

RINGKASAN EKSEKUTIF

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LAPORAN KAJIAN PENILAIAN IMPAK ALAM SEKELILING (EIA) BAGI CADANGAN PEMBANGUNAN BERCAMPUR DI ATAS LOT 5119, PT 53438, PT 53439, PT 53440, PT 53441, PT 53443 AND PT 53445, MUKIM LABU, DISTRICT OF SEREMBAN, NEGERI SEMBILAN DARUL KHUSUS.

PENGENALAN KEPADA CADANGAN PROJEK



PENGERAK PROJEK DAN PEMAJU

N9 MATRIX DEVELOPMENT SDN. BHD.
WISMA MATRIX, NO. 57, JALAN TUN DR. ISMAIL
70200 SEREMBAN, NEGERI SEMBILAN DARUL KHUSUS.
TEL.: 06-764 2688; FAX.: 03-764 6288
ATTN: MS. TAN SZE CHEE



KEADAAN SEMASA

- Tapak Projek adalah terdiri daripada ladang kelapa sawit iaitu sebahagian daripada Ladang Labu pada pertengahan tahun 2001 & 2011-an.
- Tiada penghuni/petempatan di dalam Tapak Projek. Pembinaan Jalan Nilai-Labu-Enstek (NLE) kini sedang dijalankan di bahagian tengah Tapak Projek.



PERUNDING KAJIAN EIA

EUROPASIA ENGINEERING SERVICES SDN. BHD.
No. 63A-2 & 65-2, Petaling Utama Avenue,
Jalan PJS1/50, Taman Petaling Utama, 46150
Petaling Jaya, Selangor Darul Ehsan
Attn. : Puan Nur Arina Muhamad Affandi
(CEP – C0101)
(Ketua Kajian EIA)



AKSESIBILITI

Tapak Projek boleh diakses dari Lebuhraya Utara-Selatan melalui Jalan Nilai-Pajam (Jalan Persekutuan 3265) dan membelok ke Jalan Nilai-Labu-Seremban (Jalan Persekutuan 362) dan Jalan Felda Sendayan (Jalan Persekutuan 1265), laluan estet Ladang Labu sebelum memasuki Tapak Projek yang dicadangkan.



BIDANG KUASA

Majlis Bandaraya Seremban (MBS)



KAWASAN PROJEK

- Jumlah kawasan pembangunan = 1,382.21 ekar (559.26 ha)

ASPEK PERUNDANGAN



AKTIVITI YANG DITETAPKAN

a) Aktiviti Jadual Pertama: No 17: Pembangunan Estet Industri

Pembangunan estet perindustrian yang meliputi Kawasan seluas 20 hektar atau lebih.

- Pembinaan lot-lot perindustrian dalam lingkungan keluasan 656.79 ekar (265.79 ha) daripada jumlah kawasan pembangunan.

b) Aktiviti Jadual 1 No. 16: Perumahan

Pembangunan perumahan yang meliputi kawasan seluas 50 hektar atau lebih.

- Pembinaan perumahan dan komersial seluas 256.67 ekar (103.87 ha) daripada tapak projek yang merangkumi 18.57% daripada jumlah kawasan pembangunan.

c) Aktiviti Jadual 1 No.18: Bandar Baharu

Pembinaan bandar baharu yang terdiri daripada 2,000 unit kediaman atau lebih yang meliputi kawasan seluas 100 hektar atau lebih

- Pembinaan unit kediaman sebanyak 2,895 unit.



KESESUAIAN PENZONAN

- Berdasarkan Rancangan Tempatan Malaysia Vision Valley 2045 (RT MVV 2045), cadangan pembangunan adalah terletak di dalam Blok Perancangan (BP) 7- Labu, dan adalah bersesuaian dengan unjuran penggunaan tanah untuk zon pembangunan bercampur (iaitu perindustrian, komersial dan kediaman) .

Lokasi Strategik & Aksesibiliti yang Baik

1

Tapak yang dicadangkan mempunyai tahap aksesibiliti yang tinggi kerana dalam lingkungan jalan-jalan sedia ada iaitu:-

- Dari Utara - Lebuhraya Utara Selatan (PLUS) → Jalan Nilai (FT 3265) → Jalan Labu (FT 362) → Jalan Felda Sendayan (FT 1265) → Tapak Projek.

Pada masa depan, akses ke dalam cadangan pembangunan perindustrian boleh melalui Jalan Nilai-Labu-Enstek (NLE) yang sedang dibina.

Penggunaan Guna Tanah

2

- Pembangunan perindustrian ini akan meningkatkan keadaan ekonomi tanah.
- Tapak projek yang dicadangkan akan mengoptimumkan penggunaan tanah, yang kini didominasi dengan ladang kelapa sawit dalam Ladang Labu.
- Cadangan pembangunan itu akan menjadi pelengkap kepada permintaan ekonomi untuk aktiviti perindustrian di kawasan itu.
- Pembangunan tersebut secara tidak langsung akan meningkatkan nilai hartanah di kawasan sekeliling dan mewujudkan lebih banyak peluang pekerjaan.

