

EXECUTIVE SUMMARY

INTRODUCTION



PROJECT PROPONENT

Pentas Flora (Johor Bahru) Sdn Bhd
 No. 25, Jalan SiLC 2/7
 Kawasan Perindustrian SiLC
 79200 Iskandar Puteri
 Johor Darul Takzim



EIA CONSULTANT

Alam Dinamik Sdn Bhd
 No. 19 & 19A, Jalan Bukit Impian 1
 Taman Impian Emas
 81300 Skudai
 Johor Darul Takzim



LEGAL REQUIREMENT

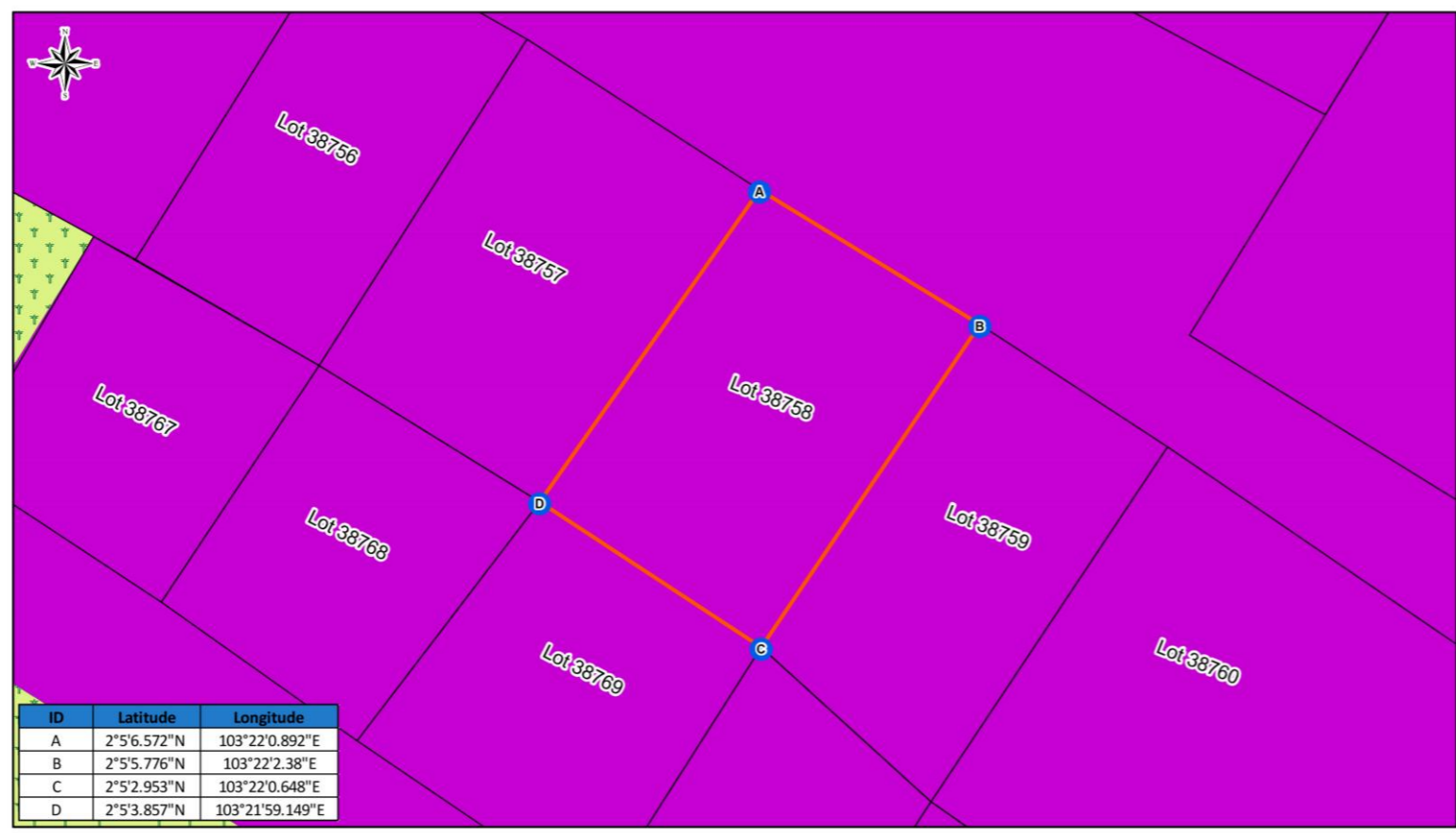
First Schedule
 14. Waste Treatment and Disposal
 (a) Scheduled waste
 (iii) Construction of storage facility (off-site)

STATEMENT OF NEEDS

- The Project Proponent intends to provide off-site storage facility for scheduled waste for center region of Johor (Kluang, Yong Peng, Batu Pahat) and east region of Johor (Mersing).
- While serving scheduled waste generators, the proposed Project will also create economic opportunities via collection and transportation of scheduled waste.
- The proposed Project is deemed as an essential supporting service for industries that generate scheduled wastes.

