ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED DEVELOPMENT OF CONDOMINIUM ON LOT PT 50098, OFF LEBUHRAYA SPRINT, MUKIM KUALA LUMPUR, KUALA LUMPUR

EXECUTIVE SUMMARY

PROJECT DEVELOPER:

PRIMA SENGGARA SDN. BHD.

ENVIRONMENTAL CONSULTANT:

EUROPASIA Engineering Services Sdn. Bhd.

Land Owner & Developer: Prima Senggara Sdn Bhd

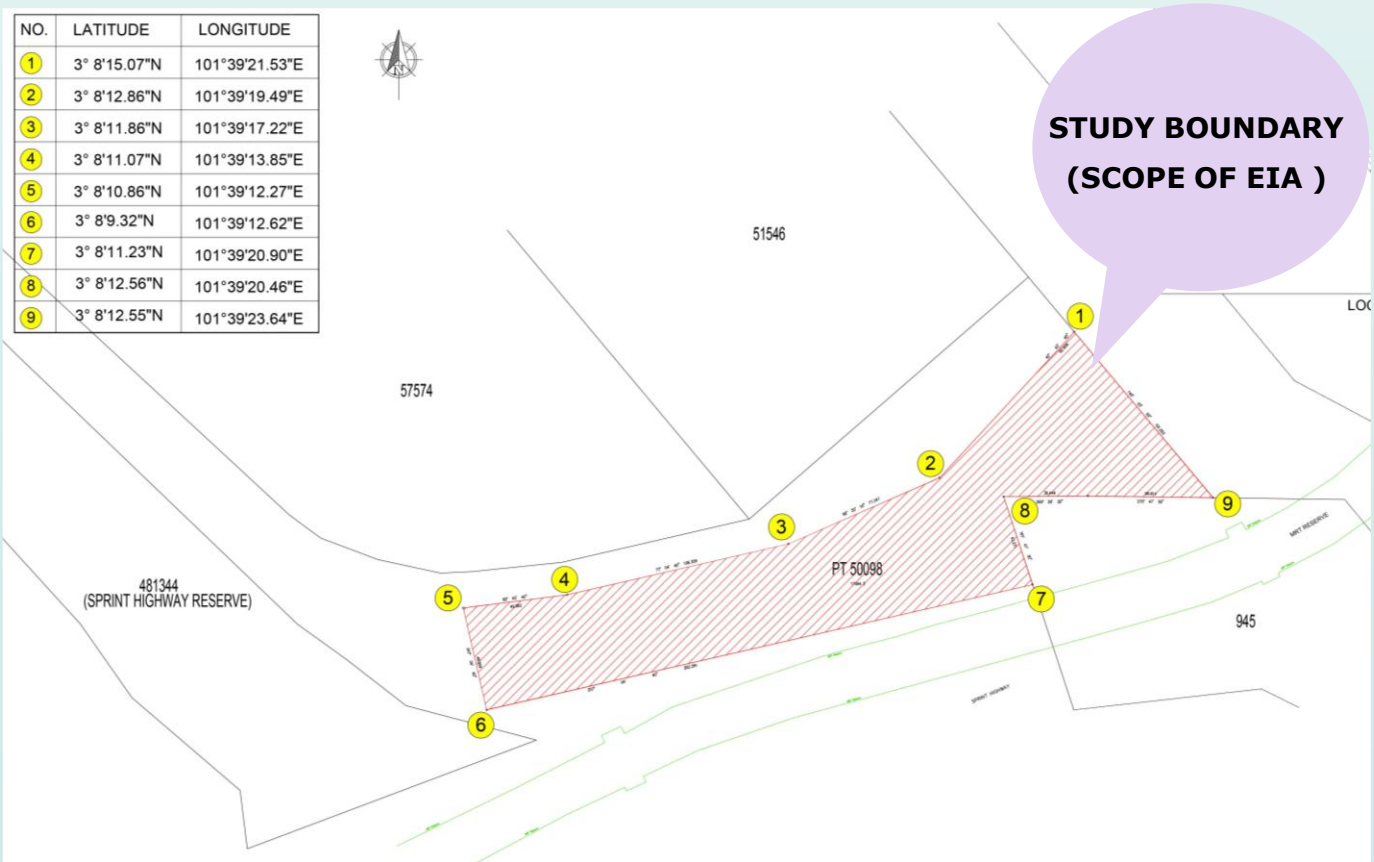
Lot No. & Size: PT 50098 & 4.298 acres (1.7394 hectares)

Type of Development: Condominium

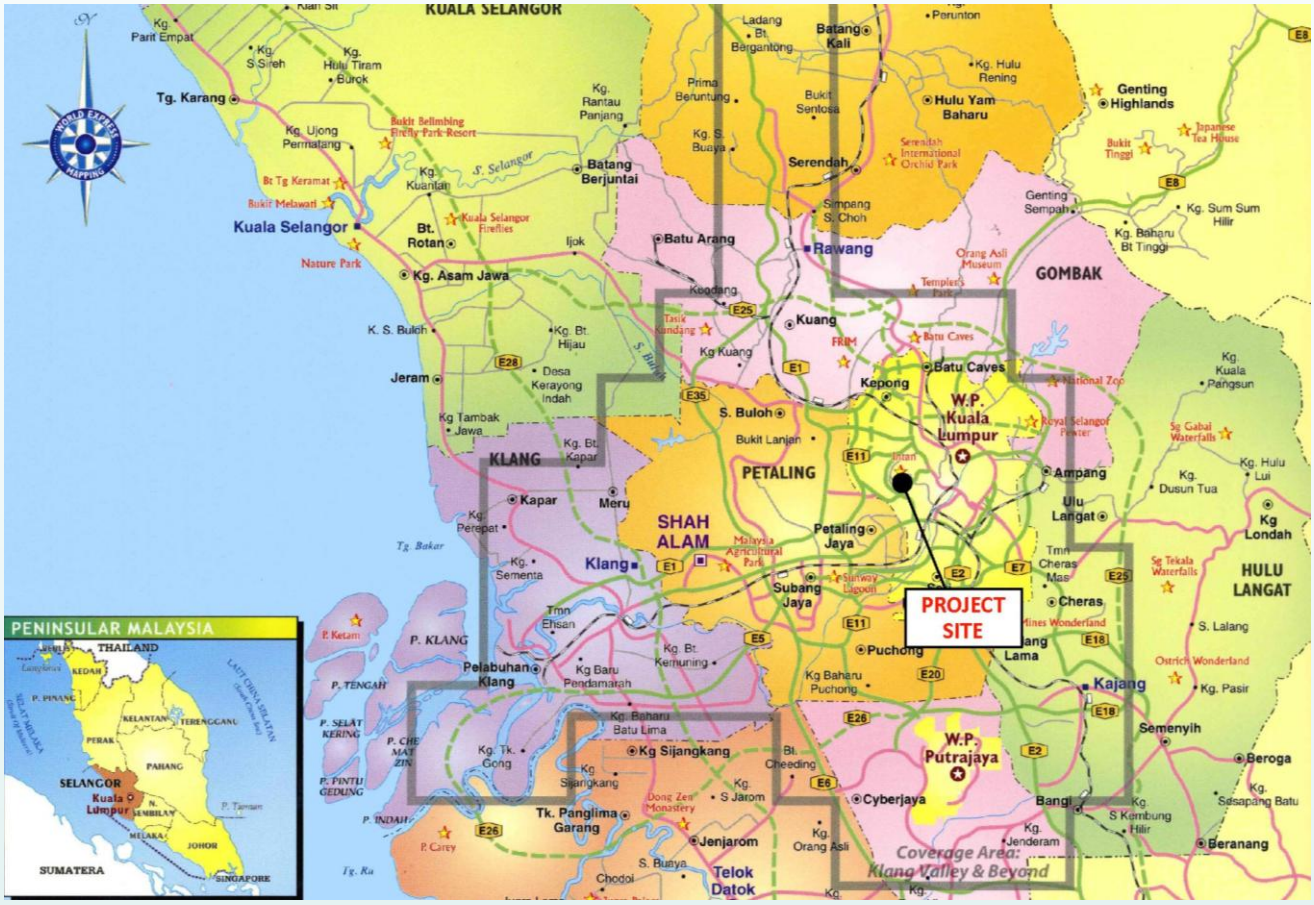
Prime Location & Environmental Quality: Elevated site with unobstructed views, natural beauty, and ventilation. The surrounding area is a well-established residential housing and high-rise developments, complemented by reputable institutions and essential amenities, ensuring a desirable and conducive living environment.