Pertimbangan Kawasan Sensitif Alam Sekitar

3

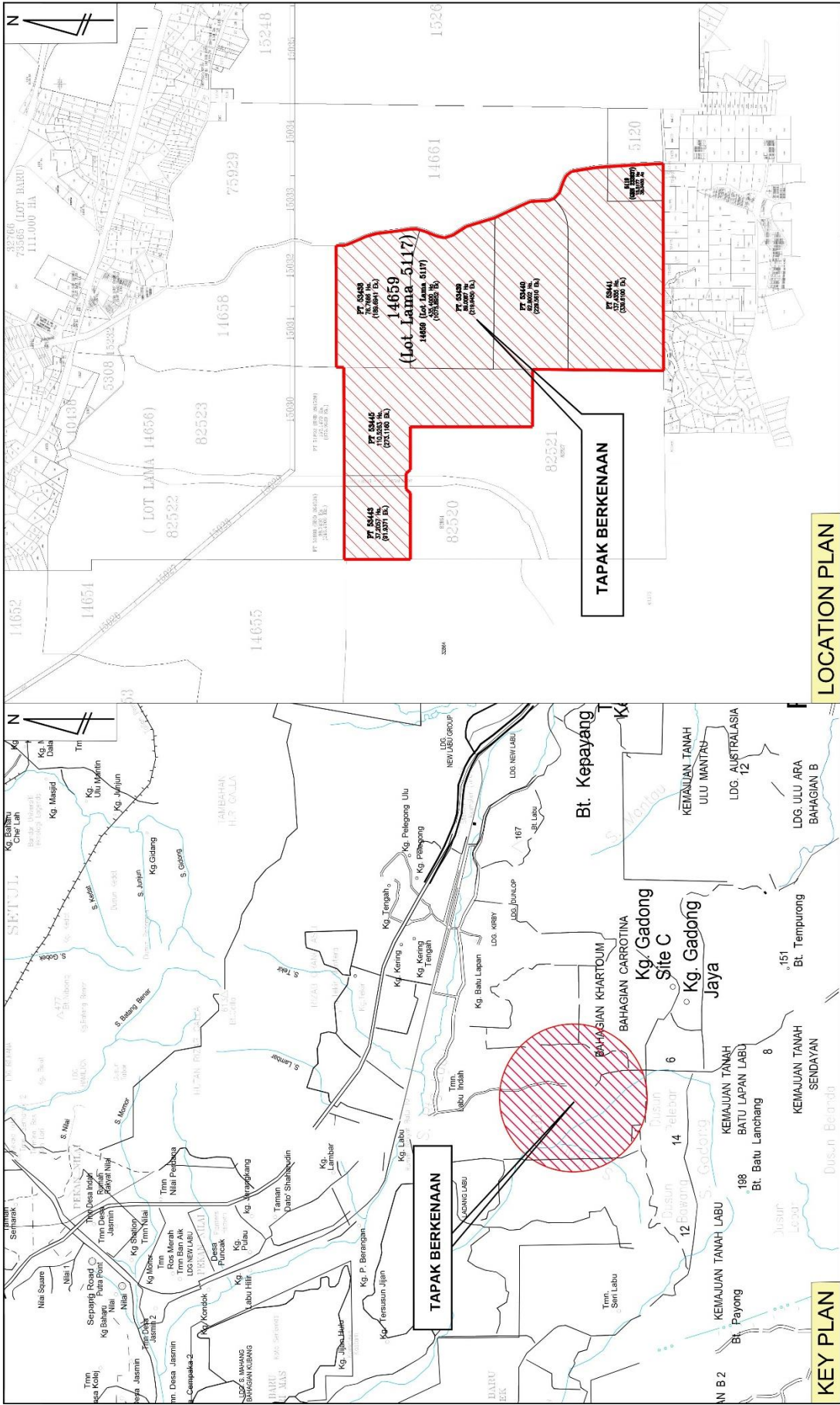
- Tapak Projek tidak terletak dalam Kawasan yang dikenal sebagai Kawasan Sensitif Alam Sekitar (ESA) (RT MVV 2045).
- Dari sudut ekologi, persekitaran biologi sedia ada di Tapak Projek adalah terhad kepada komposisi flora dan fauna yang serupa dengan estet pertanian dan pokok renek di Semenanjung Malaysia. Tapak Projek yang dicadangkan telah dikacau-ganggu kerana tanah tersebut telah lama ditukar kepada ladang kelapa sawit. Oleh itu, hanya spesies hidupan liar tertentu yang mempunyai adaptasi tinggi yang mampu hidup di luar habitatnya.
- Cadangan pembangunan termasuk konsep pembangunan kawasan hijau dan zon penampungan yang sesuai antara kawasan perindustrian dan persekitarannya. Ini adalah kondusif untuk kehidupan yang sihat dan seterusnya menambah baik/mengurangkan jangkaan pencemaran bandar (iaitu udara, bunyi, air, dll.) yang terjana.
- Aktiviti industri yang dicadangkan dalam Tapak Projek adalah selaras dengan kategori industri yang disenaraikan dalam Rancangan Tempatan Malaysia Vision Valley 2045.