PROJECT LOCATION

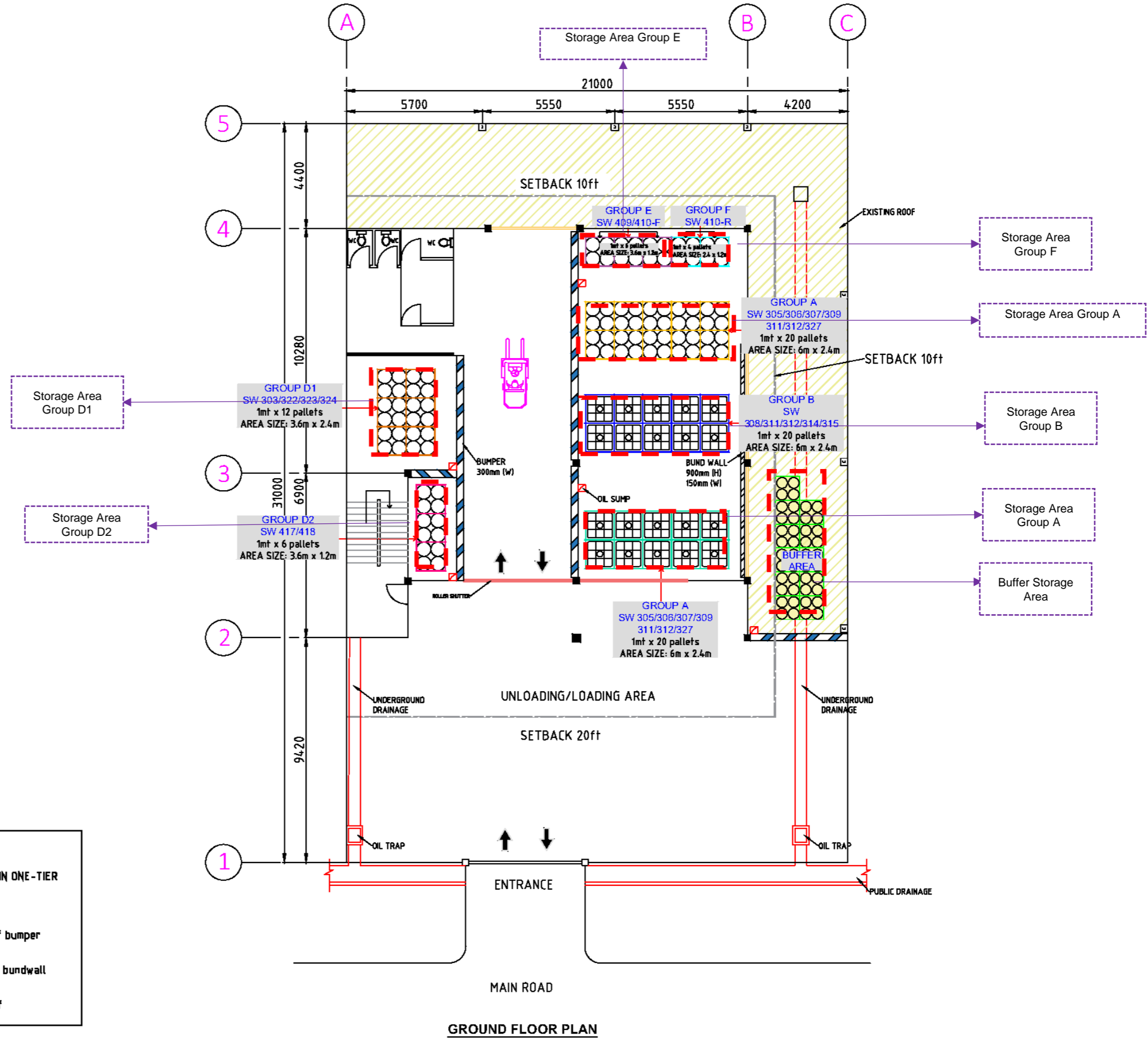
The Project site is located at No. 15, Jalan 12, Taman Perindustrian Wawasan, Mukim Kluang, Daerah Kluang, Johor Darul Takzim.



Legend
 Project Boundary
 Access Road

Legend
● Project Boundary Coordinates Project Boundary Road Industrial Oil Palm

OVERALL BUILDING LAYOUT



NOTE:
 1. ALL DIMENSION ARE IN MM (MILLIMETER) OTHERWISE STATED.
 2. ALL GROUPS TO BE STORED IN TWO-TIER STORAGES EXCEPT GROUP E & F IN ONE-TIER STORAGE.

