



## ENVIRONMENTAL IMPACT ASSESSMENT (EIA)

# OFF-SITE STORAGE FACILITY (CLINICAL WASTE) AT NO.12, LOT 138, BLOCK 4, SUNGAI MAMAT LIGHT INDUSTRIES, BUKAR-SADONG LAND DISTRICT, SERIAN, SARAWAK.

### EIA CONSULTANT

#### **ECO ENVIRO RESOURCES (SARAWAK) SDN. BHD.**

1<sup>st</sup> Floor, Sublot 5, On Lot 2855,  
Block 7, The Isthmus, Jalan Keruing,  
93050 Kuching, Sarawak.  
Tel No.: 011-75265324  
Email: ers.bdu@ecoswk.com

### PROJECT PROPONENT

#### **SYARIKAT PERMATA SURI SDN. BHD.**

1<sup>st</sup> Floor, Sublot 11, Lot 704,  
Block 233, L2542, Lee Ling Heights,  
Phase 2, 61/2 Mile, Jalan Penrissen,  
93250 Kuching, Sarawak.  
Tel No.: 082-627812

## MAY 2026





# EXECUTIVE SUMMARY

1

## INTRODUCTION

**First Schedule Environmental Impact Assessment (EIA) for the Proposed Off-Site Storage Facility (Clinical Wastes) at No. 12, Lot 138, Block 4, Sungai Mamat Light Industries, Bukar-Sadong Land District, Serian, Sarawak**

**Project Proponent:**



Syarikat Permata Suri Sdn. Bhd.

**Qualified Person:**



Eco Enviro Resources (Sarawak) Sdn. Bhd.

2

## LEGAL REQUIREMENTS

Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 2015, First Schedule



**Activity 14(a)(iii) – Construction of storage facility (off-site)**

3

## STATEMENT OF NEED



### Legal & Regulatory Requirements

Clinical waste is regulated as scheduled waste under Malaysian law, requiring management in accordance with the Environmental Quality Act 1974 and DOE approval for storage facility operation.

With no licensed clinical waste storage facility in the area, there is a need for safe waste management to support healthcare services and meet increasing regulatory requirements.



### Operational Requirements



### Environmental & Public Health Considerations

Improper clinical waste handling poses environmental and health risks, requiring a secure, well-controlled centralised storage facility to minimise hazards and protect public health.

# 4

## PROJECT LOCATION



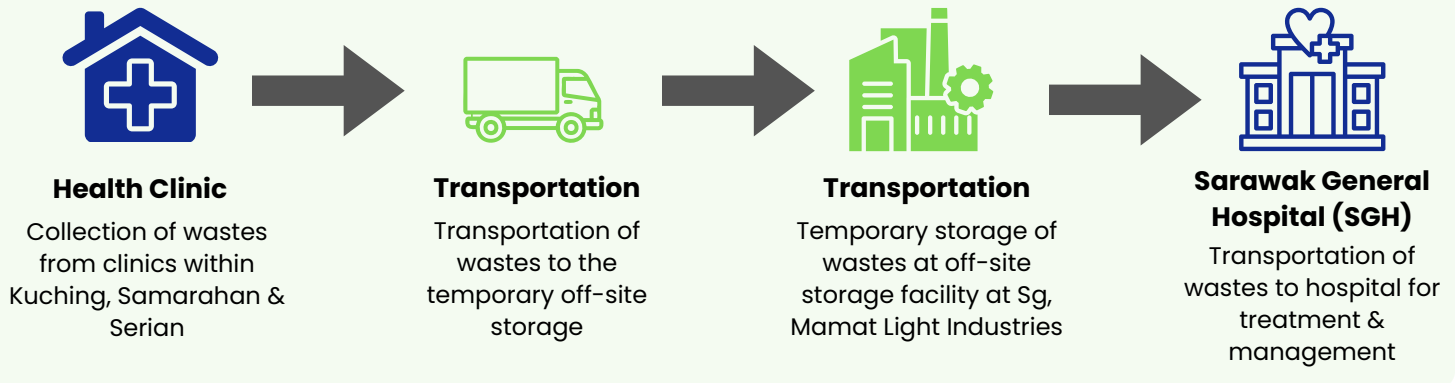
Poin	Latitud	Longitud
a	N 01° 14' 16.44"	E 110° 29' 58.84"
b	N 01° 14' 15.64"	E 110° 29' 59.39"
c	N 01° 14' 15.24"	E 110° 29' 58.78"
d	N 01° 14' 16.01"	E 110° 29' 58.21"

Tapak Projek terletak di Sublot No. 12 (Survey Lot 1497), Lot 138, Block 4, Sungai Mamat Light Industries, Bukar-Sadong Land District, Serian, Sarawak (N 01° 14' 15.86", E 110° 29' 58.79"), kira-kira 50 km dari Bandar Kuching dan sekitar 11.1 km dari Pekan Serian.

