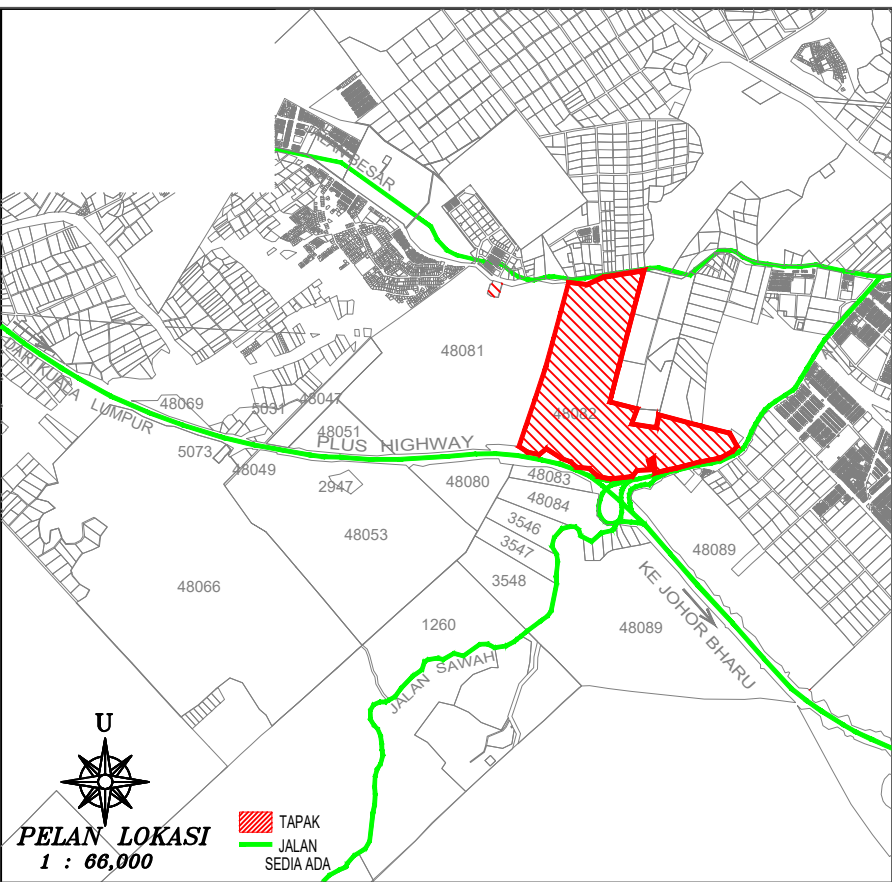
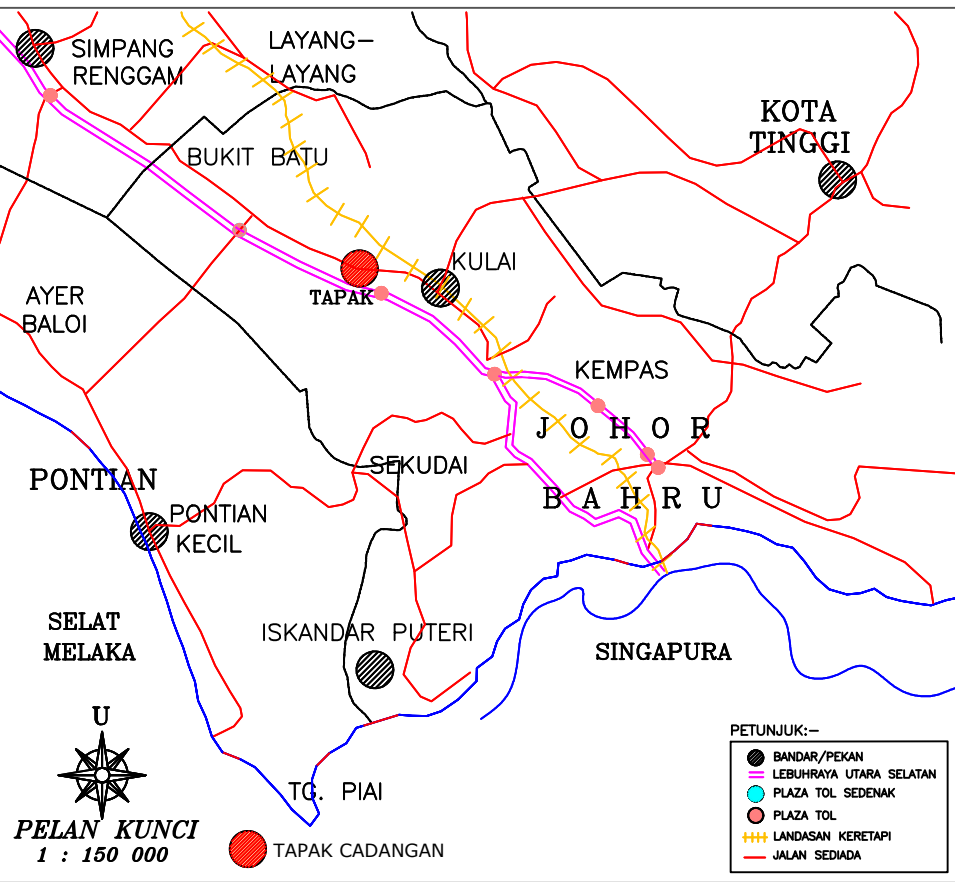