LEGEND:

Buffer Storage	Jumbo bags	300mm (W) of bumper
Pallet with drums	IBC	900mm (H) of bundwall
Oil sump	Oil trap	Existing roof

GROUND FLOOR PLAN

QUANTITY OF SCHEDULED WASTE (SW) TO BE STORED AT THE PROJECT SITE

- The total storage capacity is 88 MT at one time or 440 MT/month with proposed 5 trips per month (twice per week to Pentas Flora recovery plant at Banting, Selangor).
- There will be 18 types of scheduled waste that will be stored at the proposed Project site.
- It should be noted that some of the scheduled waste codes are grouped in more than one group because the waste will be recovered using different types of treatment process at Pentas Flora's recovery facility at Banting, Selangor.

Scheduled Waste Group	SW Code	Proposed Amount of Scheduled Waste Collection		Storage Method
		MT at one time	MT / month	
A	SW 305	40 MT	200 MT / month	Intermediate Bulk Containers (IBCs) and Drums
	SW 306			
	SW 307			
	SW 309			
	SW 311*			
	SW 312*			
B	SW 327	20 MT	100 MT / month	Intermediate Bulk Containers (IBCs)
	SW 308			
	SW 311*			
	SW 312*			
	SW 314			
D1	SW 315	12 MT	60 MT / month	Drums
	SW 303			
	SW 322			
	SW 323			
D2	SW 324	6 MT	30 MT / month	Drums
	SW 417			
E	SW 418	6 MT	30 MT / month	As it is
	SW 409			
F	SW 410-F	4 MT	20 MT / month	Drums
	SW 410-R			
Total Capacity		88 MT at one time	440 MT / month	

* Scheduled waste code grouped in more than one group

GENERAL PROCESS FLOW OF SCHEDULED WASTE COLLECTION PROCESS

SCHEDULED WASTE COLLECTION PROCESS



Customer requests for scheduled waste collection.



Scheduled waste is collected at customer's site.



Scheduled waste code is identified and segregated.



Scheduled waste is transported to local branch store unit.




Scheduled waste is transported to Pentas Flora Banting plant for recovery process.

PROJECT IMPLEMENTATION SCHEDULE

The proposed Project will take twenty-one (21) months for the EIA approval, licensing application, local authority approvals and building renovation before the proposed Project is able to commence its operation.

Description	2023	2024				2025				2026
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Land Identification & Acquisition										
Environmental Impact Assessment (EIA) and Licensing Approvals										
Other Local Authority Approvals										
Site Preparation										
Building Renovation										
Installation of Equipment, Commissioning and Operation										

EXISTING ENVIRONMENT




Topography and Land Use

- The Project site lies on a flat land which is about 45 meter above the mean sea level.
- Within 500 m radius of the Project site, there are industrial activities and one residential area.


Hydrology

- The Project site is located in the river catchment of Sg Sembrong.
- Surface runoff from the Project site immediately discharges into the concrete drain at the northwest of the Project site then flows southwest into tributary of Sg Madek.
- Sg Sembrong meanders for about 82.27 km before confluence with Sg Endau.




Ambient Air

- Ambient air was sampled at two (2) stations.
- The concentrations of all parameters were well below the specified limit.
- For VOCs, the results show that only monocyclic aromatics were detected at station A2 (Benzene – 63.5 mg/m³) and (Toluene - 13 mg/m³). Benzene exceeded the limit of 44 mg/m³ while Toluene was well below the limit of 3,000 mg/m³.




Climate and Meteorology

- Based on Kluang Meteorological data, the dominant wind direction is from north to south.
- The monthly mean rainfall amount for at Kluang Meteorological Station for year 2013 – 2022 was in the range of 66.5 – 420 mm.




Water Quality

- Water was sampled at three (3) stations.
- Water Quality Index (WQI) for all sampling stations fell between Class II, Class III and Class IV.