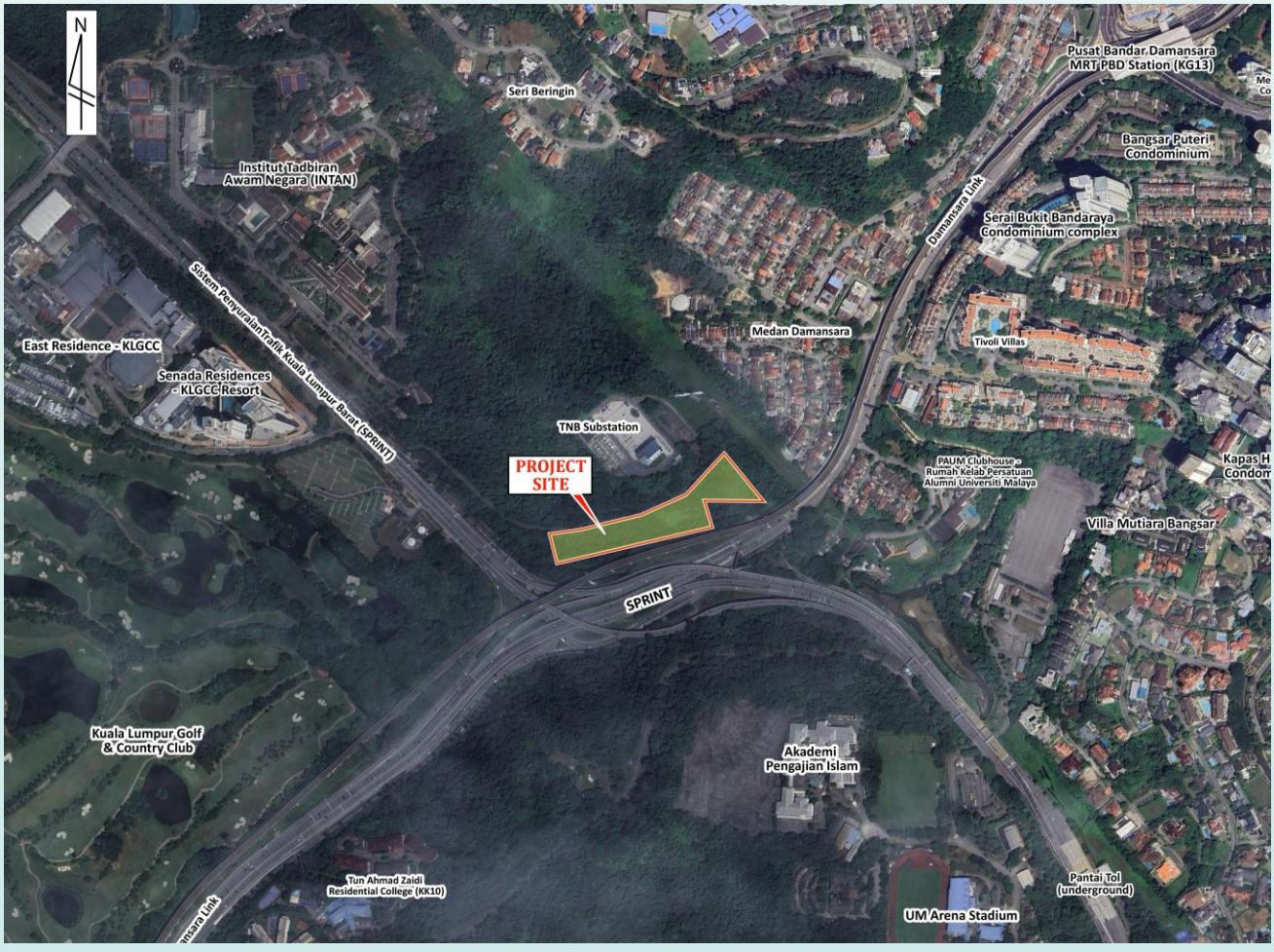
Land Status & Legal Considerations: Site is classified under "Building" rights with no legal impediments, aligned with ownership terms and designated for housing projects. It adheres to the Kuala Lumpur City Plan 2020's Residential Zoning classification and falls under the jurisdiction of Dewan Bandaraya Kuala Lumpur (DBKL).

NO.	LATITUDE	LONGITUDE
1	3° 8'15.07"N	101°39'21.53"E
2	3° 8'12.86"N	101°39'19.49"E
3	3° 8'11.86"N	101°39'17.22"E
4	3° 8'11.07"N	101°39'13.85"E
5	3° 8'10.86"N	101°39'12.27"E
6	3° 8'9.32"N	101°39'12.62"E
7	3° 8'11.23"N	101°39'20.90"E
8	3° 8'12.56"N	101°39'20.46"E
9	3° 8'12.55"N	101°39'23.64"E

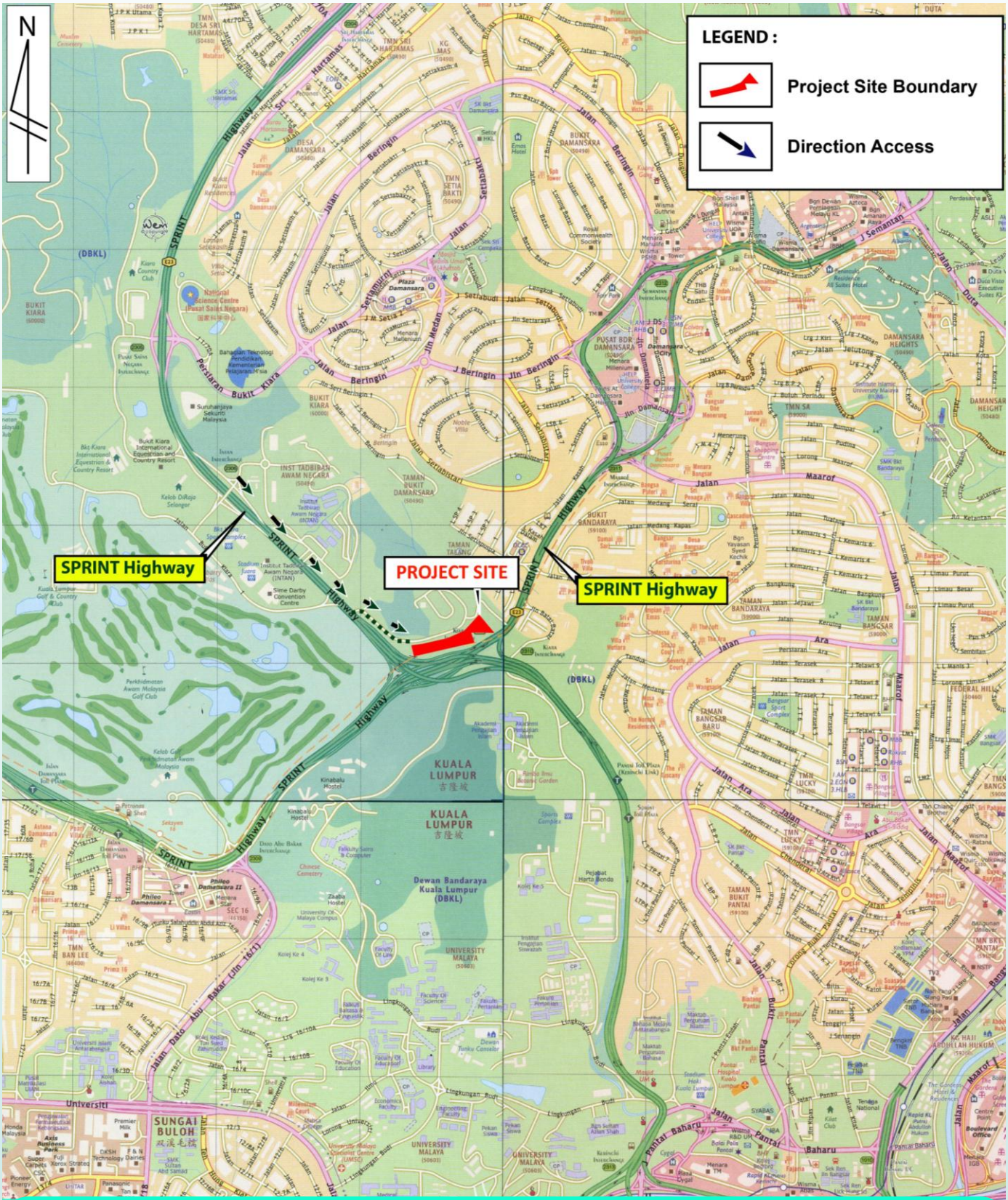


PROJECT LOCATION





ROAD NETWORK SURROUNDING PROPOSED PROJECT SITE



The Project Site is accessible via several road networks:

Damansara Link – Kerinchi Link/Lebuhraya SPRINT (E23) → Bukit Kiara (Exit 2307) → Existing Road to PMU Damansara Heights → Project Site (entrance)

CURRENT SITE CONDITION

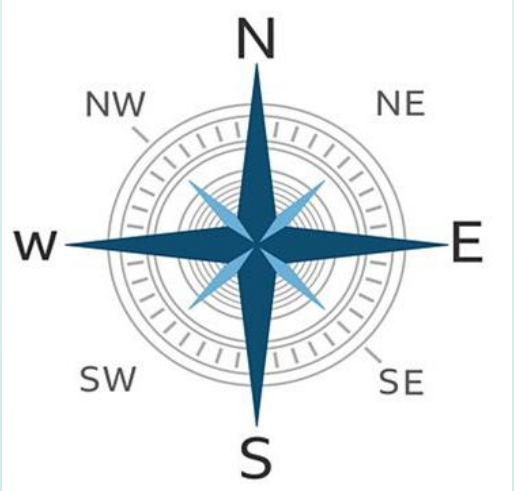
IMMEDIATE SURROUNDING (0-1km radius)

NORTH

1. PMU Damansara Heights
2. Seri Beringin
3. Bukit Damansara

WEST

1. Senada Residences – KLGCC Resort
2. Golf Field



EAST

1. Medan Damansara
2. Universiti Malaya (UM)
3. Bangsar
4. MRT Railway
5. SPRINT Expressway

SOUTH

1. Universiti Malaya (UM)
2. MRT Railway
3. SPRINT Expressway

IMMEDIATE SURROUNDING TO THE PROJECT SITE

Seri Beringin and Bukit Damansara

Seri Beringin

National Institute of Public Administration (INTAN).

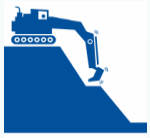
Senada Residences - KLGCC Resort.

Medan Damansara

Residential Area, Off Damansara

Tun Ahmad Zaidi Residential College (KK10)

Tun Ahmad Zaidi Residential College (KK10)



ACTIVITY 13: DEVELOPMENT IN SLOPE AREA

Development or land clearing less than 50 per cent of an area with slope greater than or equal to 25° but less than 35°.

There is approximately **31.48%** of an area with slopes 25° - 35°within the proposed Project Site

STATEMENT OF NEED

1 STRATEGIC LOCATION & HIGH ACCESSIBILITY

Accessible via Damansara Link – Kerinchi Link/Lebuhraya SPRINT (E23). The Project is also assessable via public transportation, specifically, the MRT stations of Pusat Bandar Damansara and Phileo Damansara, both situated approximately 2-4 km away.

2 LANDUSE OPTIMIZATION

- The proposed Project will enhance the utilisation of land currently occupied by secondary forest and dense undergrowth.
- The proposed development will serve to fulfil the demand for luxurious housing development in the area towards Year 2035.
- The Project aligns with the landuse patterns of the surrounding communities, which consist of communities of Damansara, Seri Beringin, and Bangsar, thereby maximising the use of existing infrastructure.
- The development will indirectly increase the value of property in the surrounding areas.

