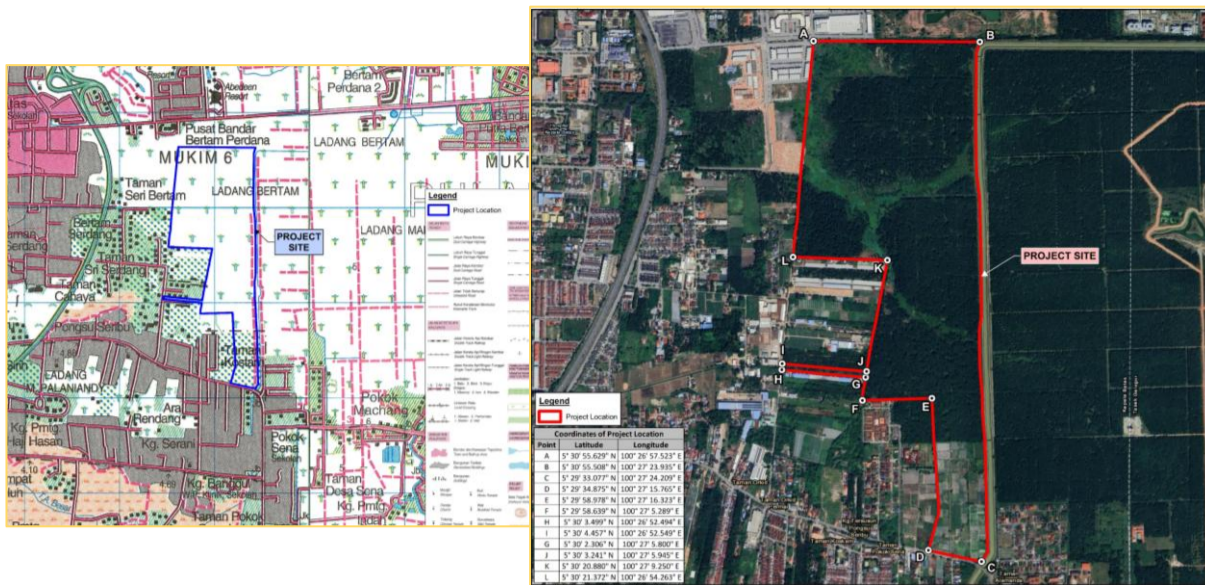


EXECUTIVE SUMMARY

1.0 INTRODUCTION



- The Project site comprises three (3) land parcels, namely Lot 25438, Lot 421, and Lot 20532 (formerly Lot 2587).
- Perda Ventures Incorporated Sdn. Bhd. (PVISB) has appointed Scientex Bertam Sdn. Bhd. (SBSB) as the project proponent to undertake the development of all three parcels.
- The Project Proponent intends to develop the site as a mixed-use development comprising residential units and commercial components, supported by the necessary infrastructure and utility provisions.

2.0 PROJECT PROPONENT & QUALIFIED PERSON



PROJECT PROPONENT:
 SCIENTEX BERTAM SDN. BHD.



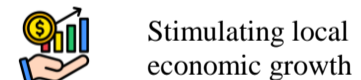
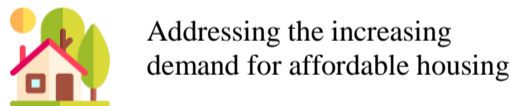
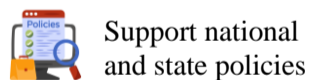
ENVIRONMENTAL CONSULTANT:
 ES ECO SMART SDN BHD

3.0 LEGISLATIVE REQUIREMENTS

Schedule	Prescribed Activity	Project Component
First Schedule	Activity 16: <u>Housing</u> Housing development covering an area of 50 hectares or more	The proposed project involves a housing development covering a total area of 144.217 hectares (356.367 acres).
	Activity 18: <u>New Township</u> Construction of new township consisting of 2,000 housing accommodation units or more or covering an area of 100 hectares or more.	The proposed project comprises the construction of 4,091 units of <i>Rumah Mutiaraku Jenis D</i> , covering an area of 144.217 hectares (356.367 acres).
	Activity 14 (c)(i): <u>Waste Treatment and Disposal</u> Sewage: Construction of sewage treatment plant with 20,000 population equivalent or more.	The proposed development includes a Sewage Treatment Plant (STP) with an ultimate capacity of 22,500 PE. However, at the time of preparing this EIA report, the detailed design and technical information for the STP are not yet available. Therefore, the STP will be subject to a separate EIA submission once the design is completed.