Perkara Sokongan Lain

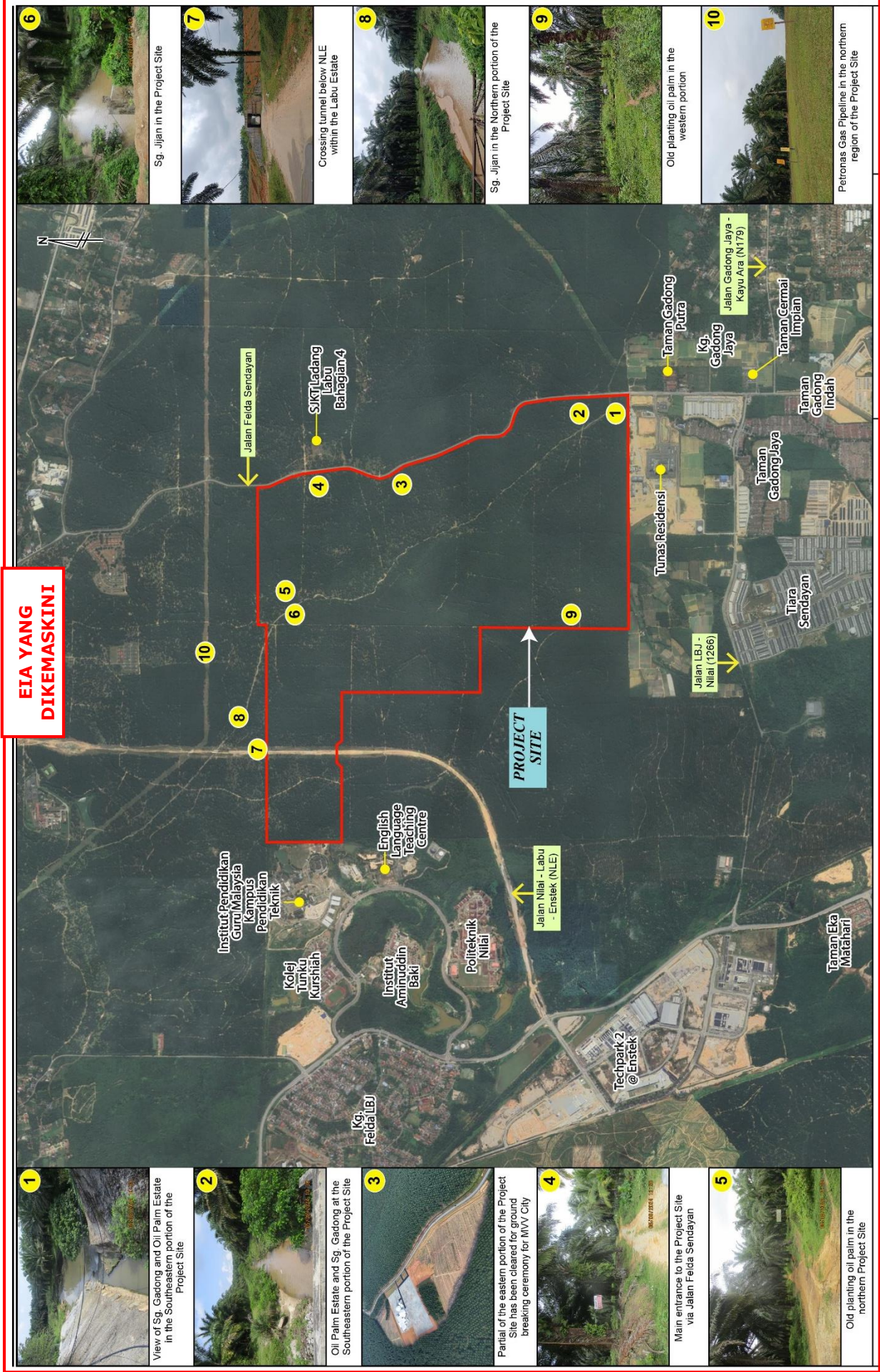
4

- Meluaskan pasaran pekerjaan daripada buruh (iaitu fasa pembinaan) kepada pejabat/kerani/pekerja kilang (iaitu fasa operasi perusahaan perindustrian).
- Meningkatkan hasil negeri dan negara melalui pengeluaran lesen dan kutipan cukai.
- Memberi peluang perniagaan kepada ahli perniagaan tempatan untuk menjalankan perniagaan dalam kawasan yang ditetapkan untuk tujuan perindustrian.