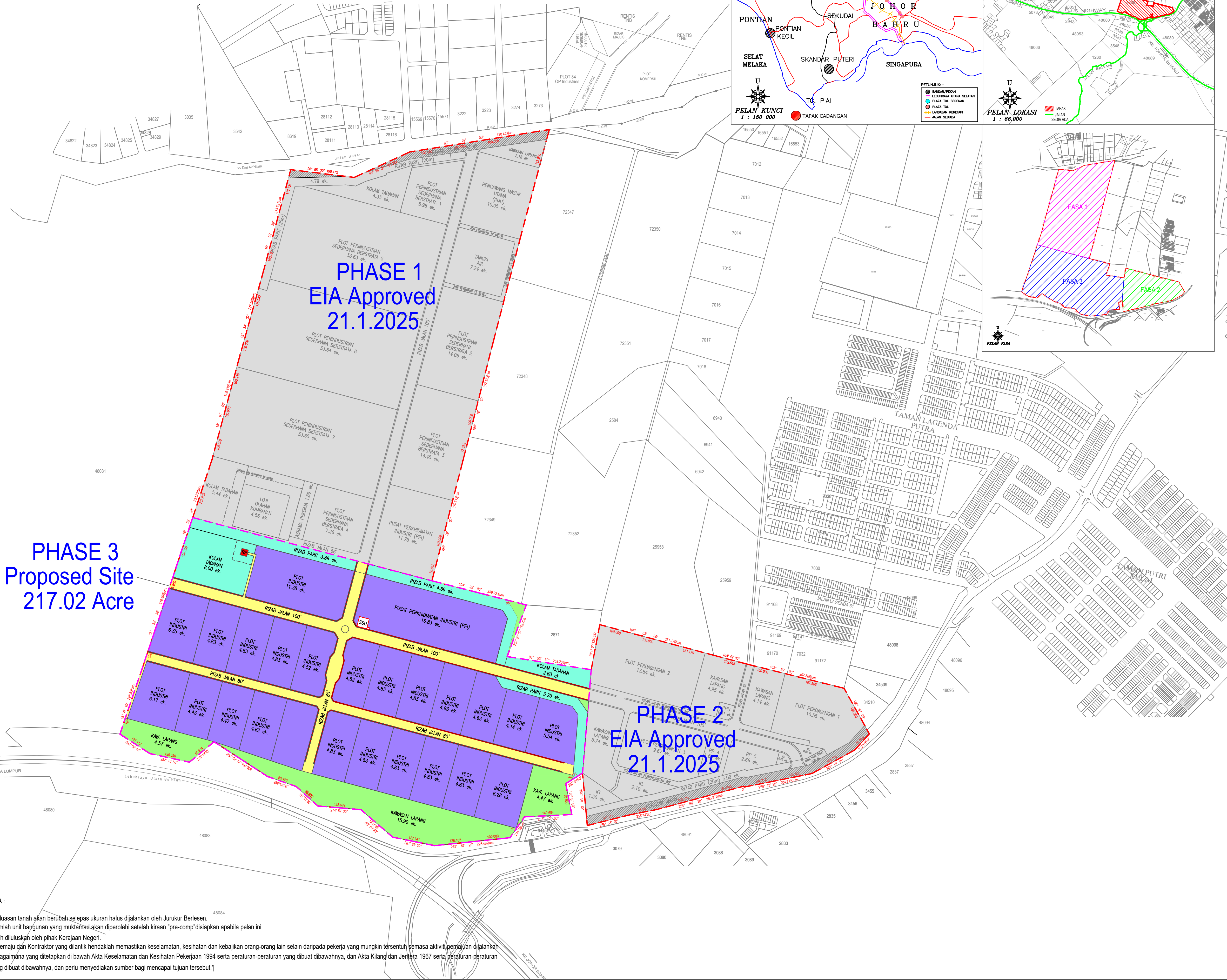
PENYERAHAN EIA BARU – FASA 3