Noise Level

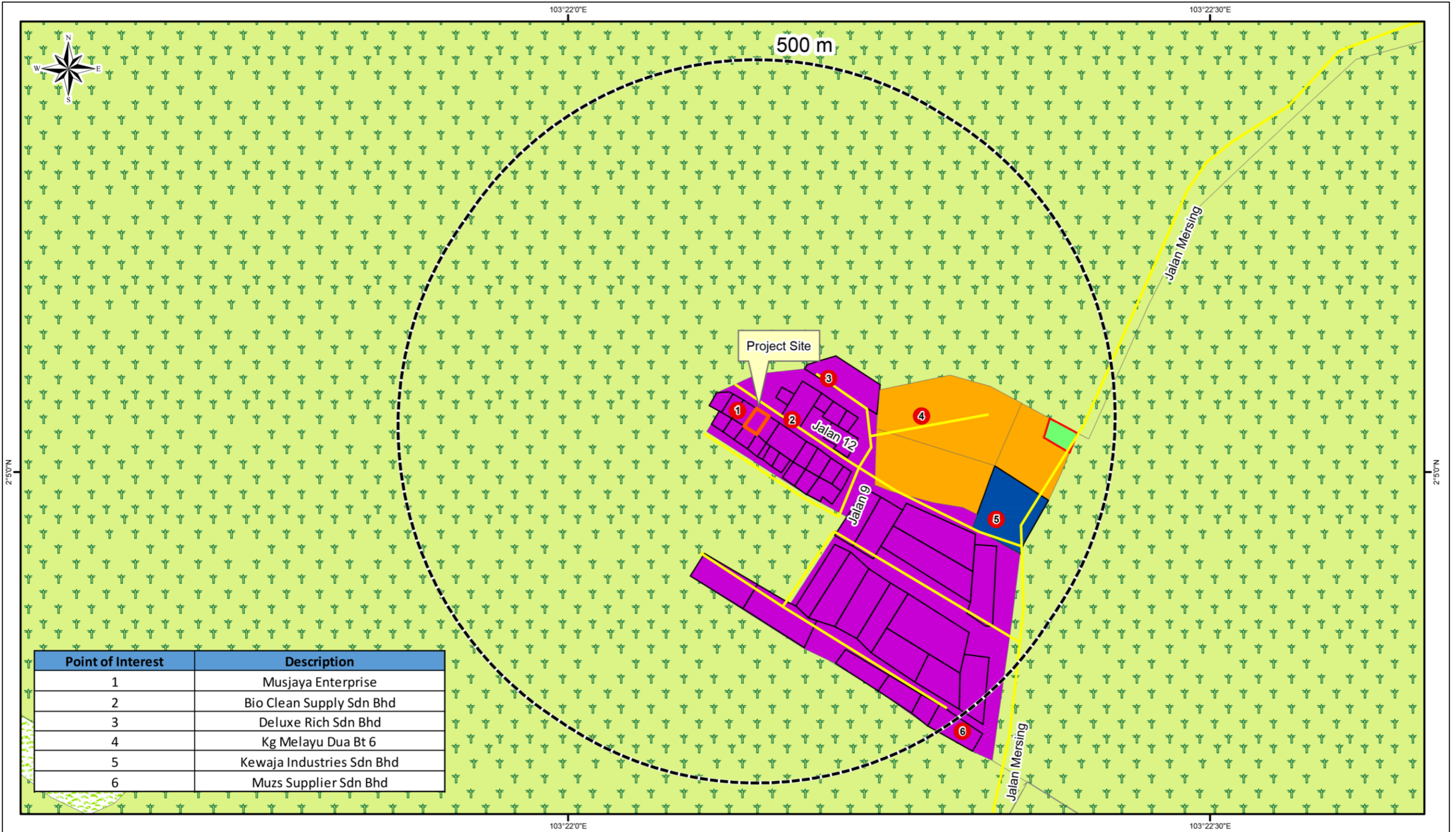
- Noise was measured at two (2) stations.
- Day-time and night-time noise level were well below the limits.



Socio-economic

- Local authority is *Majlis Perbandaran Kluang (MPK)*.
- The Project site is located within *Blok Perancangan Kecil (BPK) 2.40 Taman Perindustrian Sinaran*.