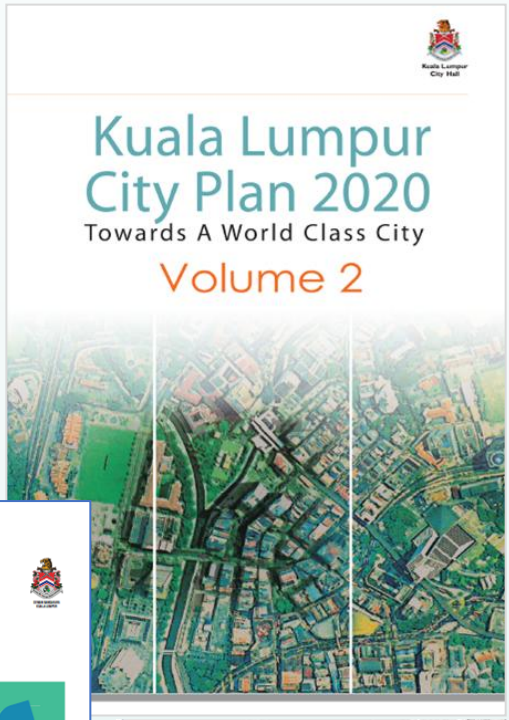
3 ENVIRONMENTAL CONSIDERATION

- The current biodiversity of flora and fauna at the site will be slightly impacted, as the existing secondary forest will be cleared during the construction phase.
- The proposed Project incorporates plan for creating green spaces utilising the existing vegetation and establishing appropriate buffer zone with the surrounding environment.
- Implementation of a proper landscaping such as tree transplanting may ensure the certain tree species remain home.

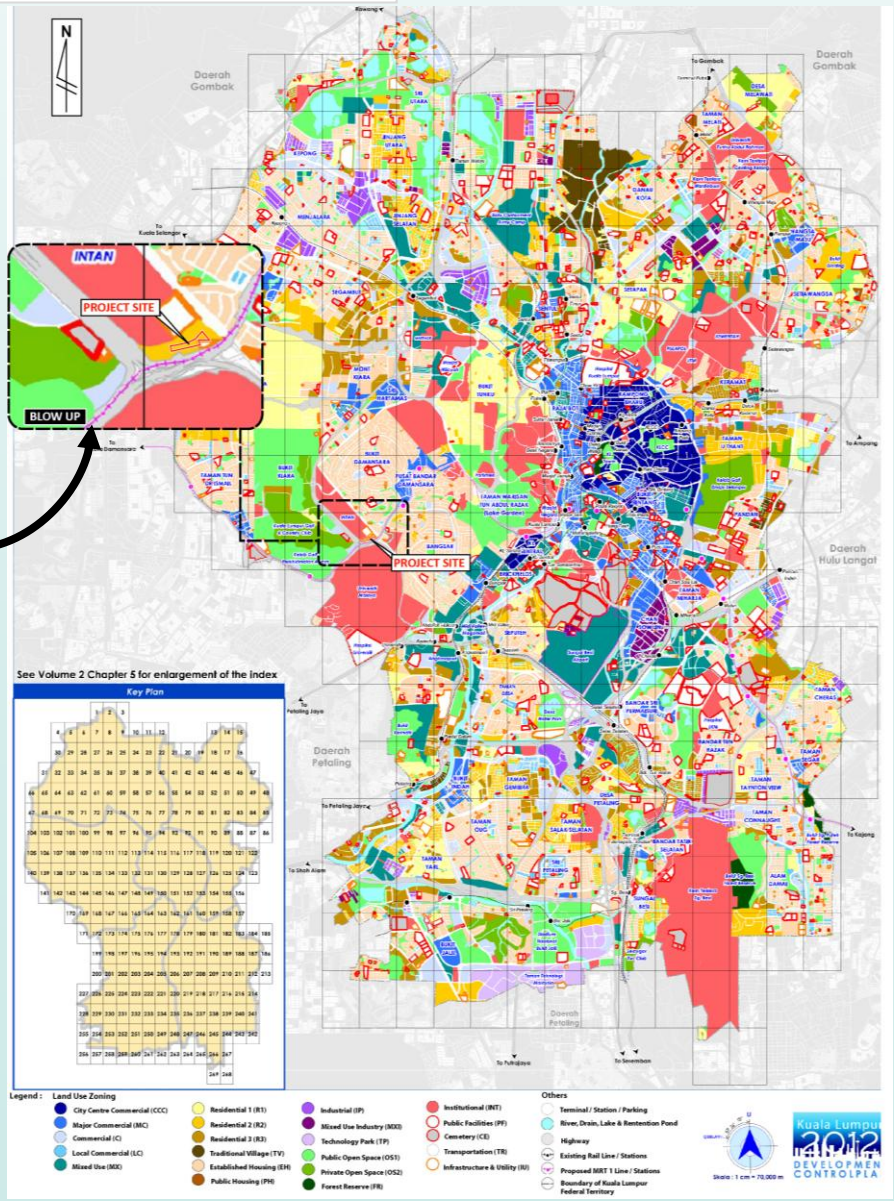
4 OTHER SUPPORTING MATTERS

- Expands the employment market, offering jobs ranging from construction labour (construction phase) to office roles for condominium management (operational phase).
- The Project increases both state and national revenue through the issuance of licenses and the collection of taxes.
- The development aims to offer comfortable housing options for various socio-economic groups, to enable home ownership in a strategically located area.

ZONING COMPATIBILITY



This development follows the land use zone and planning controls proposed in the Kuala Lumpur City Plan 2020 and the Kuala Lumpur Structure Plan 2040.



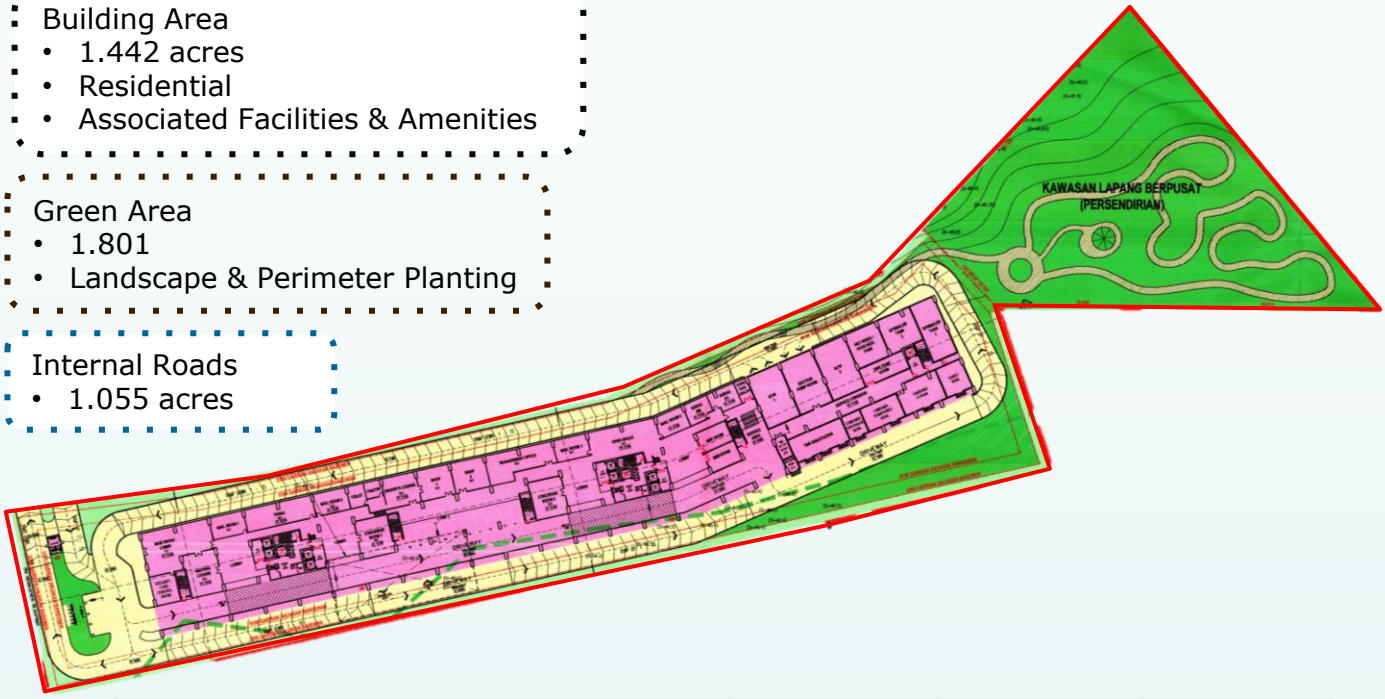
The Project Site is not located within any Riverside Corridor, Heritage Zone, Height Control Zone and Transit Planning Zone

PROPOSED LAYOUT PLAN

Building Area
- 1.442 acres
- Residential
- Associated Facilities & Amenities

Green Area
- 1.801
- Landscape & Perimeter Planting

Internal Roads
- 1.055 acres



LOKASI		LUAS (M^2)	LANTAI (KP)	PLINTH (%)
BANGUNAN				
TAPAK BANGUNAN & KEMUDAHAN		5,836.1	62,819.4	33.55
LANDSKAP SEMULAJADI				
LANDSKAP LEMBUT		5,769.9	62,106.1	33.17
LANDSKAP LEMBUT PERIMETER		1,518.1	16,341.0	8.73
LANDSKAP KERAS				
LALUAN JALAN & PARKING DALAMAN		4,269.9	45,960.8	24.55
JUMLAH		17,394.0	187,227.5	100

Facilities & Amenities include:	
❖ Restaurant	❖ Reading Room
❖ Waiting Lounge	❖ Games Room
❖ Taska	❖ Outdoor Yoga/Pilates Deck
❖ Shop	❖ Pool
❖ Gymnasium	❖ Indoor Lounge
❖ Multi-Purpose Hall	❖ Private Restaurant / Kitchen
❖ Function Hall	❖ Sky Spa / Pantry
❖ Outdoor Lounge / Sitting Area	❖ Sauna
❖ Open Lounge / BBQ Pit	❖ Sky Cabana
❖ Children's Playground	❖ Sky Dining Deck

CONCEPTUAL DEVELOPMENT PHASING

DEVELOPMENT TIMELINE

i. Construction is scheduled to commence in March 2026 and will encompass site clearing, earthworks, piling, and the main building construction, concluding approximately in December 2029.

ii. Following the acquisition of clearance from the relevant authorities, the Certificate of Completion and Compliance (CCC) is anticipated to be obtained in December 2029, with operations commencing from January 2030 onwards.