Keluasan: 217.02 ekar (87.8249 hektar)

-  Semua impak yang dikenalpasti perlu dikawal melalui pendekatan kejuruteraan (seperti pembinaan jalan sementara, kolam enapan dan sebagainya) atau pendekatan pengurusan di tapak (seperti kawalan trafik, pengurangan sisa, kaedah penyiraman pada permukaan jalan batu kerikil, dan sebagainya). Adalah disyorkan agar pihak pemaju melaksanakan projek secara berfasa bagi mengurangkan kesan negatif terhadap alam sekitar. Pelaksanaan langkah mitigasi seperti yang dicadangkan dalam LDP2M2 hendaklah dilaksanakan secara berkala dan proaktif. LDP2M2 disediakan bagi meminimumkan kerosakan alam sekitar semasa fasa kerja tanah dan kerja-kerja pembinaan.
-  Penilaian yang dijalankan dalam laporan EIA ini menunjukkan bahawa dengan pelaksanaan langkah mitigasi yang sesuai bermula dari peringkat perancangan sehingga ke peringkat operasi, kesan terhadap alam sekitar dapat dikawal dan diminimumkan dengan berkesan. Pelan Pengurusan Alam Sekitar (EMP) hendaklah disediakan dan dilaksanakan setelah laporan EIA ini diluluskan selaras dengan keperluan Jabatan Alam Sekitar (JAS) Johor.

CADANGAN PEMBANGUNAN PERINDUSTRIAN BERSTRATA DI ATAS PLOT LOT 48082, MUKIM KULAI, DAERAH KULAI JOHOR DARUL TA'ZIM UNTUK TENTUAN GOLDEN VALLEY CAPITAL SDN.BHD

Luas Tapak EIA Phase 3 : 217.02 Ekar - Sebahagian Lot 48082
Luas Tapak : 512.74 Ekar (Lot 48082)
Syt. Piawai : 58 D II & 59 C I



SKALA 1 : 5,000

PETUNJUK :

KOMPONEN PEMBANGUNAN	PLOT	%	EKAR	%
PERINDUSTRIAN				
PLOT INDUSTRI	24	80.00	124.85	57.53
PUSAT PERKHIDMATAN INDUSTRI	1	3.33	16.83	7.76
JUMLAH KECIL	25	83.33	141.68	65.28
KEMUDAHAN MASYARAKAT				
KAWASAN LAPANG	-	-	25.61	11.80
JUMLAH KECIL	-	-	25.61	11.80
INFRASTRUKTUR DAN UTILITI				
STESEN SUIS UTAMA	1	3.33	0.22	0.10
COMPACT SUB	1	3.33	0.01	0.005
RUMAH PAM	1	3.33	0.10	0.05
KOLAM TADAHAN	2	6.67	10.60	4.88
RIZAB PARIT	-	-	11.67	5.38
RIZAB UTILITI	-	-	4.58	2.11
RIZAB JALAN	-	-	22.55	10.39
JUMLAH KECIL	5	16.67	49.73	22.91
JUMLAH KESELURUHAN	30	100.00	217.02	100.00

Rajah 4.0:
Pelan Komponen Pembangunan (EIA Fasa 3)

EXTRACT FROM DWG NO: EXTRACT FROM DWG NO UEP/PLNG/KML/2025/03,
PERUNDING UEP SDN BHD

Environmental Consultant :



No 50 - 2, Jalan Pertama 1,
Pusat Perdagangan Danga Utama,
81300 Johor Bahru, Johor Darul Ta'zim
Tel : 07 - 550 0501 / 550 0502
Fax : 07 - 550 0503
Email : peruepsb@yahoo.com
official@perundinguep.com

- NOTA :
- Keluasan tanah akan berubah selepas ukuran halus dijalankan oleh Jurukur Berlesen.
 - Jumlah unit bangunan yang muktamad akan diperolehi setelah kiraan "pre-comp" disiapkan apabila pelan ini telah diluluskan oleh pihak Kerajaan Negeri.
 - [Pemaju dan Kontraktor yang dilantik hendaklah memastikan keselamatan, kesihatan dan kebajikan orang-orang lain selain daripada pekerja yang mungkin tersentuh semasa aktiviti pemajuan dijalankan sebagaimana yang ditetapkan di bawah Akta Keselamatan dan Kesihatan Pekerjaan 1994 serta peraturan-peraturan yang dibuat dibawahnya, dan Akta Kilang dan Jentera 1967 serta peraturan-peraturan yang dibuat dibawahnya, dan perlu menyediakan sumber bagi mencapai tujuan tersebut.]