4.0 STATEMENT OF NEED

The need to develop the project is predicated on several strategic factors as follows:

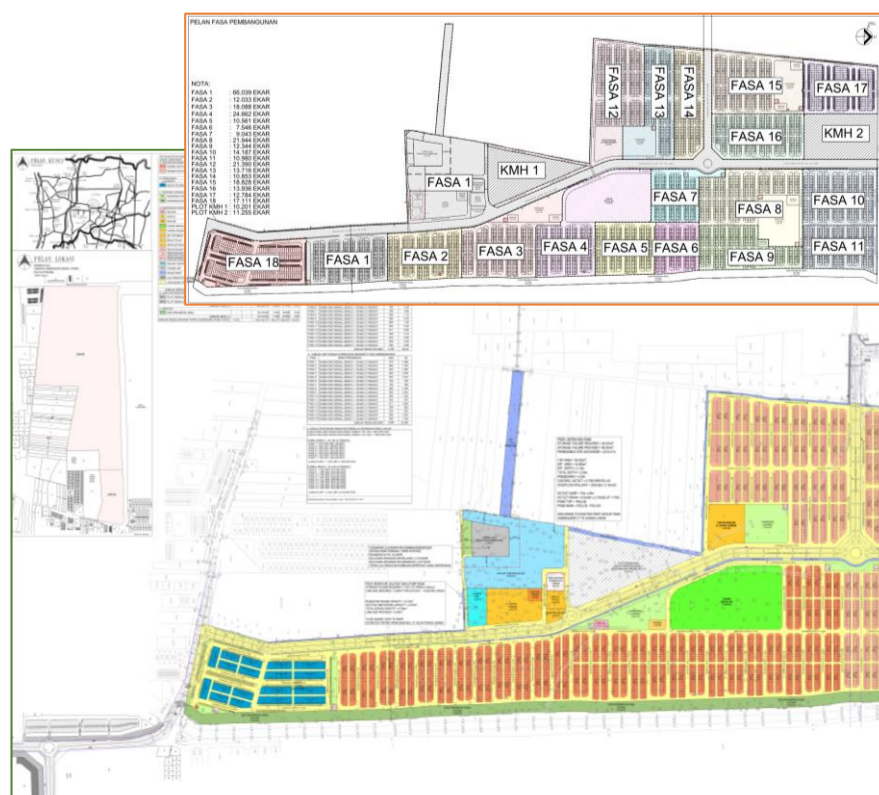


5.0 PROJECT DESCRIPTION

BREAKDOWN OF LAND COMPONENTS

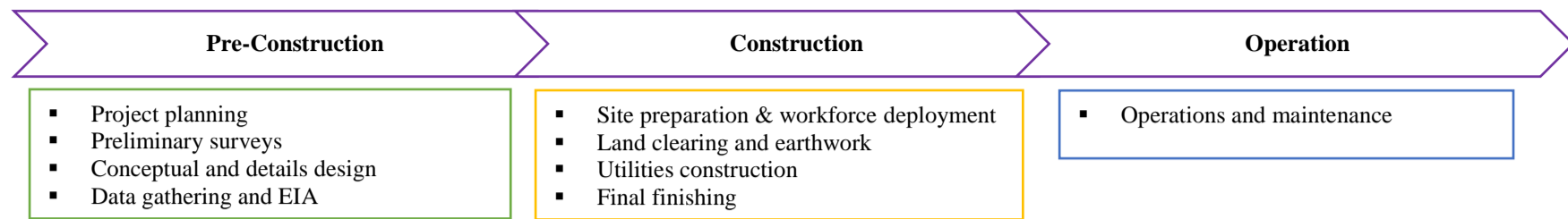
JADUAL GUNATANAH	UNIT	%	MPS	HEKTAI	EKAR	%
A. PERUMAHAN MAMPU MILIK (RUMAH MUTIARAKU)						
A.1 RUMAH MUTIARAKU JENIS D (18' x 60') - 2 TINGKAT	1,763	43.05	171,928.63	17,193	42,484	11.92
A.2 RUMAH MUTIARAKU JENIS D (18' x 60') - 2 TINGKAT	2,332	56.95	259,047.35	25,905	64,012	17.96
Jumlah Kecil A	4,095	100.00	430,975.98	43,097	106,496	29.88
B. PERNIAGAAN						
B.1 KEDAI PEJABAT (22x70') - 2 TINGKAT	308	100.00	46,801.89	4,680	11,565	3.25
Jumlah Kecil B	308	100.00	46,801.89	4,680	11,565	3.25
C. KAWASAN LAPANG & LANSKAP						
C.1 KAWASAN LAPANG	-	-	76,619.12	7,662	18,933	5.31
C.2 KAWASAN HIJAU	-	-	8,130.13	0.813	2,009	0.56
Jumlah Kecil C	-	-	84,749.25	8,475	20,942	5.88
D. KEMUDAHAN AWAM DAN INFRASTRUKTUR						
D.1 DEWAN	3	-	3,257.72	0.326	0.805	0.23
D.2 SURAU	3	-	4,328.09	0.433	1,099	0.30
D.3 MASJID	1	-	12,197.22	1.220	3,014	0.85
D.4 TAPAK SEKOLAH RENDAH	1	-	50,375.26	5.038	12,448	3.49
D.5 TAPAK PASAR AWAM	1	-	13,763.36	1.376	3,401	0.95
D.6 SETOR MBSP	3	-	1,545.90	0.155	0.382	0.11
D.7 BALAI POLIS	1	-	2,683.07	0.268	0.663	0.19
D.8 PERPUSTAKAAN	1	-	1,764.43	0.176	0.436	0.12
D.9 PPU PENCAWANG PEMBAGI UTAMA (45M x 45M)	1	-	2,573.80	0.257	0.636	0.18