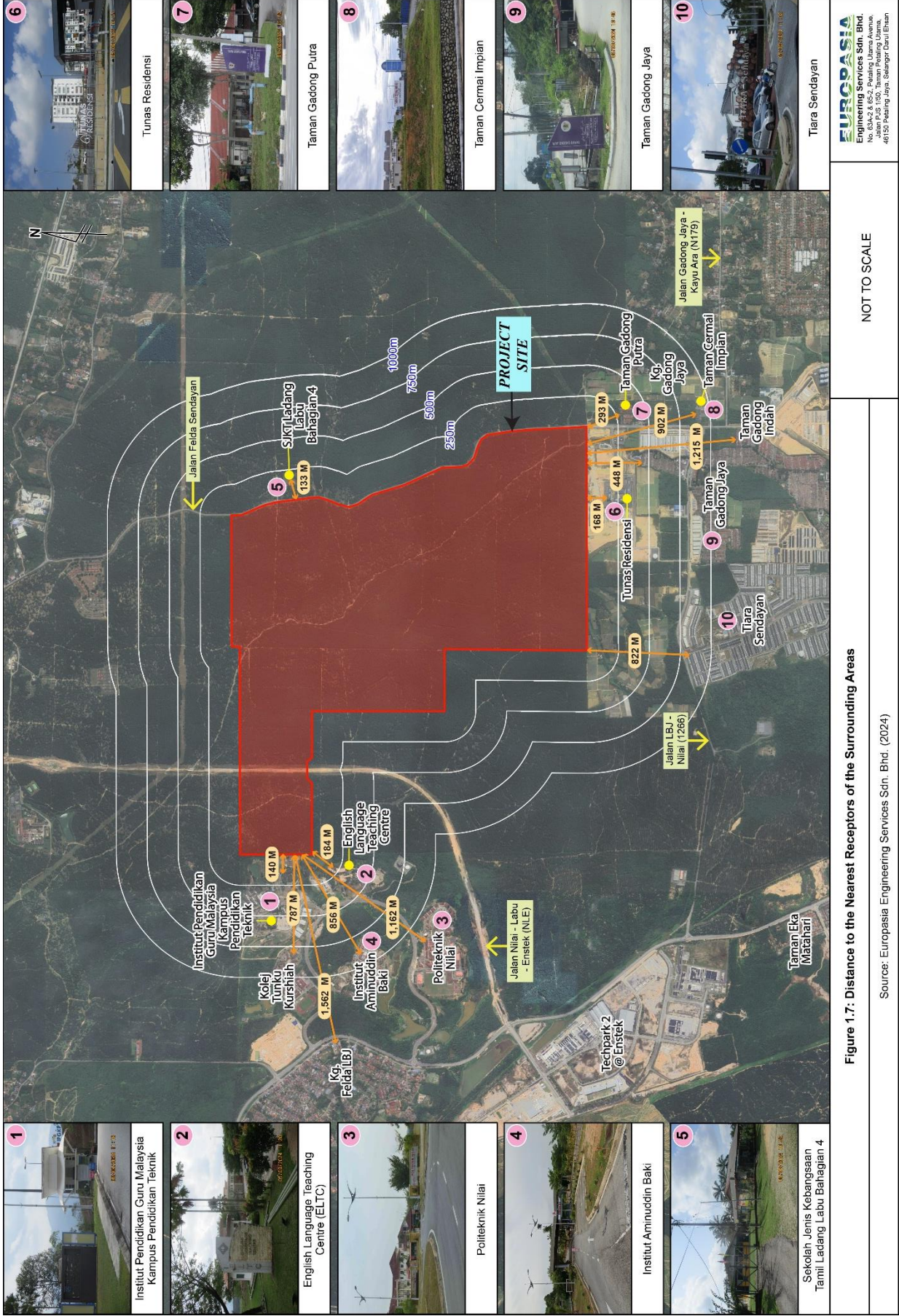
PELAN KUNCI DAN LOKASI TAPAK PROJEK



KEADAAN SEMASA DI TAPAK PROJEK DAN KAWASAN SEKELILINGNYA



RESEPTOR TERDEKAT DENGAN TAPAK PROJEK

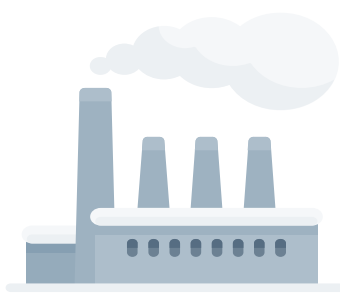


PENERANGAN PROJEK



KOMPONEN INDUSTRI

Matlamat utama pembangunan ini adalah untuk mewujudkan kawasan perindustrian untuk industri ringan hingga berat dengan keluasan 656.79 ekar (47.52%) untuk memenuhi keperluan pasaran semasa. **Pembangunan industri ini memfokuskan kepada industri ringan, sederhana dan berat** supaya dapat mengurangkan pencemaran tanah, udara dan air ke kawasan persekitaran.



165
610
66
1

- Lot Industri Individu
- Kilang Industri Semi-D
- Kilang Industri Berkembar
- Kuarter Pekerja Berpusat (CLQ)



KEDIAMAN

- Kawasan kediaman terdiri daripada kira-kira 110.1 ekar atau 7.97% daripada jumlah kawasan pembangunan.



2,894

Unit Kediaman

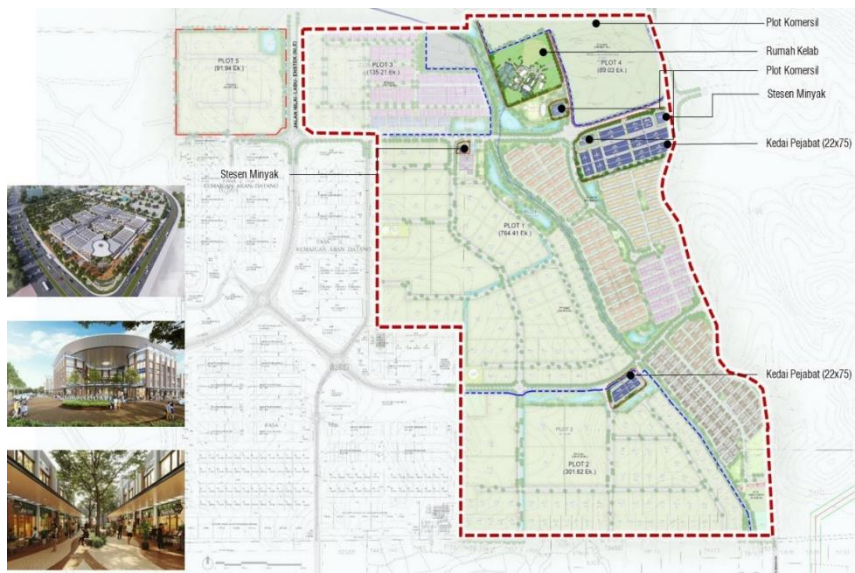


PENERANGAN PROJEK

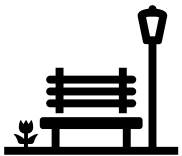


KOMERSIAL

Kawasan komersial terdiri daripada kira-kira 145.57 ekar atau 10.60 % daripada jumlah kawasan pembangunan.



- 361 2-tingkat kedai-ofis
- 1 Club house
- 9 Plot – plot komersial
- 2 Plot-plot Stesen Petrol



KEMUDAHAN

Kawasan kemudahan terdiri daripada kira-kira 13.42 ekar atau 0.97 % daripada jumlah kawasan pembangunan.



- 1 Sekolah Rendah
- 1 Tapak Kubur
- 2 Tapak Gerai
- 2 Surau
- 1 Dewan



UTILITI DAN INFRASTRUKTUR

- Kemudahan awam yang disediakan ialah Utiliti (iaitu Pencawang Elektrik TNB, tangki air, rumah pam dan loji pengolahan kumbahan) dan Infrastruktur (iaitu, rangkaian jalan raya dan sistem perparitan).
- Saliran tepi jalan direka bentuk untuk menampung kejadian ribut 1 dalam 10 tahun Purata Selang Ulangan (ARI) manakala longkang utama direka untuk menyalurkan aliran air sehingga 100 tahun ARI.
- Lapan (8) kolam takungan air yang telah dicadangkan adalah merangkumi keluasan tanah 68.86 ekar.



KAWASAN LAPANG/LANSKAP/ZON PENAMPAN/RIZAB CERUN

- Terdapat cadangan kawasan lapang, kawasan hijau, reservoir air, rizab air dan rizab jalan, dengan jumlah keluasan kawasan kira-kira 83.28 ekar (iaitu, 6.025% daripada Tapak Projek).