ESTIMATED UTILITIES DEMAND & GENERATION

Total Electricity Demand = 3,909.10 kW

Water Demand = 296,000 litres per day

Waste Generation = ~877.5 kg/day

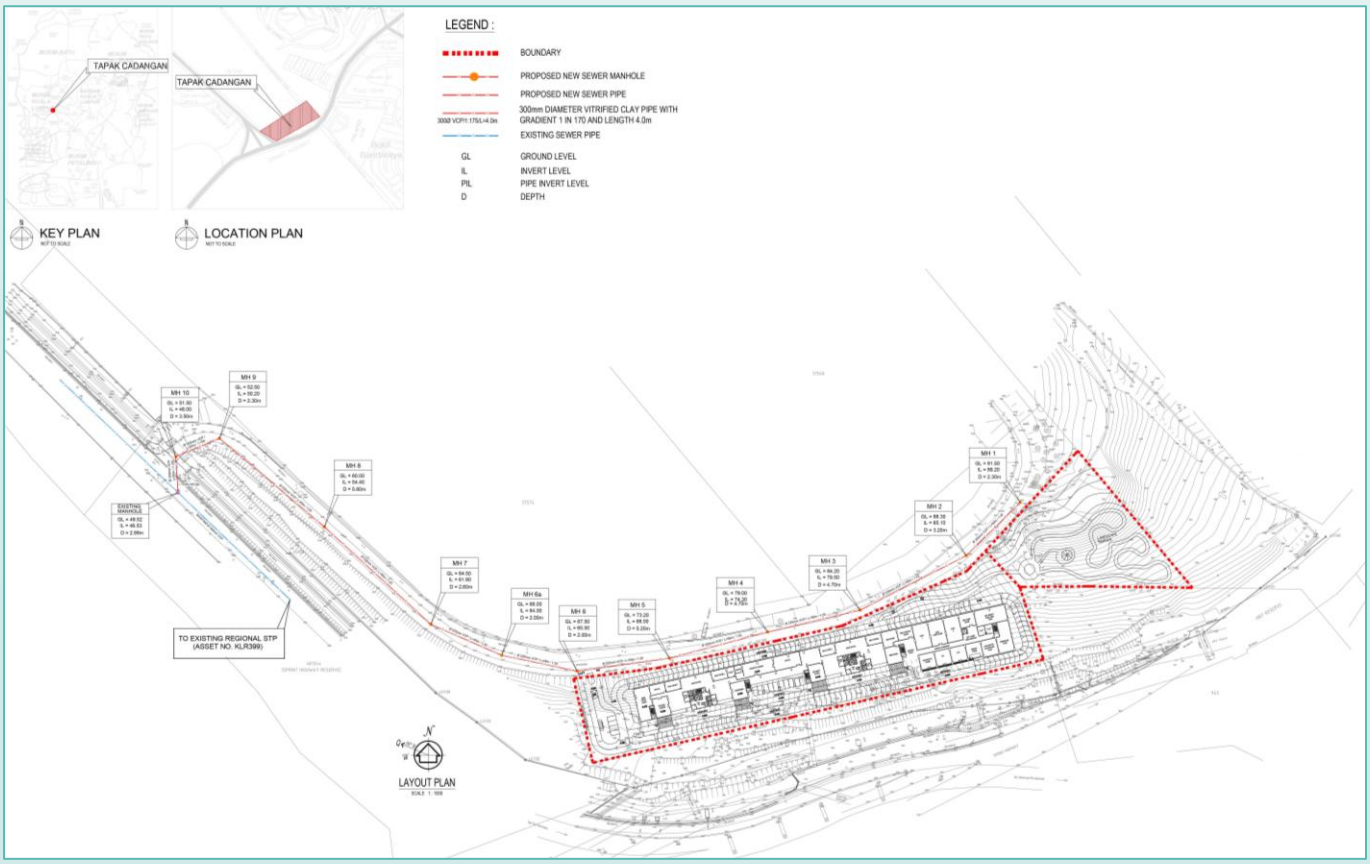
Population Equivalent = 750 PE

Wastewater from development area:
PE – 750 PE

Wastewater – 168,750 L/day

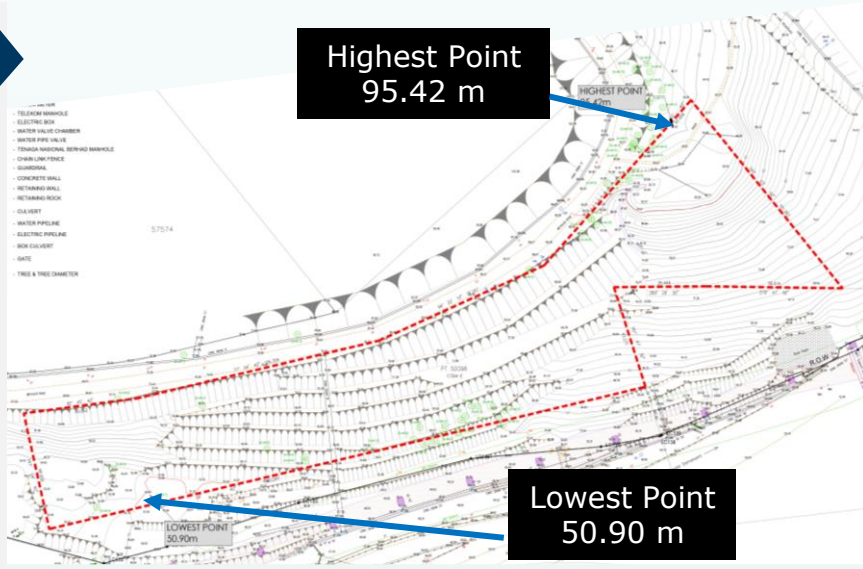
gravity → **Proposed Sewerage System** → gravity → **Off-site Existing STP (Asset No: KLR 399) Pantai 2 Sewage Treatment Plant** → **Sg Anak Air Batu**

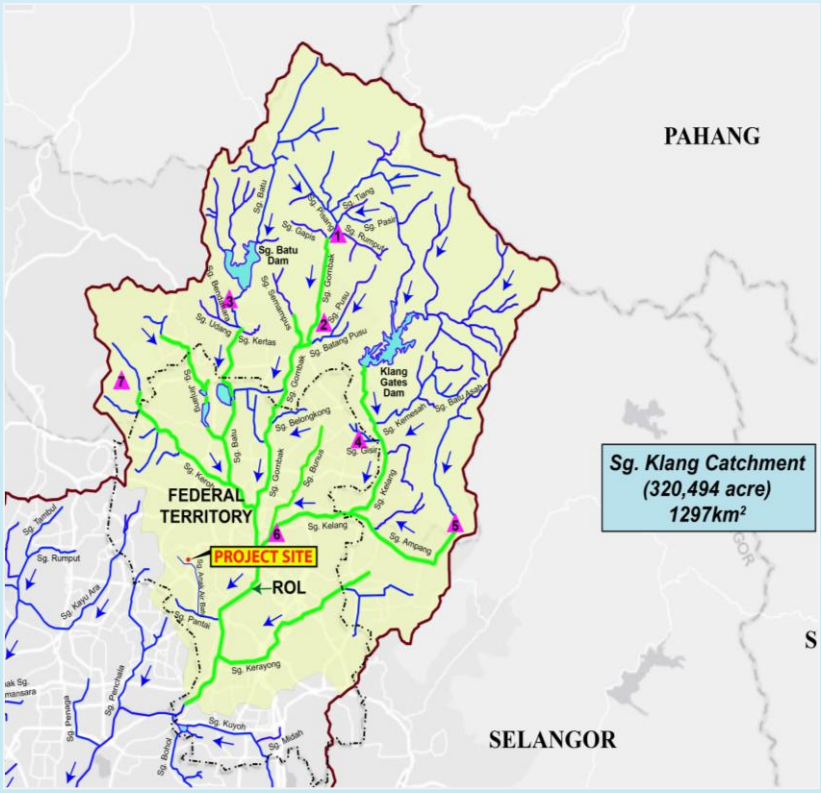
Proposed Sewerage Plan



TOPOGRAPHY

- Hilly and Steep terrains (with the elevations ranging from 50.90m to 95.42m AMSL)
- Highest point ~ 95.42 m lies near the northeastern boundary of the Project Site.
- Lowest point ~50.90 m lies near the southwestern boundary of the Project Site



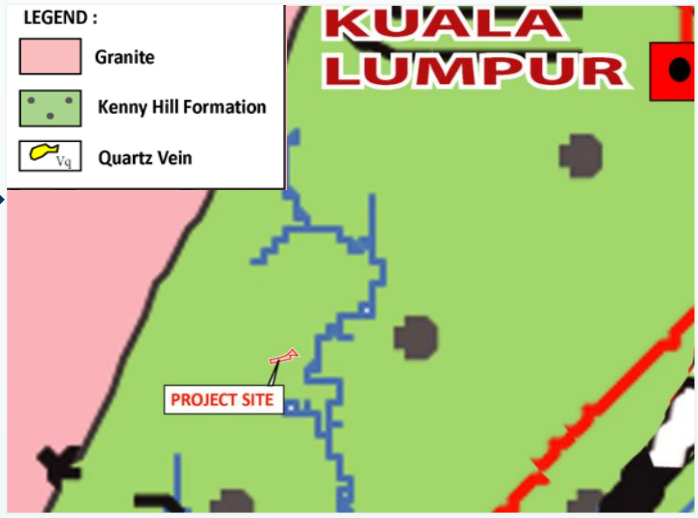


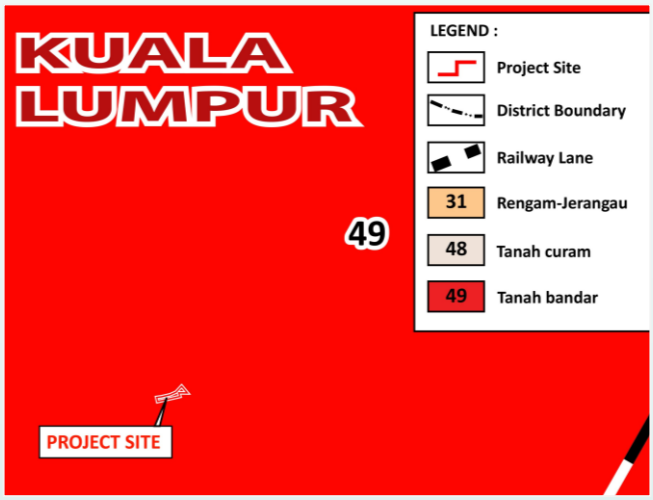
HYDROLOGY

- The Project Site lies within Sg. Klang catchment area, located approximately 5.2 km upstream of Sg. Klang.
- Surface runoff from the site flows into existing roadside and monsoon drains at the southwestern and southern boundaries.
- The runoff flows southeasterly along these existing drains, crossing the SPRINT Highway, and discharges into Sg. Anak Air Batu.
- Sg. Anak Air Batu flows southwards before merging with Sg. Klang, which then flows westward into the Straits of Malacca.
- The Sg. Klang catchment contains eight (8) water intake points within the Sg. Klang water catchment (i.e., Sg. Ampang, Empangan Klang Gates, Sg. Rumput, Sg. Gombak, Sg. Pusu, Sg. Keroh & Empangan Sg. Batu)
- No water intake points located downstream of the Project Site.