D.10 PENCAWANG ELETRIK (JENIS PLOTT 20M x 50M)	3	-	109.27	0.011	0.027	0.01
D.11 PENCAWANG ELETRIK (JENIS PLOTT 10.2M x 25.2M)	10	-	2,306.71	0.231	0.570	0.16
D.12 KOLAM TUKUNGAN AIR	-	-	41,654.29	4.165	10,293	2.89
D.13 TANGKI AIR	1	-	5,819.38	0.582	1,438	0.40
D.14 RIZAB PARIT	-	-	30,452.59	3.045	7,525	2.11
D.15 LOJI RAWATAN KUMBAHAN	1	-	9,542.49	0.954	2,358	0.66
D.16 CADANGAN RIZAB JALAN / LORONG	-	-	534,120.24	53,412	131,984	37.04
Jumlah Kecil D	30	-	716,491.81	71,649	177,049	49.68
Jumlah Kecil D	4,433	-	1,279,018.93	127,907	316,052	88.69
E. LANSKAP PEMAJUAN MASA HADAPAN						
E.1 PLOT KEMAJUAN MASA HADAPAN 1	-	-	41,281.98	4.128	10,201	2.86
E.2 PLOT KEMAJUAN MASA HADAPAN 2	-	-	45,547.36	4.555	11,255	3.16
Jumlah Kecil E	-	-	86,829.34	8,683	21,456	6.02
F. SERAHAN						
F.1 ZON PENAMPAN (PBA)	-	-	76,319.66	7.632	18,859	5.29
Jumlah Kecil F	-	-	76,319.66	7,632	18,859	5.29
Jumlah Keseluruhan Tapak Cadangan (A+B+C+D+E)	4,433	-	1,442,167.67	144,217	356,367	100.00

PHASING PLAN



LAYOUT PLAN

6.0 PROJECT ACTIVITIES



7.0 EXISTING ENVIRONMENT

Landuse

- With reference to the *Draf Rancangan Tempatan Seberang Perai 2030* (DRTSP2030), which was approved by the State Planning Committee (SPC) Bil. 1/2026 on 29 January 2026 and subsequently endorsed on 20 February 2026, the Project site is located within Blok Perancangan BPU 5 – Kepala Batas identifying the land use of the Project as *Perumahan Terancang dan Pengangkutan*.