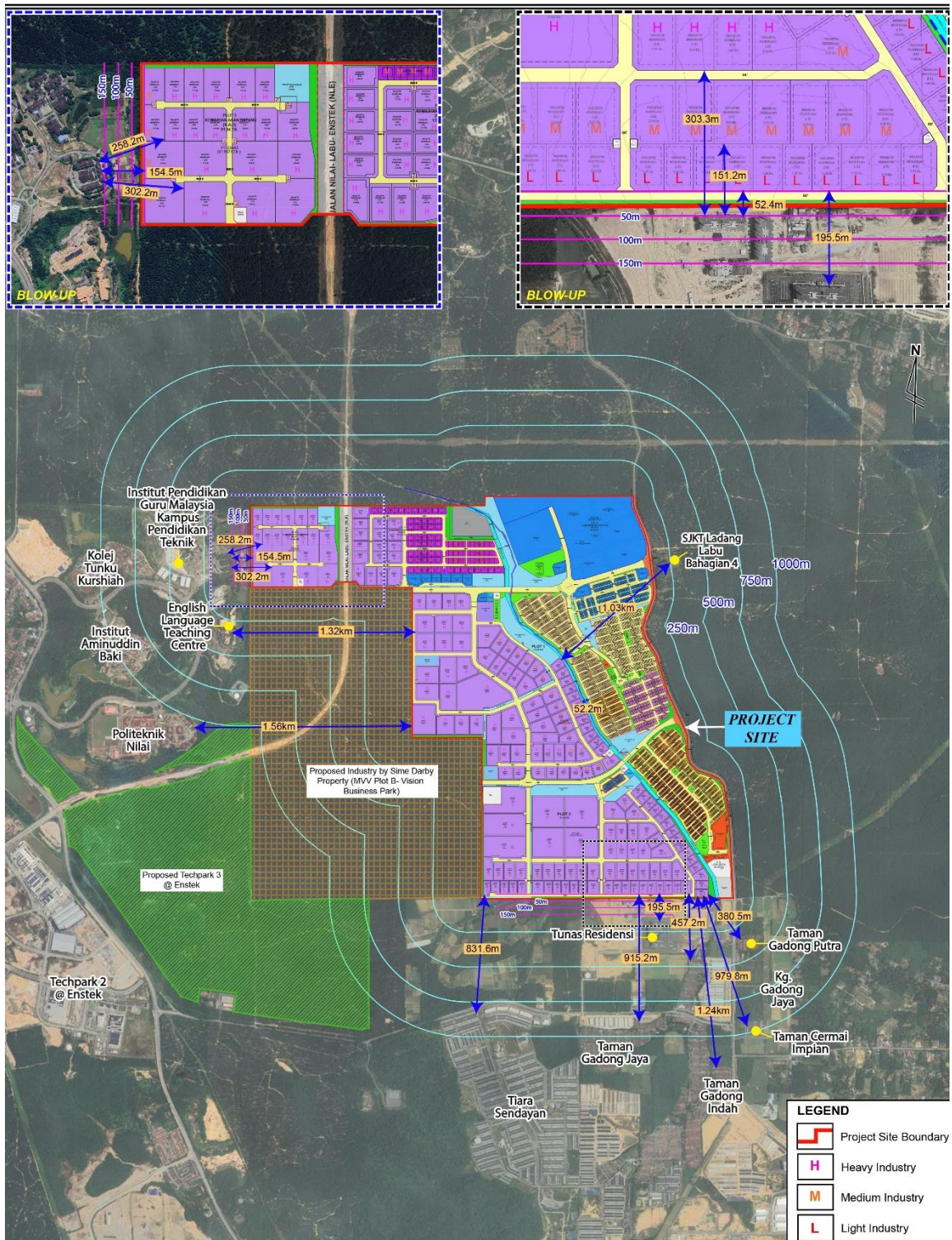
Nota : Untuk Cadangan Ilustrasi Sahaja

PENERANGAN PROJEK



PENYEDIAAN ZON PENAMPAN KEPADA RECEPTOR TERDEKAT

- Aktiviti perindustrian yang dicadangkan adalah Perindustrian Ringan ke berat.
- Zon penampian yang sesuai telah diambil kira mengikut *Environmental Essentials for Siting of Industries in Malaysia (DOE, 2017)*
- Ada beberapa institusi pendidikan sedia-ada (i.e. Institut Pendidikan Guru, *English Language Teaching Centre* dan Politeknik Nilai) serta Kawasan perumahan (i.e. Tunas Residensi, Tiara Sendayan, Taman Gadong Jaya dan Taman Gadong Putra) terletak di sekitar cadangan zon perindustrian.





CADANGAN JENIS INDUSTRI DAN AKTIVITI DALAM KAWASAN PEMBANGUNAN

- Penggerak projek hendaklah merujuk kepada beberapa keperluan dan garis panduan seperti Rancangan Tempatan Malaysia Vision Valley 2045 (RT MVV 2045), *Guidelines for the Environmental Essentials for Siting Industries in Malaysia* (DOE, 2017) dan *Malaysian Standard Industrial Classification (MSIC) 2008* untuk jenis-jenis aktiviti perindustrian yang dibenarkan beroperasi di dalam Tapak Projek.
- Aktiviti perindustrian pada masa depan di dalam Lot Perindustrian Individu hendaklah mengikut zon penanaman yang dibenarkan seperti yang dinyatakan dalam *Appendix B: Industries and Activities are Listed According to Malaysia Standard Industrial Classification 2008 (MSIC 2008) Version 1.0 (as of 2012)* dan *Guidelines for the Environmental Essentials for Siting of Industries in Malaysia* (DOE, 2017) Jabatan Alam Sekitar.
- Aktiviti perindustrian yang dicadangkan dalam Pembangunan MVV City ini adalah terhad hanya kepada kategori industri ringan ke berat yang selaras dengan Jadual Kelas Kegunaan Tanah BP 7- Labu di bawah Rancangan Tempatan Malaysia Vision Valley 2045 dan aktiviti industri yang dicadangkan dalam Tapak Projek hendaklah mengikut Kelas 3: Industri Ringan ke Sederhana kecuali Kelas 3(d) : Industri Berat/Am Kelas B.
- Selaras dengan cadangan yang diberikan dalam laporan EIA ini berhubung dengan jenis industri yang boleh dibenarkan beroperasi di Tapak ini, N9 Matrix Development Sdn. Bhd. hendaklah mengawal-selia pembeli melalui Perjanjian Jual Beli (SPA) mereka untuk memastikan hanya aktiviti perindustrian yang mematuhi cadangan ini dibenarkan.