GENERAL GEOLOGY

The entire Project Site is situated on the metasediments rock type of formation namely Kenny Hill Formation. The major rock types included in Kenny Hill formation consist of a sequence of interbedded shale, mudstone and sandstone.





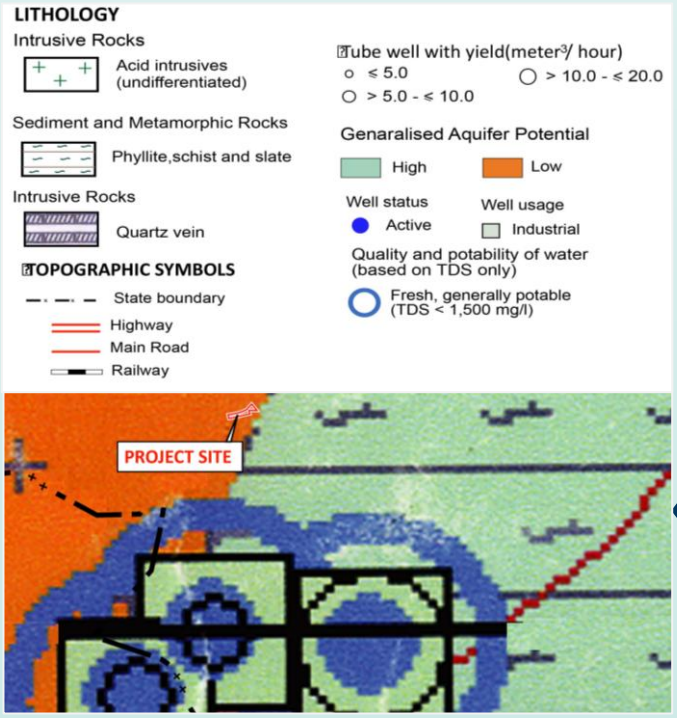
SOIL

Based on the Reconnaissance Soil Map of Peninsular Malaysia (*Pindaan* 2002), published by the Ministry of Agriculture Malaysia, the soil within the Project Site is classified as *Tanah Bandar* (Urban Land).

Soil Investigation

Borehole results:

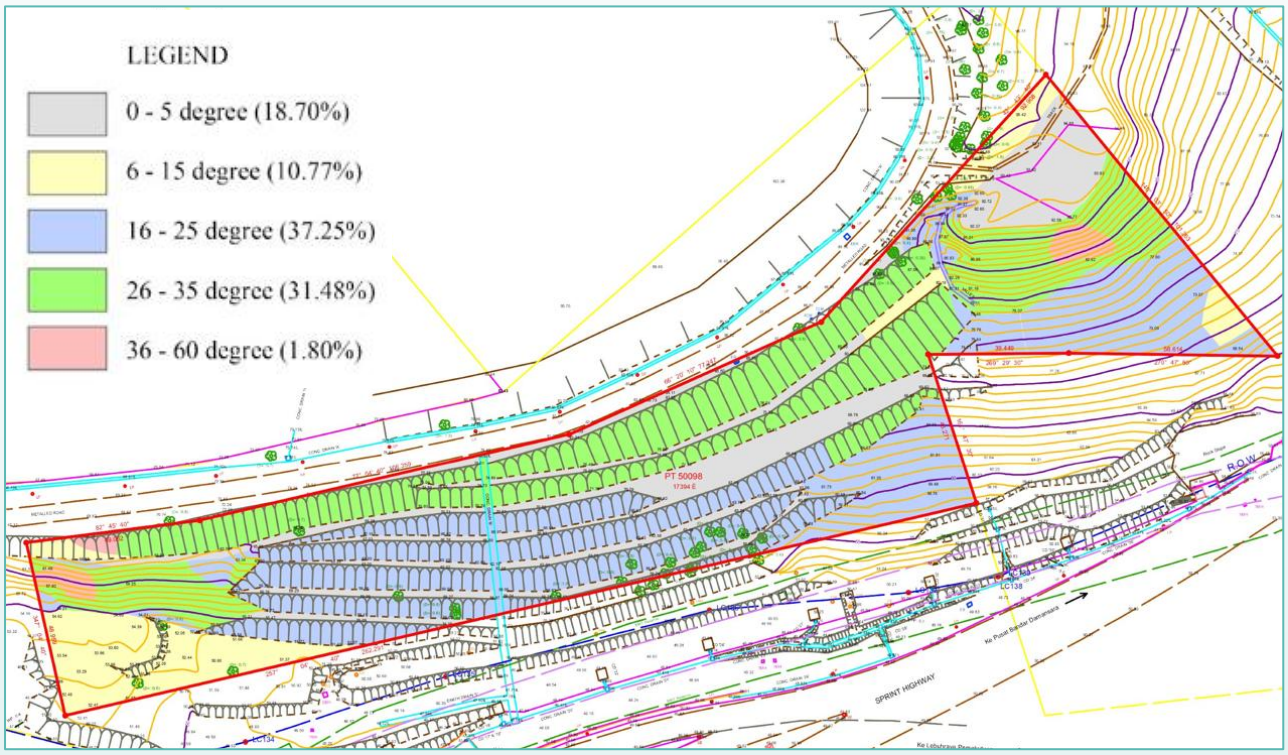
- Subsoil layer can be simplified into three (3) main strata and generally consists of sandy SILT, sandy CLAY or gravelly SILT.
- The boreholes were terminated at the depth ranging from 21.07m to 28.62m below the existing ground level.
- The ground-water level for all the boreholes measured ranges from 2.60m to 5.90m below the existing ground level. Standpipe piezometers were also installed in all borehole positions to monitor the fluctuation of groundwater table.



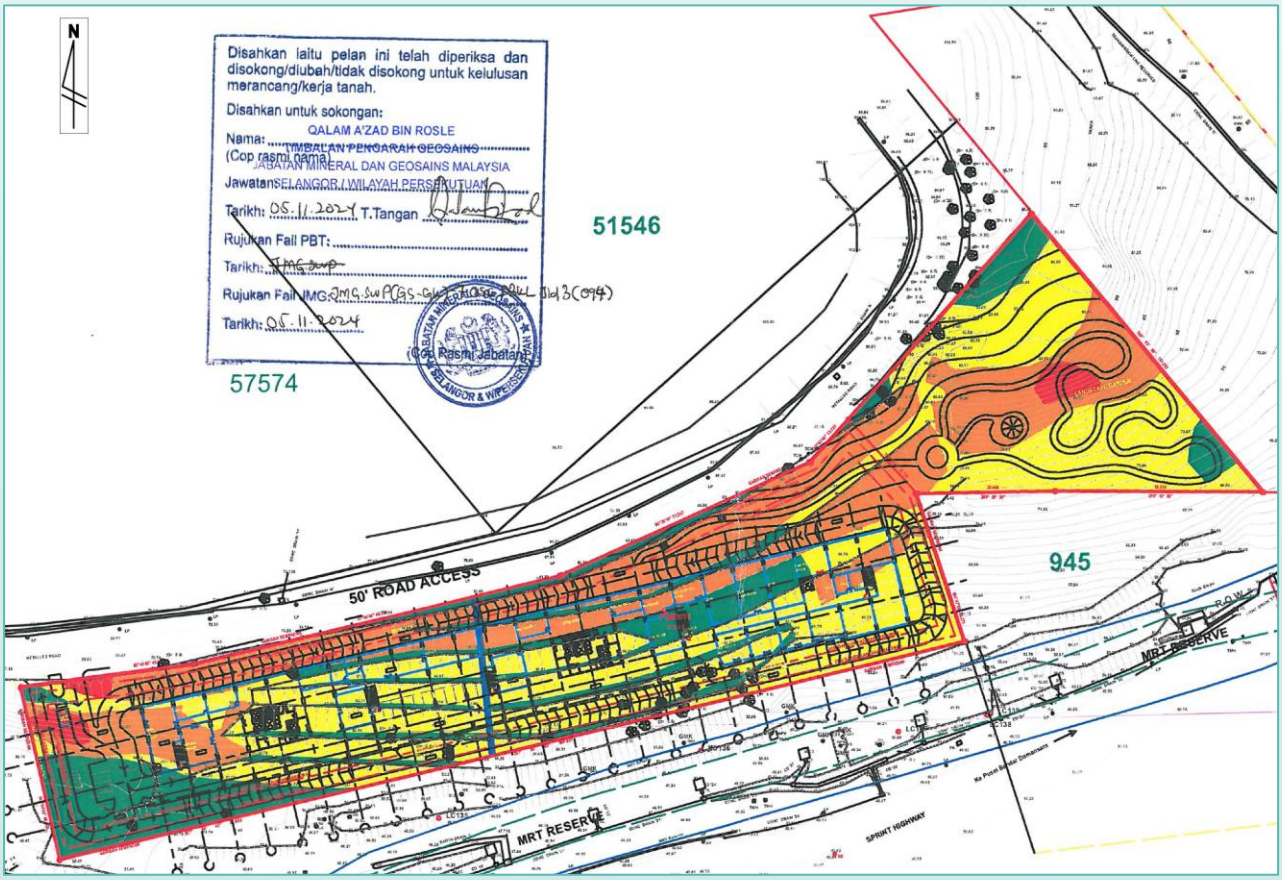
HYDROGEOLOGY

The Project Site is located on low potential aquifer regime of this region. The nearest active tube well is located at University of Malaya, approximately 2.2 km south of the proposed Project Site, indicates that the groundwater could yield between >5.0 - <10.0 meter3/hour and total dissolved solid (TDS) less than 1,500mg/l.