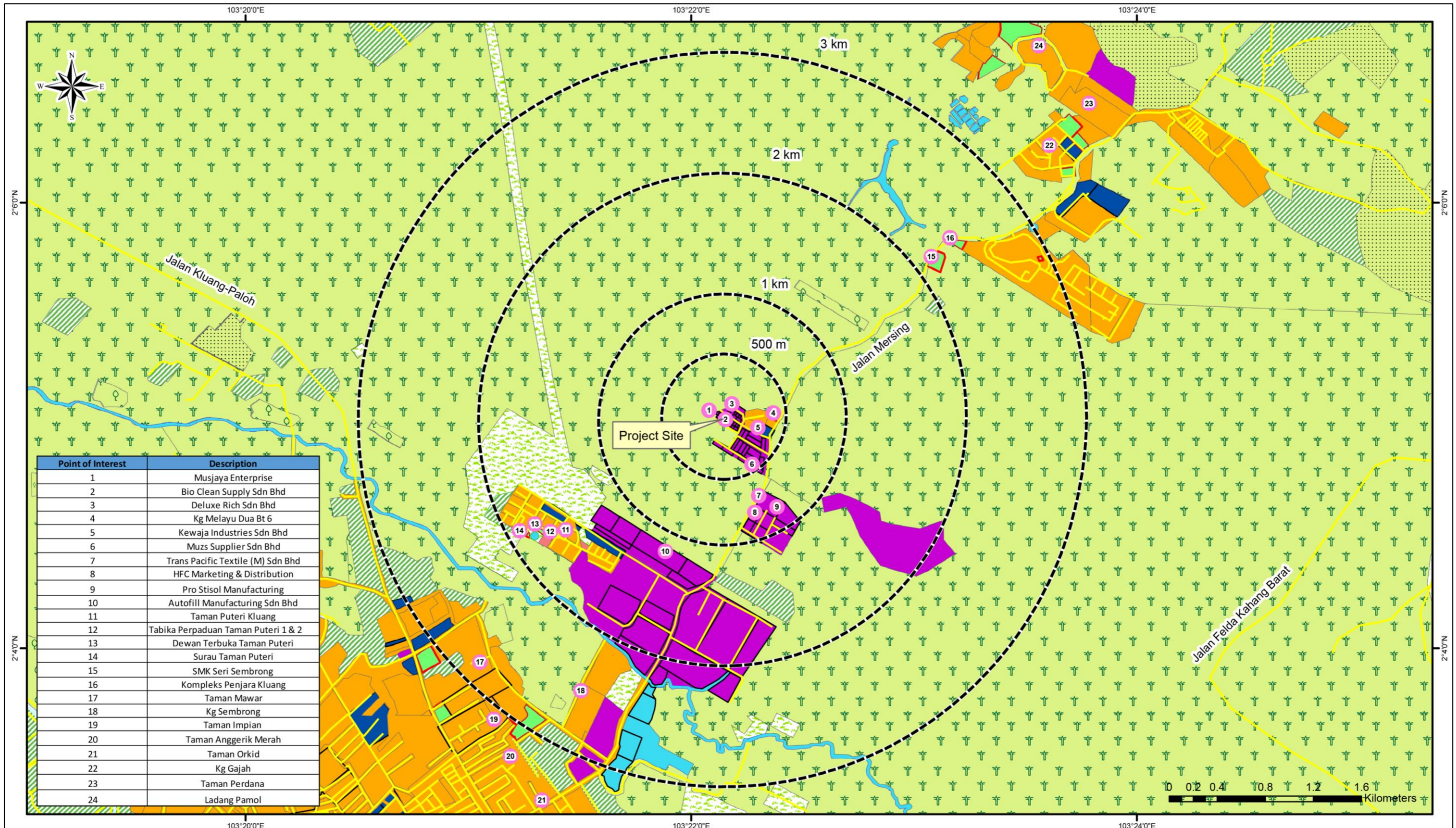
LAND USE 500 M RADIUS



Point of Interest	Description
1	Musjaya Enterprise
2	Bio Clean Supply Sdn Bhd
3	Deluxe Rich Sdn Bhd
4	Kg Melayu Dua Bt 6
5	Kewaja Industries Sdn Bhd
6	Muzs Supplier Sdn Bhd