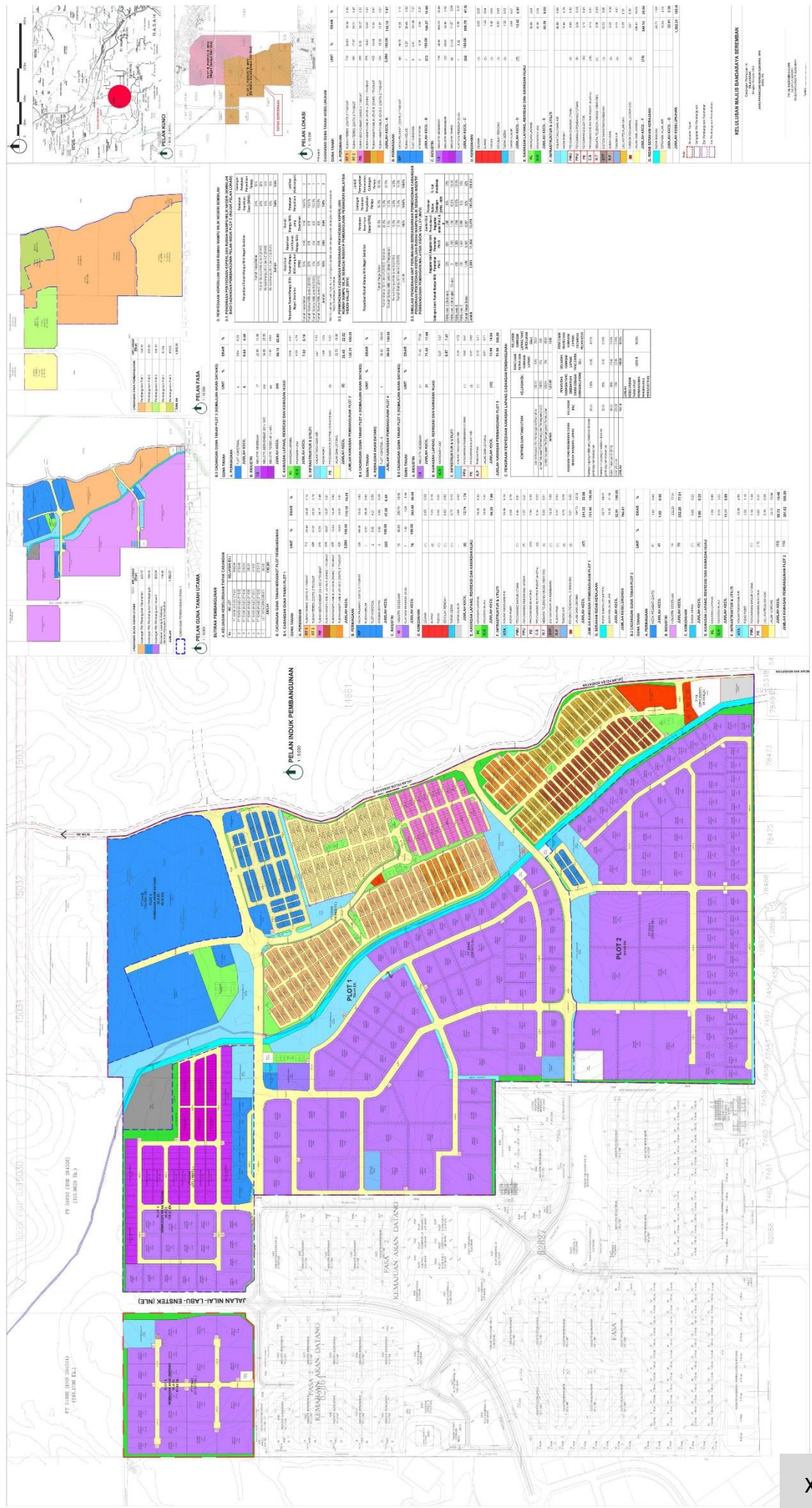


Skop pembangunan oleh N9 Matrix Development Sdn. Bhd. adalah untuk menyediakan pembangunan platform Lot Industri Individu, Kilang Semi-D dan Kilang Berkembar Sedia Bina dan kerja-kerja infrastruktur utama (iaitu jalan, tangki air, perparitan, loji pengolahan kumbahan).