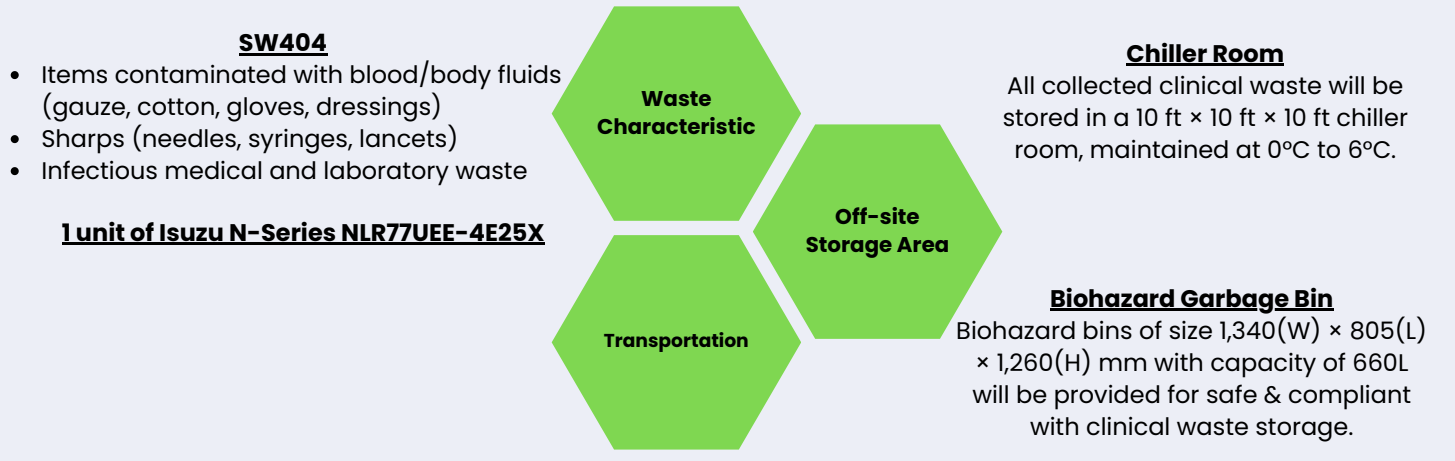
# 5

## PROJECT DESCRIPTION

### Project Concept



### Project Component





**Topography**

- Project site is generally flat and even.
- Surrounding area has gentle slopes with some hilly zones
- Elevated areas create slight terrain variations



**Geology & Soil**

- Characterised by a complex assemblage of sedimentary and volcanic rock formations.
- Predominantly underlain by Ramun (Rmn) Soil Series

**Climate & Meteorology**



**Rainfall & Rain Days**

- Mean annual rainfall approximately 4,281.6mm, indicating substantial inter-annual variability
- Average of 246 rainy days per year (about two-thirds of the year).



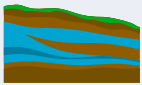
**Temperature & Relative Humidity**

- The annual mean temperature for the region is 27.0°C, with monthly 24 hour means ranging from 26.3°C (January) to 27.5°C (May and July).
- Average humidity is 84.5%, indicating a consistently humid tropical climate year-round.



**Wind Speed & Direction**

- Mean wind speed throughout the year is 1.6m/s with maximum gust speed of 31.5m/s on 23/09/2017. Prevailing wind direction is from South.
- Calm conditions recorded 5.9% of the time, indicating generally light to moderate wind regimes



**Hydrogeology, Hydrology & Drainage**

- Situated within Btg Samarahan catchment basin with Sg Baru and Sg Mamat as tributaries.
- Sg. Mamat is a small stream that drains the area near the project site and connects to the roadside drainage system.
- The project site has moderate to high groundwater potential, meaning it can store and transmit groundwater depending on local geology.



**Land Use**

- Surroundings are mainly agro-based rural landscape.
- Light industrial and commercial areas along Pan Borneo Highway
- Built-up areas concentrated along main road; hinterland mostly agricultural and low population
- Land uses include residential, poultry farming, and general agriculture.



**Flora**

- Near site: mainly shrubs and secondary-growth trees typical of roadside areas.
- Within 5 km: more diverse vegetation (oil palm, paddy fields, fruit orchards).
- No plant species recorded as protected or totally protected under Sarawak WLPO, 1998.
- Only 1 species, "Tarap" (*Artocarpus odoratissimus*) is listed as Near Threatened (NT) under IUCN.