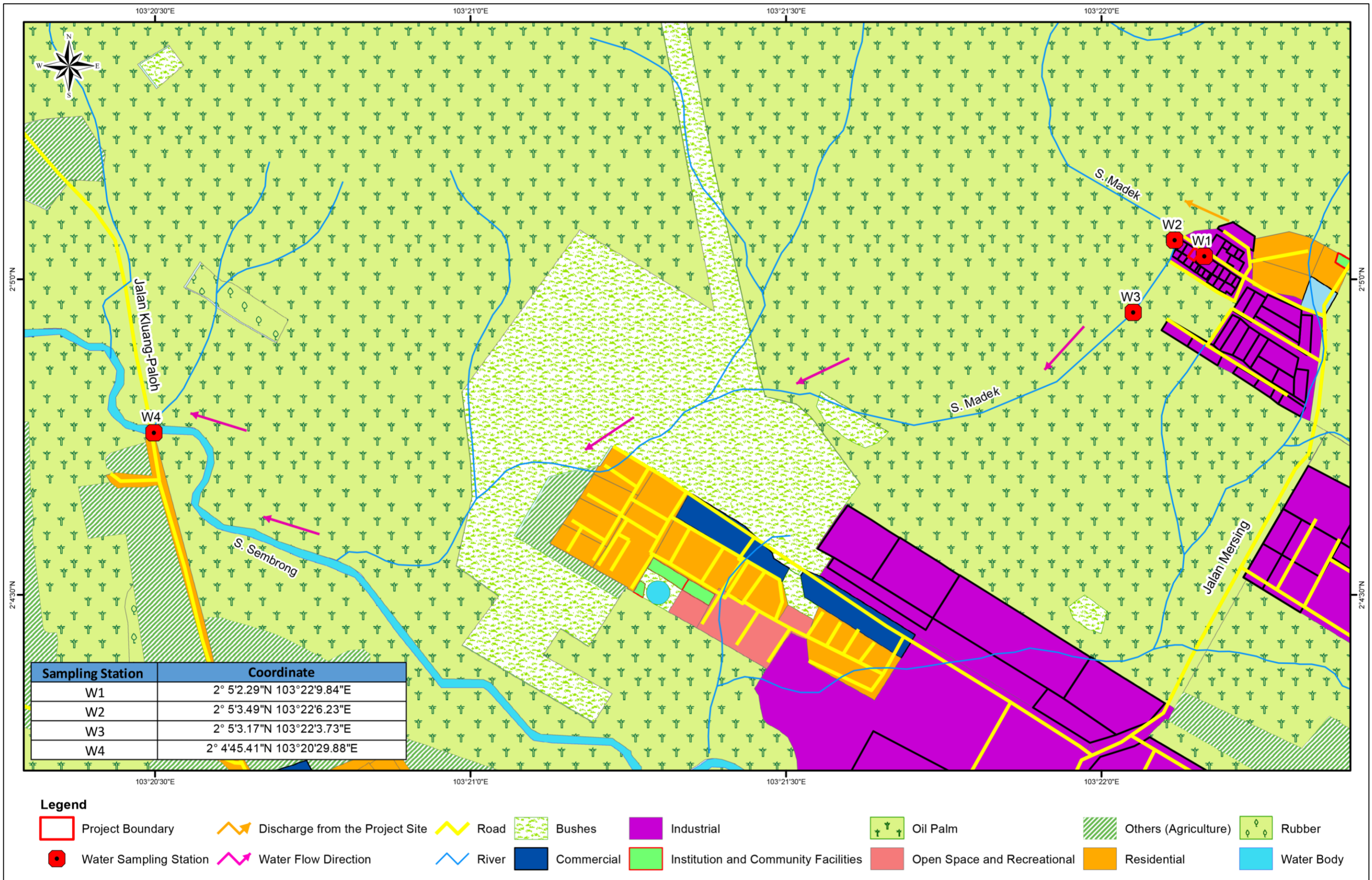
LAND USE 3 KM RADIUS



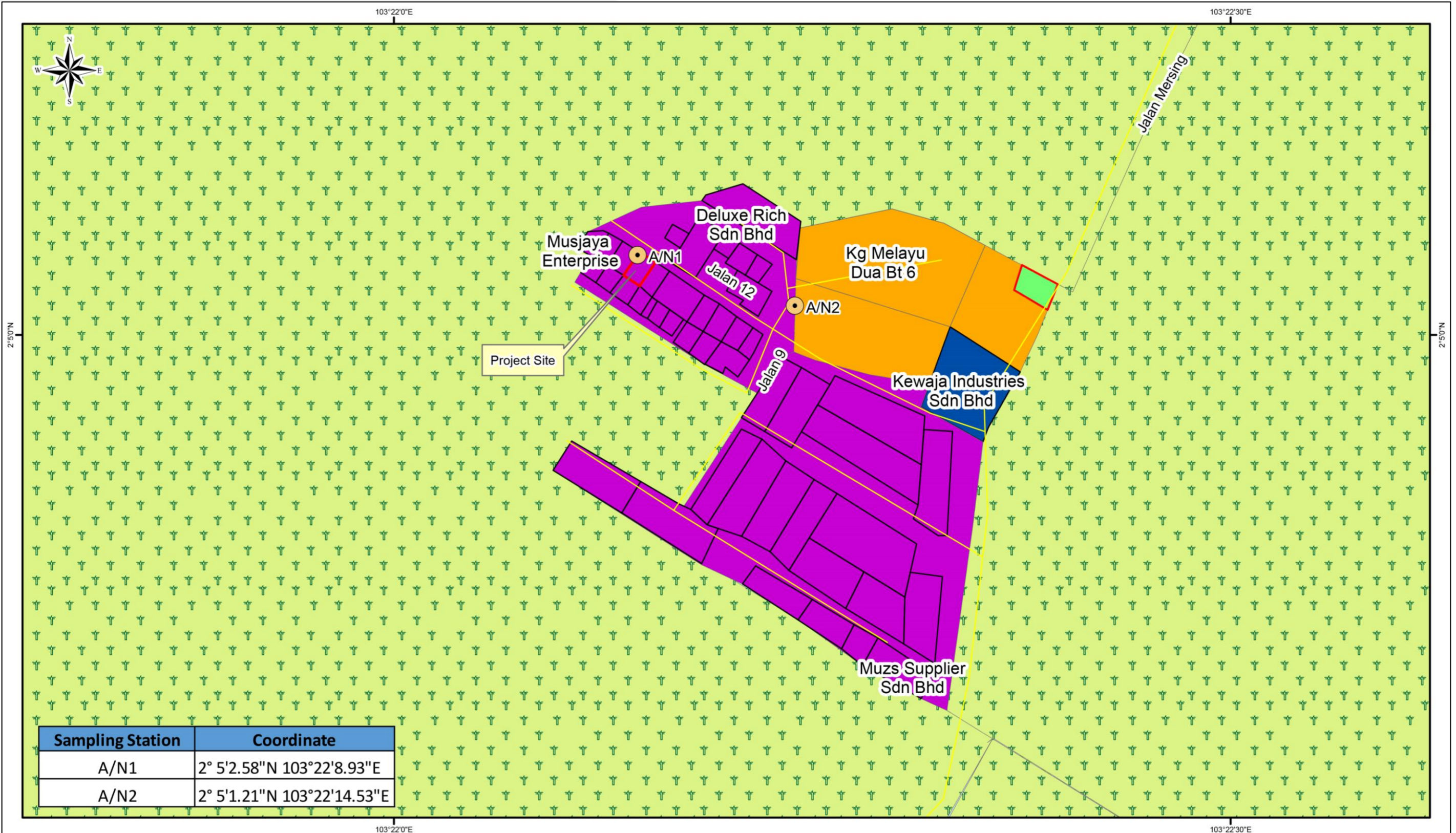
Legend

- Buffer
- Project Boundary
- Road
- Bushes
- Forest
- Commercial
- Industrial
- Institution and Community Facilities
- Oil Palm
- Rubber
- Others (Agriculture)
- Residential
- Secondary Forest
- Water Body

SAMPLING STATIONS FOR WATER QUALITY



SAMPLING STATIONS FOR AMBIENT AIR QUALITY AND NOISE LEVEL



Legend

- Project Boundary
- ~ Road
- Commercial
- Institutions and Community Facilities
- Residential
- Ambient Air and Noise Sampling Station
- Bushes
- Industrial
- Oil Palm

BASELINE SAMPLING RESULTS

WATER QUALITY

Classification of Water Quality Based on National Water Quality Standards for Malaysia (Sampled on 15th March 2024)

Parameter	Station W1	Class	Station W2	Class	Station W3	Class	Station W4	Class
Dissolved Oxygen (mg/L)	-	-	6.95	II (5-7)	4.49	III (3-5)	7.58	I (>7)
BOD ₅ at 20°C (mg/L)	-	-	92	V (>12)	15	V (>12)	4	III (3-6)
COD (mg/L)	-	-	312	V (>100)	47	III (25-50)	12	II (10-25)
Total Suspended Solids (mg/L)	-	-	130	III (50-150)	12	I (<25)	23	I (<25)
Ammoniacal Nitrogen (mg/L)	-	-	6.73	V (>2.7)	1.77	IV (0.9-2.7)	0.37	III (0.3-0.9)

Water Quality Index (WQI) of Sampling Stations

Parameter	Sampling Station			
	W1	W2	W3	W4
Water Quality Index (WQI)	-	37.6	60.5	86.4
Class	-	IV (31.0-51.9)	III (51.9-76.5)	II (76.5-92.7)

NOISE LEVEL

Measured on 14th to 15th March 2024

Sampling Station	Noise Level L _{Aeq}	DOE Recommended Noise Level*	*Second Schedule, Recommended Permissible Sound Level (L _{Aeq}) by Receiving Land Use for Existing Built Up Areas