Slope Classification Map

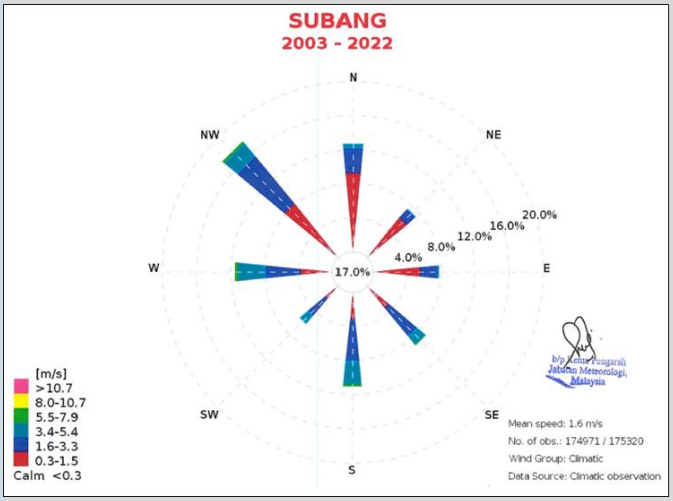


Construction Suitability Map



CLIMATE

- Based on the monthly temperature records at Subang Airport from 2004 to 2023, temperatures remain relatively stable throughout the year, with average monthly variations not exceeding 1.5°C.
- The average total annual rainfall recorded from 2004 to 2023 was approximately 2,997.5 mm.
- The wind rose data indicates that the west wind exhibits the highest velocity (mean speed of 2.6 m/s), and the greatest frequency originates from the northwest.



Environmental Baseline Monitoring

WATER QUALITY

Generally, water quality at all sampling points was classified as 'Clean', corresponding to Class II under the Malaysian Water Quality Index (MWQI). These points represent the main drain and river receiving discharges from various sources. While some contamination was noted, particularly high faecal and coliform coliform counts in certain areas, the water quality at these locations is generally acceptable.

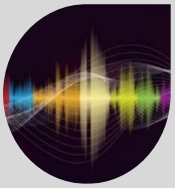
AIR QUALITY

All parameters at all sampling stations comply with the Malaysian Ambient Air Quality Standards (MAAQS), Standard 2020.

NOISE LEVEL

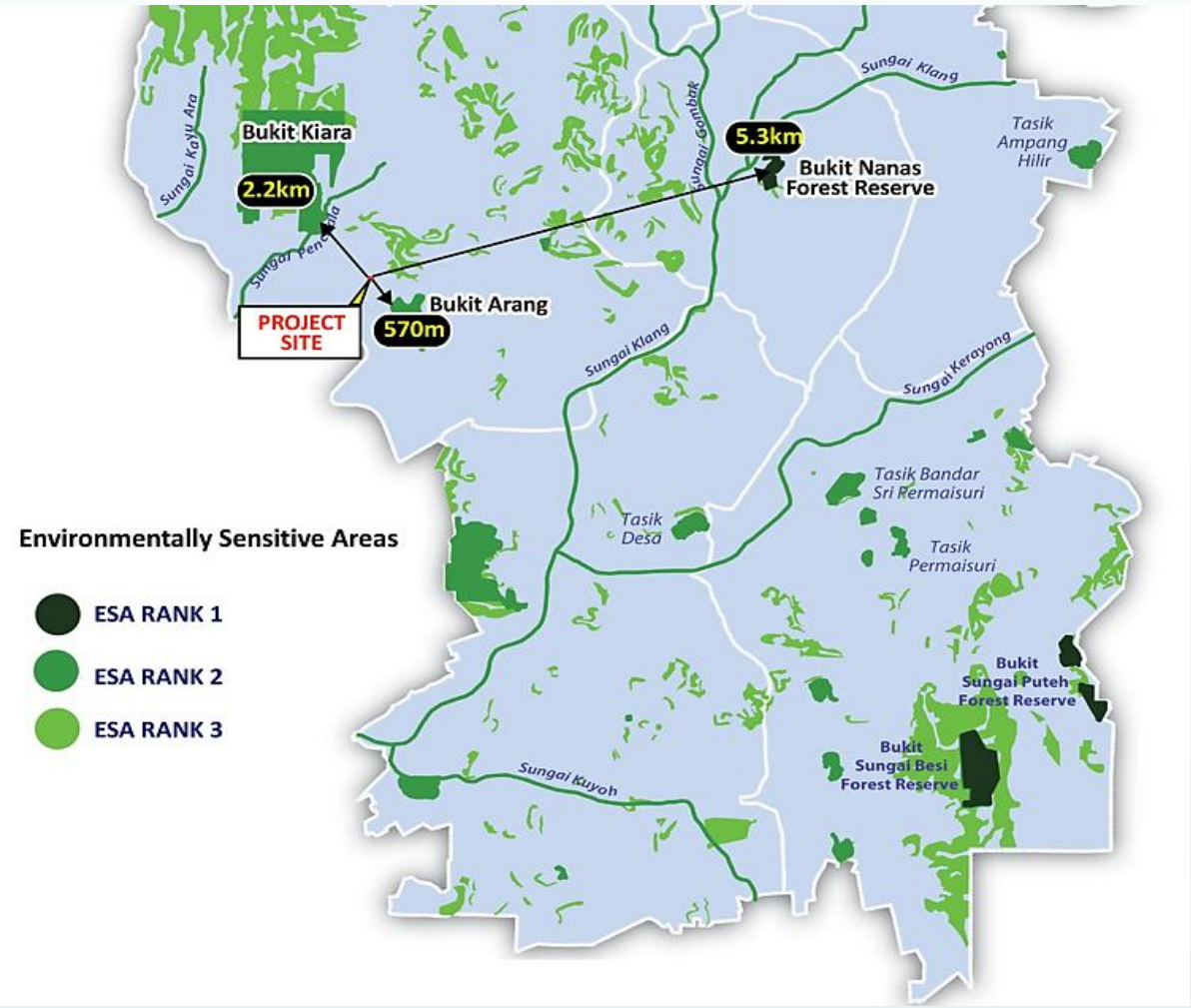
Noise levels complied with the permissible limits set forth in the DOE Guidelines for Environmental Noise Limits & Control, 3rd Edition, 2019, Reprint 2021, First Schedule, for both daytime and nighttime.

VIBRATION LEVEL



The root mean square (RMS) values on the z-axis (vertical) at all sampling points indicate that the values exceeded the maximum velocity level of 0.2 mm/s, as stipulated in the First Schedule for Residential in the DOE Guidelines for Environmental Vibration Limits and Control, 3rd Edition, 2021.

Baseline Sampling Locations



ENVIRONMENTAL SENSITIVE AREA

The Proposed Project Site is not located within any Environmental Sensitive Areas (ESA).

FLORA

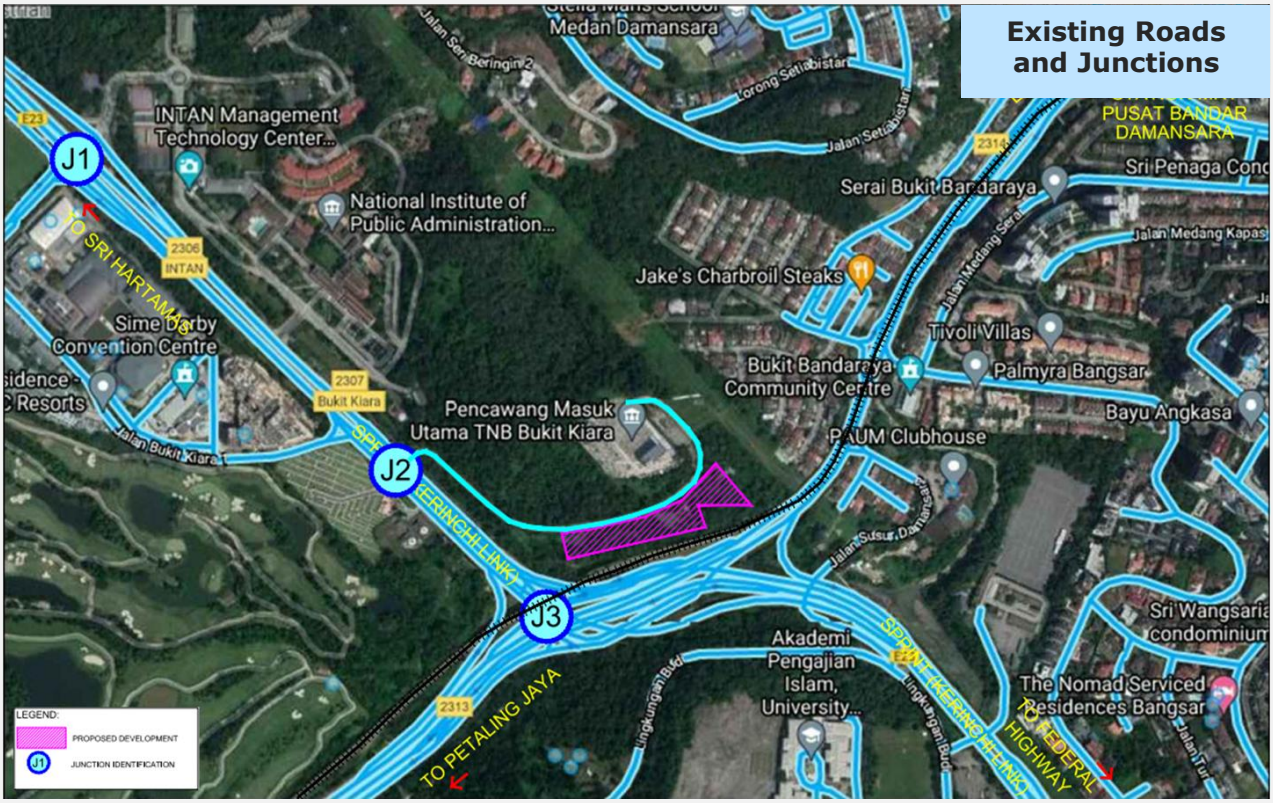
- Project Site is classified as a disturbed habitat, dominated by pioneer species typical of a secondary forest.
- A total of 11 families, 17 genera, and 20 species were recorded, with the Euphorbiaceae family being the most diverse in both genera and species.
- Key species include *Acacia mangium (akasia lebar* or wattle) and *Macaranga sp. (mahang).* Additionally, *Dillenia suffruticosa* (simpoh air) was also encountered.
- Ten (10) species are listed under the IUCN Red List of Threatened Species, all classified as Least Concern, and one (1) species is listed as Least Concern in the Malaysia Biodiversity Information System (MyBIS).