**Ecology**



**Fauna**

- Most faunal species are classified as Least Concern (IUCN).
- 2 species are protected under WLPO - "Layang-layang gua" (*Aerodramus fuciphagusi*) and "Ayam hutan" (*Gallus gallus*).



**Socio-economic**

- 104 respondents were interviewed.
- All respondents have no objections to the proposed Project.
- Concerns on potential health and well-being impacts.
- Emphasised strict SOP compliance and effective management to mitigate impacts

# 7

## ENVIRONMENTAL BASELINE

### Water

- 4 sampling points - W1, W2, W3 & W4.
- Samples from all monitoring stations fall under **Class III of the NWQS**, reflecting moderately polluted water conditions.

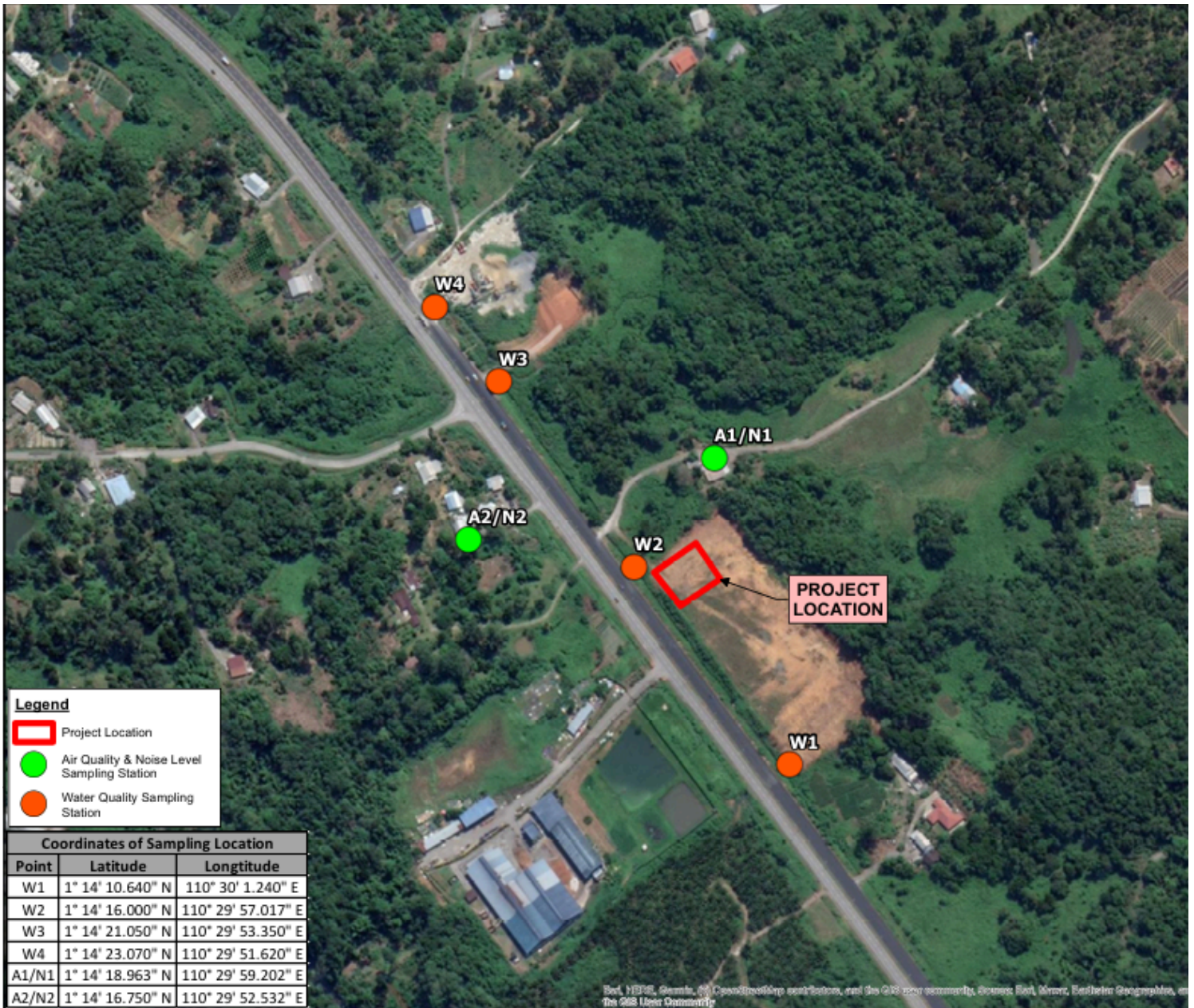
### Ambient Air

- 2 monitoring points - A1 and A2
- Air quality meets NMAAQS (2020) at both stations
- **Pollutant levels are low**, some below detectable limits.
- Indicates **generally good air quality** with minimal pollution sourced.