Geology and Soil

- The proposed site area is predominantly underlain by Quaternary deposits comprising undifferentiated alluvium. These deposits generally consist of unconsolidated to semi-consolidated materials such as clay, silt, sand, and gravel, which are typically associated with fluvial and coastal depositional environments. Soil series project site is underlain by alluvial soils of intermediate and higher terraces, specifically classified under the Sogomana–Sitiawan–Manik soil association.



Hydrology

- The Project site is located within a defined river catchment that ultimately drains into Sungai Perai. Based on the hydrological mapping, the Project falls within a catchment area of approximately ±68.09 km². The drainage pattern within the catchment is characterised by a network of natural rivers and man-made drains, with surface runoff from the Project area first flowing into Sungai Lokan before discharging into Sungai Perai downstream. The nearest Water Treatment Plant (WTP) is the Sungai Dua WTP, located approximately 5.15 km downstream of the Project site



Water Quality

- Eight (8) water samples were taken from surface water for baseline analysis. 1 location (W5) was dry during the sampling conducted.
- According to the analysis, W4 is classified as clean and W6 as ‘Polluted’, while the remaining sampling points are ‘Slightly Polluted’. Most stations are classified under Class II, except for W7 and W8, which are classified under Class III.



Air Quality

- Ambient Air : Five (5) locations were selected for ambient air sampling. Baseline result for PM₁₀, PM_{2.5}, SO₂, NO₂, CO and O₃ were all within the limits specified in the 2020 MAAQS (Malaysian Ambient Air Quality Standards).
- Odour : Five (5) locations were selected for odour sampling. Overall, baseline results indicate that odour was more noticeable near agricultural areas and drainage sources, particularly during the night when higher intensities were recorded.



Noise and Vibration

- Noise : Five (5) sampling locations, the analysis compared with the Second Schedule of Guidelines for Environmental Noise Limits and Control, Third Edition, 2019 (Reprint 2021). The noise levels (LAeq) at all monitoring points were within the DOE permissible limits during both daytime and nighttime, except at N5, where the results were slightly higher than the prescribed limit.
- Vibration : Five (5) sampling locations, all results are well within the Third Schedule – Recommended Vibration Limits for Human Response and Annoyance from Intermittent Vibrations of Guidelines for Environmental Limits and Control, 3rd Edition (DOE, 2021).



Ecology

- Flora : The project area mainly consists of oil palm plantation. Vegetation is dominated by shrubs, ferns, and grasses, with a few scattered trees. No protected, threatened, or endemic plant species were recorded.
- Fauna: Bird surveys recorded 20 species from 14 families, indicating moderate biodiversity. Most species (95%) are classified as Least Concern, with only the Streaked Bulbul (*Ixos malaccensis*) listed as Near Threatened.



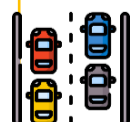
Socio-Economy

- The survey was conducted using a stratified random sampling technique based on the respondents’ residential areas. A total of 351 respondents were involved.
- The majority of respondents (77.8%) expressed explicit support for the development, citing the critical need for affordable housing to meet future demand. Meanwhile, 8.9% expressed conditional support, 10.2% remained neutral, and the remaining 3.1% opposed the Project. Their primary concerns involve potential population surges, resulting in traffic congestion and pressure on existing public facilities, particularly educational institutions.










Traffic

- The project site is accessible via Jalan Pongsu Seribu.
- Existing junction performance analysis was conducted for all the thirteen (13) main junctions during morning and evening peak hours. The majority of the junctions were assessed to operate at LOS A and B, with the exception of the Jalan Tun Hamdan Sheikh Tahir – Persiaran Dagangan – Jalan Bertam junction, which operates at LOS D and F.