Day Time			
N1	49.3	75 dBA	Industrial Zones
N2	48.4	65 dBA	Suburban and Urban Residential, Mixed Development
Night Time			
N1	41.7	75 dBA	Industrial Zones
N2	40.2	60 dBA	Suburban and Urban Residential, Mixed Development

*Guidelines for Environmental Noise Limits and Control (DOE Malaysia, 2019) – Second Schedule, Recommended Permissible Sound Level (L_{Aeq}) by Receiving Land Use for Existing Built Up Areas

AMBIENT AIR QUALITY

Sampled on 14th to 15th March 2024

Parameter	Concentration (µg/m ³) at sampling station		*Limit (µg/m ³)
	A1	A2	
Particulate Matter (PM ₁₀)	41.7	55.6	100 (24 hours)
Particulate Matter (PM _{2.5})	13.9	13.9	35 (24 hours)
Carbon Monoxide (CO)	<0.1	<0.1	30 mg/m ³ (1 hour) 10 mg/m ³ (8 hours)
Sulphur Dioxide (SO ₂)	<1	<1	80 (24 hours)
Nitrogen Dioxide (NO ₂)	<1	<1	70 (24 hours)

*Malaysia Ambient Air Quality Standards (MAAQS) 2020

Results of Volatile Organic Compounds (VOCs) in Ambient Air at Station A2

Compound	Unit	Sampling Station A2	*Limit (24 hr) (µg/m ³)
VOC: Monocyclic Aromatics			
Benzene	µg/m ³	63.5	44
Toluene	µg/m ³	13	3,000
Total VOCs	µg/m³	76.5	-

*Arizona Ambient Air Quality Guidelines (1999)

POTENTIAL IMPACTS AND MITIGATION



RIVER WATER
QUALITY

IMPACT

- Minimal impact from renovation work is anticipated towards water quality.
- The proposed Project site will be used for storage purpose only, there will be no industrial effluent generation at the site.