### Noise

- 2 monitoring stations - N1 and N2
- Noise levels **slightly exceed limits during day and night at both stations**
- Mainly due to existing sources (traffic, heavy vehicles, dog barking)

## Environmental Sampling Baseline Locations





**Major Impacts**

**Clinical Waste Handling & Storage Risks**

- Clinical waste handling and storage identified as a major impact
- Rated high significance due to risks to environment and public health
- Risks may occur during operation if waste is improperly handled or stored.

**Water Quality**

- Water quality impact identified due to risk of contaminated leakage from clinical waste
- Rated medium significance based on impact criteria and sensitivity of water bodies
- Site drains into a connected system: Internal drainage → roadside drains → Sungai Mamat → Sungai Baru → Batang Samarahan → South China Sea
- This connectivity increases the potential spread of pollution if not controlled

**Occupational Safety & Health**

- Occupational health and safety identified as a major impact
- Rated high significance due to hazardous nature of clinical waste
- Workers may be exposed to physical, biological, and chemical risks during handling and storage operations



**Minor Impacts**

**Noise Level and Noise from Traffic**

- Noise identified as a minor impact with low significance
- Limited due to low transport activity
- Only one 1-tonne lorry used, resulting in low traffic frequency and noise levels

**Air Quality**

- Dust and air emissions identified as minor impacts with low significance
- Generated mainly from routine vehicle operations
- Only one 1-tonne lorry used, resulting in low emission and dust levels compared to larger facilities

**Energy & Resource Consumption**

- Energy and resource use identified as a minor impact with low significance.
- Low due to small project scale.
- Main uses: chiller system for storage and fuel for transport vehicle.



**Socioeconomic Assessment**

**Project Awareness**

- 38.5% of respondents are aware of the Project; 61.5% are not.
- Awareness mainly comes from the village head who attended the FGD.

**Level of Agreement**

- 97.1% support the Project; 2.9% do not
- Indicates strong community support and positive perception

**Level of Concerns**

- 38.5% strongly disagreed and 10.6% disagreed that the Project would have negative environmental impacts
- 46.2% were neutral
- Only a small proportion perceived negative environmental impacts

**Potential Impacts**

The Project is expected to generate positive socio-economic impacts during operation by creating both direct jobs in facility operation, management, and maintenance, as well as indirect opportunities in transport, security, and related services, thereby boosting local income and economic activity while also providing limited upskilling in waste handling, safety, and regulatory compliance.



**Clinical Waste Management**

- Leak-proof, impermeable, banded storage areas
- Enclosed, ventilated, and refrigerated storage (2–8°C)
- Strict waste segregation and limited storage duration
- Routine inspection, cleaning, and disinfection
- Pest control and vector-proof design
- Spill kits and emergency response procedures
- SOPs, training, PPE, and restricted access



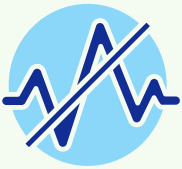
**Water Quality**

- Zero-discharge policy (no release to drains)
- Fully enclosed storage, no connection to stormwater
- Leak-proof containers and proper waste handling
- Immediate spill cleanup and good housekeeping
- Regular inspection and water quality monitoring



**Occupational Safety & Health**

- Use of PPE and safe handling procedures
- Proper sharps management (puncture-proof containers)
- Training, SOPs, and incident reporting system
- Safe workplace design (anti-slip floors, clear pathways)
- Health surveillance and emergency response plan
- Restricted access and hygiene facilities



**Noise Control**

- Limit vehicle trips and restrict to daytime
- Maintain vehicles and minimise engine idling
- Designated loading areas within site
- Monitor noise and comply with DOE limits



**Air Quality**

- Maintain vehicles to control emissions
- Limit idling and control vehicle speed
- Good housekeeping to reduce dust
- Regular inspection and prompt corrective action



**Energy & Resource Consumption**

- Optimise chiller temperature (2–8°C)
- Regular maintenance of equipment
- Reduce energy use (lighting control, awareness)
- Efficient transport scheduling and eco-driving



**Socioeconomic Assessment**

- Prioritise local employment
- Maintain community communication
- Establish grievance mechanism
- Manage workers (legal compliance, social conduct)