8.0 POTENTIAL IMPACT & MITIGATION MEASURES

	Construction Phase	Operation Phase
 Soil Erosion & Sedimentation		
IMPACT	<ul style="list-style-type: none"> Soil erosion due to the removal of vegetation cover Land clearing and associated earthworks Impacts related to the placement of fill material 	<ul style="list-style-type: none"> Potential localized flooding or drainage issues if stormwater systems are inadequate Maintenance-related pollution
MITIGATION	<ul style="list-style-type: none"> Install sediment control measures on-site prior to the commencement of earthworks Apply erosion control techniques, including temporary bare areas protection, turfing, and compaction Install sediment control features, such as sediment basins, silt fences, and wash troughs Conduct regular inspection and maintenance of Best Management Practices (BMPs) 	<ul style="list-style-type: none"> Conduct regular and systematic walk-over surveys Ensure turfing and stabilization measures are properly maintained Regular maintenance of proper drainage infrastructure (e.g., stormwater pipes, culverts, retention ponds) to manage runoff and prevent localized flooding. Implement routine inspection and maintenance schedules for drainage systems to prevent blockages and pollution.
 Hydrology & Water Quality		
IMPACT	<ul style="list-style-type: none"> Increased suspended solids and turbidity levels Improper maintenance of sanitation facilities 	<ul style="list-style-type: none"> Leaks or failures in the sewage and sullage systems Generation of domestic and municipal wastes, including plastics and food waste, by residents may potentially contribute to the deterioration of the water quality of Sg. Lokan.
MITIGATION	<ul style="list-style-type: none"> Prior to the commencement of earthworks, temporary perimeter earth drains and sediment basins will be constructed to effectively manage surface runoff and control sediment discharge. Regular water quality monitoring will be conducted to ensure compliance with environmental standards. 	<ul style="list-style-type: none"> Proper and regular maintenance of the proposed sewage system to ensure compliance with the required standards. Treated sewage within the project site shall comply with the Environmental Quality (Sewage) Regulations 2009 at all times. Regular water quality monitoring will be conducted to ensure compliance with environmental standards.
 Air Quality		
IMPACT	<ul style="list-style-type: none"> Dust generated during earthworks may cause disruptions or health concerns for nearby residents. 	<ul style="list-style-type: none"> Increase in emissions from vehicles belonging to new residents and visitors.
MITIGATION	<ul style="list-style-type: none"> The application of water spraying, particularly during dry weather conditions, will help minimize dust emissions and mitigate their impact. Vehicles shall be regularly serviced and properly maintained Engine idling should be minimised when vehicles are stationary 	<ul style="list-style-type: none"> Landscaping and green coverage as much as possible in the area
 Noise & Vibration		
IMPACT	<ul style="list-style-type: none"> Heavy construction vehicle movement and activities 	<ul style="list-style-type: none"> Noise and vibration due to the movement of vehicles.
MITIGATION	<ul style="list-style-type: none"> Ensure all equipment and machinery are properly maintained to minimize noise and vibration emissions. Establish a system for the public to easily register complaints throughout the construction period, ensuring timely responses to concerns. 	<ul style="list-style-type: none"> It is anticipated that noise and vibration will be minimal during the operational phase, and therefore, no additional mitigation measures will be necessary.
 Ecology		
IMPACT	<ul style="list-style-type: none"> The use of heavy machinery will cause noise pollution and scare native wildlife 	<ul style="list-style-type: none"> Human-wildlife conflict
MITIGATION	<ul style="list-style-type: none"> Regular monitoring on ecology-related issues No alien species shall be introduced within the project area 	<ul style="list-style-type: none"> Any sightings and potential human-wildlife conflict should be reported to PERHILITAN for further action.
 Socio-Economy		
IMPACT	<ul style="list-style-type: none"> Social tensions with an increase in foreign workers 	<ul style="list-style-type: none"> Lead to various forms of pollution which might impact the communities if not properly regulated and managed.
MITIGATION	<ul style="list-style-type: none"> To eliminate misunderstandings, the incoming workforce must be briefed/updated on the local history, culture, beliefs, and traditions 	<ul style="list-style-type: none"> Engage with local communities in decision-making processes to address their concerns and enhance transparency.
 Traffic		
IMPACT	<ul style="list-style-type: none"> Increase in heavy vehicles Might elevate the likelihood of an accident. 	<ul style="list-style-type: none"> Lead to increased traffic congestion and a decrease in road level of service.
MITIGATION	<ul style="list-style-type: none"> Warning signages and adequate lighting Traffic and logistics management plan 	<ul style="list-style-type: none"> Implement road upgrades, particularly at impacted junctions, to alleviate congestion and maintain optimal road performance.