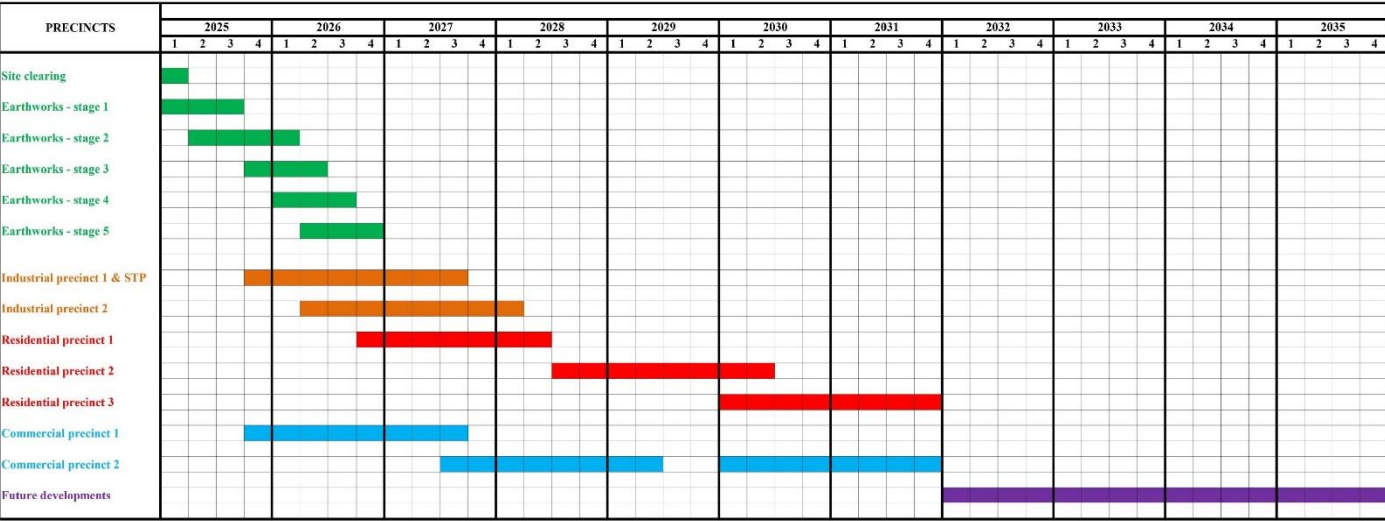
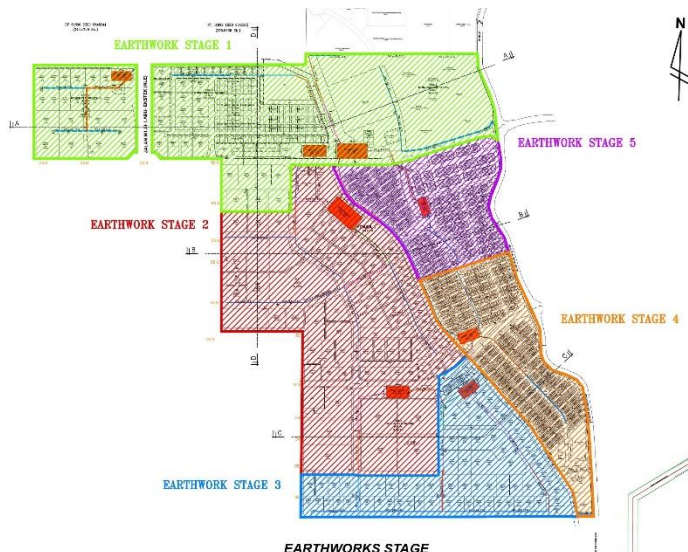
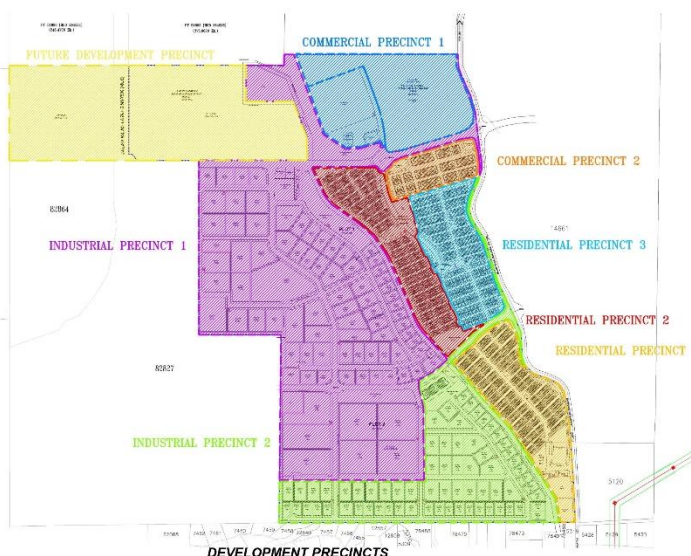


Lot-lot Perindustrian akan dijual untuk pembangunan dan operasi kilang individu.

CADANGAN PELAN SUSUNATUR TAPAK PROJEK



JADUAL PEMBANGUNAN PROJEK



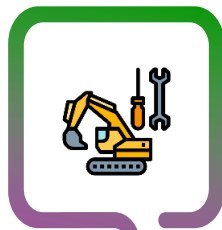
- Pembangunan Tapak Projek akan dilaksanakan dalam lima (5) fasa kerjetanah iaitu Fasa 1 hingga Fasa 5 dan Lapan (5) Fasa Pembangunan Presinst, i.e., Presinst industry 1 hingga Presinst 2, Presinst kediaman 1 hingga Presinst 3, Presinst komersial 1 hingga Presinst 2 dan Presinst Pembangunan akan datang dalam tempoh lebih kurang sebelas (11) tahun mulai Kwartar 1 2025 hingga Kwartar 4 2035.
- Kerja-kerja pembinaan bangunan, kerja-kerja mekanikal & elektrikal dan kerja-kerja infrastruktur hendaklah dijalankan sebaik sahaja kerja-kerja tanah siap dan platform telah diwujudkan.

AKTIVITI PROJEK



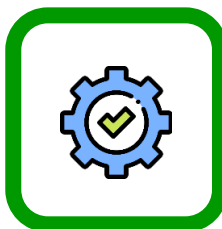
FASA PRA-PEMBINAAN

- ✓ Ukur Tanah
- ✓ Penyiasatan Bawah Tanah
- ✓ Survei Persepsi Sosial.
- ✓ Kajian Persekitaran
- ✓ Kajian Kejuruteraan



FASA PEMBINAAN

- Penyediaan Tapak dan Pelapangan Tumbuhan;
- Mobilisasi Pekerja dan Jentara ke Tapak Projek;
- Pejabat Tapak;
- Landskap dan Penanaman Semula;
- Penjanaan, Pengurusan dan Pelupusan Bahan Buangan.