MITIGATION

- Any disposal of construction waste into public drains shall be prohibited.
- All scheduled waste storage area shall be surrounded by low concrete bumper to prevent spillage flow into public drain.
- The use of absorbent shall prevent generation of wastewater due to floor washing.
- Oil trap will be provided at the Project site to prevent any spillage of contaminated waste from being directly discharged into the public drain.



SOLID WASTE
MANAGEMENT

IMPACT

- Generation of solid waste from the Project site.

MITIGATION

- Construction and domestic waste generated during this phase shall be disposed of at approved landfill by local authority.



AMBIENT AIR
QUALITY

IMPACT

- Minimal impact is anticipated towards ambient air during construction phase.
- The only potential sources of impacts are fugitive emissions of volatile organic compounds (VOCs) from storage area and exhaust emissions from vehicles.

MITIGATION

- Dust generation during construction phase is expected to be minimal, hence no mitigation is required.
- Testing of indoor air quality is recommended to be carried out annually at the Project site during operational phase.
- The Project site will be designed as semi-enclosed area with proper ventilation using industrial ventilation fan equipped with ducting system.



SCHEDULED
WASTE (SW)
MANAGEMENT

IMPACT

- The storage facility will not generate wastes unless from accidental spillage.
- The potential wastes will be disposed of at DOE approved premises.

MITIGATION

- Scheduled waste should be managed in accordance with the Environmental Quality (Scheduled Wastes) Regulations 2005.



NOISE LEVEL

IMPACT

- Minor renovation works may contribute to moderate increase of noise level.
- Noise will be generated from the vehicles transporting waste and forklift operated in the daily operation of storage facility.

MITIGATION

- Regular maintenance of machinery should be carried out.
- Employer shall ensure that noise exposure to workers comply with Occupational Safety and Health Administration (OSHA) (Noise Exposure) Regulations 2019.



QUALITATIVE
AND
QUANTITATIVE
RISK
ASSESSMENT

IMPACT

- Pool fire is the main hazard from the proposed Project.
- Hazard from toxic dispersion of volatile matters to the surrounding is low since the amount being released is expected to be very small.


MITIGATION

- All personnel to undergo proper fire safety training with Jabatan Bomba dan Penyelamat Malaysia.
- All emergency planning for fire and other incidents need to be compliance with Jabatan Bomba dan Penyelamat Malaysia.
- Regular inspection and maintenance should be exercised.


PROPOSED ENVIRONMENTAL MONITORING PROGRAM

CONSTRUCTION PHASE


Impact Monitoring

 Water quality

- Three (3) monitoring stations.
- Comparison with National Water Quality Standards (NWQS).

 Ambient air


- Two (2) ambient air monitoring stations.
- Compliance with Malaysia Ambient Air Quality Standards (MAAQS) 2020.

 Noise level


- Two (2) noise monitoring stations.
- Compliance with Second Schedule, (Receiving Land Use for Land Use for Existing Built Up Areas) Planning Guidelines for Environmental Noise Limits and Control 2019.

OPERATIONAL PHASE


Impact Monitoring

 Ambient air

- Two (2) ambient air monitoring stations.
- Compliance with Malaysia Ambient Air Quality Standards (MAAQS) 2020.


 Indoor air quality

- Monitor air quality inside the building.
- Compliance with Industry Code of Practice on Indoor Air Quality 2010.


 Noise level

- Monitor at boundary of the Project site.
- Compliance with Second Schedule, (Receiving Land Use for Land Use for Existing Built Up Areas) Planning Guidelines for Environmental Noise Limits and Control 2019.

Performance Monitoring


 Spillage control system

- Monitor low concrete bumper upon spillage.
- Monitor oil trap conditions.

 Drainage system

- Monitor oil trap upon floor washing activity.


Compliance Monitoring

 Scheduled waste

- Monitor collection, storage and transportation out to recovery facility.
- Compliance with Environmental Quality (Scheduled Wastes) Regulations 2005.


DECOMMISSIONING PHASE

Impact Monitoring

 Water quality


- Three (3) monitoring stations.
- Comparison with National Water Quality Standards (NWQS).

Impact Monitoring

 Ambient air


- Two (2) air quality monitoring stations.
- Compliance with Malaysia Ambient Air Quality Standards (MAAQS) 2020.

Impact Monitoring

 Noise level


- Two (2) noise monitoring stations.
- Compliance with Second Schedule, (Receiving Land Use for Land Use for Existing Built-Up Areas) Planning Guidelines for Environmental Noise Limits and Control 2019.

Compliance Monitoring

 Solid waste

- Collection and disposal of waste from dismantling of structures.
- Compliance with Local authority guidelines for disposal upon demolition work.

Compliance Monitoring

 Scheduled waste

- Monitor for chemicals (solid and/or liquid).
- Compliance with Environmental Quality (Scheduled Wastes) Regulations 2005.