9.0 ENVIRONMENTAL MONITORING

TYPES OF MONITORING

IM – Impact Monitoring

- Monitoring conducted to assess the actual environmental impacts resulting from project activities and to verify predicted impacts.

CM – Compliance Monitoring

- Monitoring carried out to ensure compliance with environmental standards, regulatory requirements, and approval conditions.

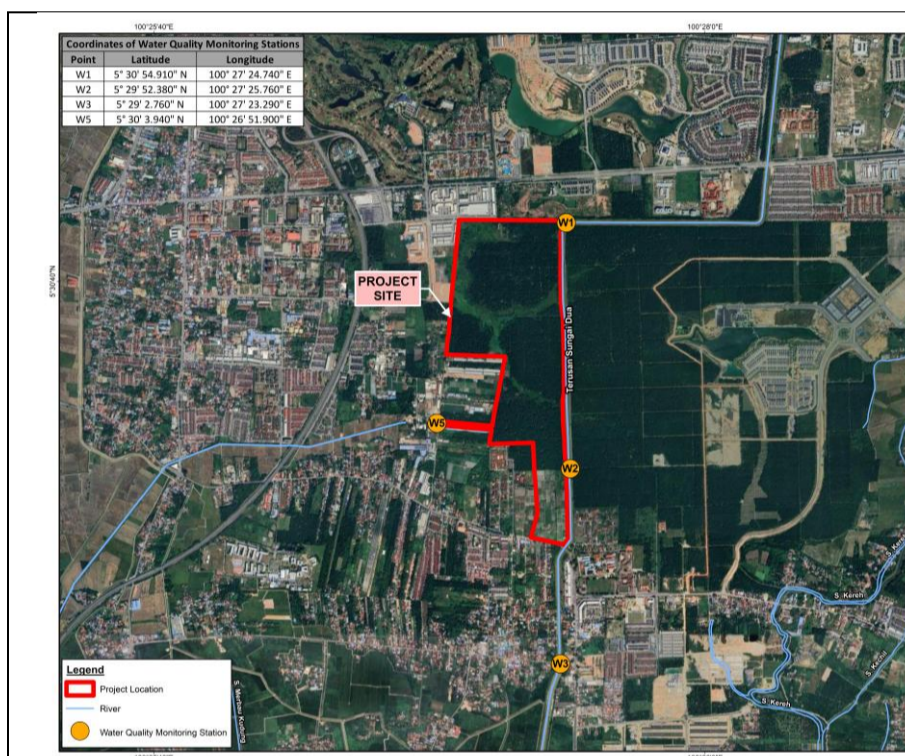
PM – Performance Monitoring

- Monitoring undertaken to evaluate the effectiveness of mitigation and control measures implemented under the EMP.

LD-P2M2 MONITORING

Performance Monitoring (PM)	Monitoring Locations	Frequencies
Silt Trap	The locations referred to the LD-P2M2 attachment	2/3 of the height of silt marker After 12.5mm of heavy rainfall
Check dam	The locations referred to the LD-P2M2 attachment	After 12.5mm of heavy rainfall
Silt Fence	The locations referred to the LD-P2M2 attachment	Twice per week and every after a major event (within 24 hours)
Sand Bag	The locations referred to the LD-P2M2 attachment	Twice per week and every after a major event (within 24 hours)
Temporary drain	The locations referred to the LD-P2M2 attachment	Twice per week and every after a major event (within 24 hours)

ENVIRONMENTAL MONITORING LOCATIONS



WATER QUALITY



AIR, NOISE & VIBRATION

10.0 CONCLUSION

- ✓ This EIA Study demonstrates that the Project can be implemented in an environmentally sustainable manner through the adoption of the recommended mitigation measures.
- ✓ Following the EIA, the preparation of an Environmental Management Plan (EMP) is mandatory. The EMP will provide a structured framework to minimize potential adverse environmental impacts through continuous monitoring, reporting, and strict adherence to all proposed mitigation measures.
- ✓ The Project Proponent is fully committed to complying with all relevant laws, regulations, and guidelines throughout the Project's lifecycle, ensuring that environmental protection and sustainability remain a top priority.