FAUNA

- Project Site likely to have common bird species, small mammals, reptiles such as lizards, and other herpetofauna.
- All mammal species identified and anticipated within the Project Site are classified as Least Concern under the IUCN Red List of Threatened Species, except for *Macaca fascicularis, Tupaia glis* and *Tupaia minor*, which are Protected under the Wildlife Conservation Act 2010.
- Site features 4 bird species from 4 families, including the common myna and oriental magpie-robin, all classified as Least Concern by the IUCN, and the house swift designated as Totally Protected Wildlife under the Wildlife Conservation Act 2010.
- Site comprises 4 families of reptiles and amphibians, with a total of 6 identified species, all classified as Least Concern by the IUCN, and several species protected under the Wildlife Conservation Act 2010.

EXISTING ENVIRONMENT- Traffic Conditions

ROAD AND JUNCTION INVENTORIES



PERFORMANCE OF EXISTING ROADS & JUNCTIONS

- Existing roads operate under acceptable to worst conditions, with LOS ranging from A to F during peak hours.
- Most junctions near the proposed Project Site function at acceptable traffic levels, with LOS ranging from A to C during peak hours. However, one junction (Persimpangan Bukit Kiara, J3) is currently operating at saturation, exhibiting a LOS of E during the evening peak hour.

EXISTING ENVIRONMENT- Socio Economic And Human Environment

TOTAL POPULATION

- Based on My Local Stats Wilayah Persekutuan Kuala Lumpur, a total population of 1,961,200 reside in Wilayah Persekutuan Kuala Lumpur in 2022.

PERCEPTION SURVEY

- A total of 54 respondents from the nearest receptor, Medan Damansara, participated in the questionnaire survey.
- A significant majority of respondents (89%) expressed strong disagreement, while 7% disagreed, and an equivalent 2% were unsure. Notably, only 2% expressed agreement with the proposed Project. Traffic congestion, noise, air, and water pollution are key concerns during both the construction and operational phases. Flooding, social conflict, improper solid waste disposal and infectious diseases were notable issues, especially during construction.

CONSTRUCTION PHASE

LOGISTIC ROUTES

Logistic access:

- The access route during construction is via Damansara Link – Kerinchi Link/Lebuhraya SPRINT (E23), then the existing road to PMU Damansara Heights, which provides access to the Project Site.

IMPACT

- Increased traffic risks.
- Potential oil spills and leakage of raw construction materials onto public roads.
- Increased dust and debris.

MITIGATION MEASURES

- Regular sweeping / cleaning of access roads
- Flagmen must be stationed at the access road junctions to control and direct traffic.
- Proper warning signs, signals or warning light and barricade are recommended to ensure safety and smooth flow of traffic.
- Wash trough is proposed at the Project Site's entrance/exit gateway.

SITE CLEARING

~273.29 tonnes of biomass is estimated to be generated from the site clearing.

IMPACT

- Loss of existing vegetation and associated habitats.
- Noise and dust pollution during the site clearing.
- Potential for soil erosion and increased surface runoff.
- Improper disposal may result in water quality deterioration and attract unwanted pests.
- Open burning of biomass or solid waste may generate soot and dust.

MITIGATION MEASURES

- Site clearing will be conducted in a single stage in accordance with the earthworks staging sequence.
- The secondary vegetation will be shredded into fine fibre using shredding machines and mulched and left to decompose within the project site, naturally protecting the soil from erosion.
- Domestic waste will be disposed of at Bukit Tagar Sanitary Landfill.

CONSTRUCTION PHASE

WORKERS ACCOMODATION

- *Approximately 100 workers to be employed*
- *No workers' quarters is provided on-site*

IMPACT

- Impact associated with the generation of sewage and solid waste.
- Without adequate sewage management, untreated raw sewage can lead to water pollution, unpleasant odours, and the spread of disease, thereby posing a risk to nearby communities.

MITIGATION MEASURES

- Strict protocol to be established to ensure the cleanliness of workers and the site office.
- Maintain high quality of housekeeping within the proposed Project Site.
- Total of four (4) septic tanks, each with a capacity of 30 population equivalents (PE), are required to manage sewage discharge at the site.
- Open burning of rubbish is strictly prohibited.

WATER QUALITY

IMPACT

Surface erosion or sediment washout in the area may lead to increased water turbidity if the drainage system is insufficient or inadequately maintained

MITIGATION MEASURES

- Proper design and implementation of the LD-P2M2 system.
- Supervision of the LD-P2M2 system by a qualified individual.
- Regular maintenance of the drainage network and silt trap.
- Allocation of budget for water quality and enhancement initiatives.

CONSTRUCTION PHASE

EARTHWORKS

Cut - 16,000 m^3
Fill - 0 m^3
Excess- 16,000 m^3 (will be stored temporarily at the proposed location within the site before exporting out periodically to Bukit Tagar Sanitary Landfill)

IMPACT

- The earthworks will be carried out in a single (1) stage.
- Discharge of sediments from earthworks into the surrounding waterways, ultimately flowing into Sungai Anak Air Batu.
- Exposed slopes are susceptible to erosion, which may result in slope failure, particularly during the rainy season.
- In a worst-case scenario, should no erosion control mitigation measures be implemented, the average soil loss rate for the entire earthwork areas of the project site is estimated at 1,827.85 tonnes/ha/year.
- The total estimated sediment yield, under the worst-case scenario, is projected to be 97.06 tonnes per storm event for the overall earthworks.

MITIGATION MEASURES

- Implementation of LD- P2M2.
- Earth drains and two (2) silt traps to be provided.
- Sandbags and silt fences will serve as temporary perimeter controls, designed to direct runoff from off-site and undisturbed areas away from disturbed areas.
- Regular maintenance of the drainage and silt trap.
- Final formed platform and slopes will be turfed or covered as promptly as possible to prevent further erosion into the waterways.
- Compliance with Conditions of Approval (COAs) is required.

NOISE & VIBRATION

IMPACT

- Noise and vibration primarily arise from construction activities, including piling and movement of heavy vehicles.
- Higher noise levels will create a nuisance and may have psychological effects on individuals, and to some extent, may also cause physiological effects.
- Noise and Vibration generated during piling and construction works are not anticipated to cause any significant impacts due to the presence of natural buffers surrounding the Project Site and absence of receptors in close proximity.

MITIGATION MEASURES

- Erection of hoarding along the boundary of the Project Site.
- Construction activities should be conducted solely during daytime hours.
- Proper maintenance of all equipment and machinery.
- Avoid using equipment that generate excessive noise levels.
- No blasting to be carried out.

CONSTRUCTION PHASE

AIR

IMPACT

- Increased level of PM10 and PM2.5 due to spillage or wind-blown dust from uncovered material.
- Traffic movement on dirt road will churn up the surface and may incite hazy condition especially during dry and windy periods.
- Direct affect to the road users of SPRINT Highway surrounding the Project Site.

MITIGATION MEASURES

- Provision of one (1) wash trough.
- Constant wetting and cleaning of roads connecting the Site to public roads.
- Proper covering of raw materials and topsoil stockpiles.
- Traffic management trough speed limits and regular maintenance of vehicles / machinery.
- Erection of hoarding along the boundary of the Project Site.

SOLID WASTE

- Approximately 412.74 tonnes of construction waste generated throughout the construction phase.
- Approximately 117 kg of domestic wastes for 100 workers are daily generated.

IMPACT

- Unattended debris could compromise the safety of the site as construction activities proceed.
- The indiscriminate disposal of domestic waste can lead to disease outbreak and pollution of waterways.
- Spills of diesel or hydraulic oil onto the soil may lead to contamination of both soil and water.

MITIGATION MEASURES

- Construction waste from the development will be reused and recycled and must be managed in accordance with the Solid Waste And Public Cleansing Management (Scheme For Construction Solid Waste) Regulations 2018.
- Separate containers should be provided for the collection of recyclable materials.
- Burning of any type of waste is strictly prohibited.
- All scheduled waste must be handled in accordance with the Environmental Quality (Scheduled Wastes) Regulations 2005.

CONSTRUCTION PHASE

TRAFFIC

IMPACT

- Increased traffic flow due to lorries and trucks delivering construction materials.
- Significant traffic congestion on SPRINT Highway, connecting the project site.
- Increased traffic hazards for workers and the public in the area.

MITIGATION MEASURES

- Develop a comprehensive Traffic Management Plan to manage traffic flow and construction timings.
- Schedule construction activities during staggered hours to avoid peak traffic times and alleviate congestion.
- Implement clear signage to alert drivers to construction activities.
- Deploy traffic control personnel to facilitate vehicle movement and assist pedestrians.
- Restrict heavy vehicle operations during peak hours.

SOCIO - ECONOMY

IMPACT

- Environmental issues are expected, including air and water pollution, noise and vibration nuisances as well as traffic impacts.
- Increased demand for both semi-skilled and skilled workers, providing job opportunities for local residents.
- An influx of foreign workers may lead to social conflicts due to diverse backgrounds of the workforce.
- The use of access roads by heavy vehicles is expected to disrupt traffic flow and elevate the risk of accidents from falling objects, posing dangers to local residents.
- Building on sloped areas may increase soil instability and erosion, potentially leading to flooding and compromising nearby properties.

MITIGATION MEASURES

- Conduct regular environmental monitoring to ensure compliance with guidelines and EIA measures.
- Ensure foreign workers are legally registered while prioritising local residents for job opportunities.
- Locate construction facilities away from residential areas and establish a complaints centre for local residents.
- Provide health education and sanitary facilities for workers, adhering to health guidelines to prevent disease.
- Supply safety equipment to workers and implement site management practices to mitigate risks.

CONSTRUCTION PHASE

FLOOD RISK

Project Site and its surrounding areas are not located within flood-prone zones. However, land clearing and earthwork activities may increase surface runoff, elevating the flood risk for nearby low-lying areas. To mitigate this, effective flood management is necessary, and two silt traps will be established during the earthworks.

GEOHAZARDS

IMPACT

- Construction activities that alter the land's natural slope may heighten the vulnerability to slope instability, encompassing landslides and erosion.
- Activities such soil compaction, grading, rock scaling and excavation have the potential to modify infiltration rates and surface water flow, thereby influencing the recharging of groundwater aquifers.
- The landslide susceptibility map of Kuala Lumpur and GIS analysis, shows the Project Site's landslide risk is considered moderate.

MITIGATION MEASURES

- Shallow foundation is not recommended to be adopted at this Project Site.
- Deep (Piled) foundation is proposed for the intended building structures and infrastructures. Driven and injection piles (displacement piles) may not be suitable at this project site as most of the buildings and infrastructures are to be built over slopes.
- For building and bridge structures that located at flatter ground, bored pile option can be adopted, as bored pile installation by machine would be much faster as compared to labour intensive hand dug Caisson Pile.
- Regular maintenance of slopes is essential for hill-site developments to ensure the completed slopes remain stable for the life of service slope.

ABANDONMENT

IMPACT

- Improper dismantling of built structures may result in illegal settlements by squatters and create opportunities for anti-social activities among local youth.
- The neglected condition of these structures serves as a potential habitat for the proliferation of various pests and diseases.

MITIGATION MEASURES

- Develop a comprehensive plan for stabilising the abandoned construction site to prevent erosion, sediment runoff, and potential water contamination in the absence of ongoing construction activities.
- All type of waste must be disposed of entirely prior to any abandonment.

OPERATIONAL PHASE

STORMWATER MANAGEMENT

IMPACT

A higher and faster peak discharge is anticipated due to the increased imperviousness created by the presence of built-up units and paved road systems.

MITIGATION MEASURES

Installation of one (1) unit on-site detention tank located it the low-lying areas within the Project Site, which will subsequently direct water flow into existing drains connecting to Sg. Anak Air Batu.

WATER QUALITY

IMPACT

- Wastewater intrusion into waterways may occur due to pipe leakage, leading to the discharge of non-compliant effluent, causing odours and health issues.
- Improper waste disposal can lead to water pollution, unpleasant odours affecting atmospheric quality, breeding grounds for disease vectors and localised flooding from drainage blockages.

MITIGATION MEASURES

- Wastewater from the proposed development will be channeled to the off-site Pantai 2 Sewage Treatment Plant (KLR 399).
- It is essential to perform periodic inspections and regular preventive maintenance to ensure the proper functioning of the sewage reticulation system.
- Adherence to best waste management practices.

OPERATIONAL PHASE

AIR & NOISE

IMPACT

- Increased traffic is a significant contributor to air and noise pollution.
- Air pollutants such as dust, smoke and exhaust gases are primarily from vehicular combustion.
- Noise mainly emanates from the SPRINT Highway users and other transport-related operations such as the MRT rail.

MITIGATION MEASURES

- Provision of sufficiently sized junctions, traffic signages and proper maintenance of road network system.
- Employment of sound insulators within the receptor dwellings and the modification of acoustics properties of the building and units to reduce the receiving noise impact from the MRT railway and roads.
- Heavy landscaping can be used to naturally screen the surroundings.

SOLID WASTE MANAGEMENT

IMPACT

- Improper disposal of solid waste may affect aesthetic quality, a source of water contamination and proliferation of disease vectors.
- Localize flooding may happen due to river/drain blockage.

MITIGATION MEASURES

- Solid waste from the development will be reused and recycled where possible and must be managed in accordance with the Solid Waste and Public Cleansing Management (Household Solid Waste and Similar Waste) Regulations 2011 and the Solid Waste and Public Cleansing Management (Commercial, Industrial, and Institutional Waste) Regulations 2018.
- Implementation of an efficient waste collection system, which includes sufficient waste collection bins and regular collection services.
- Provision of a recycling center to promote the recovery of reusable materials.
- Domestic waste disposal to legal dumpsite e.g. Bukit Tagar Sanitary Landfill.

OPERATIONAL PHASE

TRAFFIC

IMPACT

- Northbound SPRINT Highway: LOS C in the morning peak, LOS F in the evening peak.
- Southbound SPRINT Highway: LOS E in the morning peak, LOS A in the evening peak.
- Persimpangan Intan (EXIT 2306) Signalised Interchange (J1): LOS C during both peak hours.
- SPRINT Highway / Jalan PMU TNB Damansara Heights Left-in/Left-out Junction (J2): LOS B in the morning peak, LOS A in the evening peak.
- Persimpangan Bukit Kiara Signalised Junction (J3): LOS F during both peak hours.

MITIGATION MEASURES

Based on TIA study, several traffic improvements will be carried out:

i. Widening the existing road to PMU TNB Damansara Heights to a two-lane single carriageway to enhance accessibility and reduce congestion.
ii. Upgrading the existing left-in/left-out junction at SPRINT Highway/Jalan to PMU TNB Damansara Heights to include additional acceleration and deceleration lanes for smoother merging and exit movements.
iii. Provision of three access points to the project site, all connecting to Jalan to PMU TNB Damansara Heights for optimal traffic distribution and connectivity.

BIOLOGICAL ENVIRONMENT

IMPACT

Biological impacts are positive and primarily relate to the replanting of greenery through landscaping efforts.

MITIGATION MEASURES

- A central open space utilizing the existing vegetation will be established.
- Re-establish and diversify the flora and fauna species, albeit modestly, on the site.
- Implementation of aesthetically pleasing and extensive landscaping will attract small wildlife and create a wholesome environment.

OPERATIONAL PHASE

SOCIO - ECONOMIC ENVIRONMENT

IMPACT

- Population increases, leading to higher traffic volumes and congestion as well as risks of road accidents.
- Increased demand can strain existing infrastructure and utilities.
- Economic growth opportunities and employment generation.

MITIGATION MEASURES

- Implementation of efficient traffic management plan to ensure safety of road users.
- Establish enforcement and monitoring committee.
- Establish hotlines for public complaints.
- A series of emergency response plans.
- Proper firefighting and prevention facilities.

SUMMARY OF IMPACT MONITORING, COMPLIANCE MONITORING AND PERFORMANCE MONITORING

Impact/ Monitoring Aspect	Monitoring Parameter	Compliance Limit	Monitoring Frequency	Impact Monitoring (IM)	Compliance Monitoring (CM)	Performance Monitoring (PM)
CONSTRUCTION PHASE						
Water Quality	▪ pH ▪ Temperature ▪ Dissolve Oxygen (DO) ▪ Chemical Oxygen Demand (COD) ▪ Biological Oxygen Demand (BOD_5) ▪ Total Suspended Solid (TSS) ▪ Oil & Grease ▪ Ammoniacal Nitrogen (NH_3-N) ▪ Total coliform (CFU/100ml) ▪ Faecal Coliform (CFU/100mL) ▪ Turbidity	6.0-9.0 - 5-7mg/L 25mg/L 3mg/L 50mg/L 7;N 0.3mg/L 5000 400 250 NTU	Monthly	√	√	Not Applicable
Silt Trap	· Total Suspended Solid (TSS) · Turbidity	50mg/L 250NTU	(i) Monthly (ii) Biweekly (iii) Per rainfall event	Not Applicable	√	√
Check Dam **Temporary Earth Drain/Bund** **Silt fence/ Silt bund Hoarding** **Stabilized Construction Access** **Interlocking Paver** **Wash through**		Not applicable	(i) Biweekly (ii) Per rainfall event	Not Applicable	Not Applicable	√

SUMMARY OF IMPACT MONITORING, COMPLIANCE MONITORING AND PERFORMANCE MONITORING

Impact/ Monitoring Aspect	Monitoring Parameter	Compliance Limit	Monitoring Frequency	Impact Monitoring (IM)	Compliance Monitoring (CM)	Performance Monitoring (PM)
CONSTRUCTION PHASE						
Ambient Air Quality	· PM_{10} · $PM_{2.5}$ · NO_2 · SO_2 · CO	100µg/m³ 35µg/m³ 70µg/m³ 80µg/m³ 30mg/m³	Quarterly	√	√	Not Applicable
Noise Level	· L_{10} · L_{90} · L_{min} · L_{max}	Guidelines for Environmental Noise Limits and Control, 3rd Edition, 2019 (reprint 2021) - First Schedule				
Vibration Level	· Peak Particle Velocity at: - X-axis - Y-axis - Z-axis · Peak Vector Sum · Vertical Vibration Peak Velocity	Guidelines for Environmental Vibration Limits and Control, Third Edition, Department of Environment #				
OPERATIONAL PHASE						
Ground movement & Groundwater level	To be proposed by engineer	Guidelines on Slope Maintenance in Malaysia by JKR	To be proposed by engineer	√	Not Applicable	√

- ✓ The proposed Project is a residential development which falls under **Activity 13: Development in Slope Area** (Development or land clearing less than 50 per cent of an area with slope greater than or equal to 25° but less than 35°) of the First Schedule of the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment Order 2015) made under sub-section 34A(1) of the Environmental Quality Act 1974 [Act 127] (DOE, 2015).

- ✓ Based on the "Kuala Lumpur City Plan 2020", the proposed development aligns with the designated land use for housing, ensuring consistency with the current zoning classification of the site.

- ✓ The Project Site features hilly and steep terrain covered by secondary vegetation and dense undergrowth, with no evidence of human habitation. It is surrounded by residential and commercial areas, located near major roads, while the nearest Environmental Sensitive Area, Bukit Arang, is approximately 570 metres away.

- ✓ Construction may lead to significant issues such as soil erosion, pollution, noise, air and traffic impacts.

- ✓ Earthworks conducted in single stage without mitigation may violate compliance limits, threatening local water quality.

- ✓ Particulate matter (PM10 and PM2.5) from construction dust is a primary pollutant of concern.

- ✓ Construction activities will likely increase noise levels, requiring compliance with permissible limits.

- ✓ Construction traffic is expected to cause congestion, particularly during peak hours. The completed development will increase traffic, posing safety risks.

- ✓ Key recommendations include strict adherence to the Land Disturbing Pollution Prevention and Mitigation Measures (LD-P2M2), Approved Engineering Plans and Best Management Practices (BMPs) to mitigate identified impacts during the construction phase.

- ✓ In conclusion, success of the residential development in integrating with the surrounding areas will contribute to the social acceptability of the proposed Project. With strict commitment and supervision on-site, it is anticipated that the development can progress within the framework of sustainable development.