FASA OPERASI

- Sistem Pembetulan untuk Pembangunan
- Penjanaan Sisa Pepejal
- Pelepasan Efluen Perindustrian
- Pelepasan Gas Perindustrian
- Penjanaan Sisa Buangan Terjadual oleh Industri
- Semua lot perindustrian yang dicadangkan mungkin mempunyai satu ruang simpanan IETS / Stack / Bahan Buangan Terjadual.

ANGGARAN PENGHASILAN & KEPERLUAN UTILITI

FASA PEMBINAAN	FASA OPERASI
	 Permintaan maksimum bekalan elektrik adalah 179,605 MVA.
	 Jumlah permintaan bekalan air adalah dianggarkan 29,075,440 L/hari.
Penjanaan air kumbahan ialah 22,500 L/hari (100 PE).	 Penjanaan air kumbahan dianggarkan sebanyak 15,750,000 L/hari berdasarkan kepada penjanaan air kumbahan tipikal 225 L/hari per kapita untuk 70,000 PE.
Penjanaan sisa pepejal ialah 100 kg/hari (100 PE).	 Penjanaan sisa pepejal adalah 81,900 kg/day.

PERSEKITARAN SEDIA ADA

PERSEKITARAN FIZIKAL



TOPOGRAFI

Tapak Projek terdiri daripada bentuk muka bumi yang beralun merangkumi lembah anak sungai Sg. Gadong dan Sg. Jijan dengan purata ketinggian antara 30m hingga 60m di atas purata paras laut.

Kawasan tertinggi (kira-kira 74.066m) adalah terletak di atas bukit di bahagian selatan Tapak Projek manakala kawasan paling rendah (kira-kira 26.193m) adalah terletak di dalam lembah anak sungai Sg. Jijan di sempadan utara Tapak Projek.



HYDROLOGI

Tapak Projek adalah terangkum dalam kawasan tadahan Sg. Langat dan terletak kira-kira 13 km di hulu Sg. Labu dan kira-kira 86 km di hulu muara Sg. Langat di Kuala Langat.

Bahagian selatan dan tengah Tapak Projek adalah disalurkan oleh anak sungai Sg. Gadong yang mengalir ke arah timurlaut dan bertemu dengan Sg. Jijan manakala bahagian utara tapak projek adalah disalurkan ke dalam Sg. Jijan sebelum mengalir masuk ke Sg. Labu. Semua air larian akan mengalir ke arah barat laut merentasi Jalan Nilai-Labu-Enstek (NLE) dan Kampung Jijan dan bertemu Sg. Chinchang berhampiran Taman Desa Merpati sebelum discaj ke dalam Sg. Labu. Air larian permukaan dari bahagian utara Tapak Projek juga mengalir ke Sg. Jijan sebelum dilepaskan ke Sg. Labu yang mengalir ke arah barat dan mengalir ke Sg. Langat berhampiran Lebuhraya Maju II (MEX II) yang sedang dalam pembinaan dan Plaza Tol KLIA Lebuhraya Utara-Selatan (NSE)

Terdapat sepuluh (10) muka sauk sedia ada di dalam kawasan tadahan Sg. Langat. Antara muka sauk ini, titik pengambilan air Loji Rawatan Air Sg. Labu, Salak Tinggi dan Labohan Dagang terletak kira-kira 14 km, 19 km dan 34 km di hilir Tapak Projek.



PEMETAAN TEREN GEOLOGI

Kawasan Kelas I (0° - 15°) meliputi kira-kira 99.77% daripada Tapak Projek yang dicadangkan. Tiada Kawasan Kelas III dan Kelas IV di dalam Tapak Projek.



GEOLOGI AM

Tapak Projek terdiri daripada *Main Range Granite* kecuali bahagian barat Tapak Projek yang terdiri daripada batuan metasedimen skis yang dikenali sebagai Formasi Jelevu Skis.



PENYIASATAN TANAH (SI)

Berdasarkan SI yang dijalankan Geodata Engineering Sdn. Bhd., empat (4) lubang gerudi penerokaan telah digerudi di dalam Tapak Projek.

Lapisan bawah tanah teratas terdiri daripada LUMPUR/KELODAK berpasir yang sangat lembut dengan nilai SPT-N antara 0 hingga 4 hentaman. Lapisan keras kebanyakannya terdiri daripada KELODAK dengan nilai SPT-N melebihi 50 hentaman ditemui selepas lubang gerudi melebihi 30.0m. Tiada batu dasar dijumpai untuk semua lubang gerudi.

Tiada kerja letupan batuan perlu dijalankan untuk Tapak Projek ini,



HIDROGEOLOGI & AIR BAWAH TANAH

Tapak Projek adalah terletak dalam rejim akuifer berpotensi rendah di rantau ini kecuali bahagian barat laut Tapak Projek terletak dalam rejim akuifer berpotensi tinggi di rantau ini.



GUNATANAH

Jenis guna tanah utama di dalam kawasan impak adalah tergolong dalam komponen pertanian (iaitu ladang kelapa sawit dan getah, dusun dan tanaman jangka pendek) dengan jumlah 23,246.61 ekar atau 67.40% daripada jumlah kawasan impak.

Tapak Projek yang meliputi kira-kira 4.01% daripada jumlah kawasan impak terutamanya terdiri daripada ladang kelapa sawit.

PERSEKITARAN SEDIA ADA

PERSEKITARAN BIOLOGI



FLORA DAN FAUNA

- ✓ Pokok kelapa sawit (*Elaeis guineensis*) merupakan tumbuhan dominan yang meliputi keseluruhan Tapak Projek.
- ✓ Kawasan ladang ini juga dilitupi dengan semak biasa iaitu rumput, tumbuhan menjalar dan epifit yang biasa. Di sepanjang jalan tanah di dalam ladang kelapa sawit, tumbuhan menjalar dan rumput yang kelihatan.
- ✓ Secara amnya, daripada pemerhatian yang dijalankan di kawasan perladangan dan pokok renek perintis kebanyakannya terdapat pokok dan semak yang boleh diklasifikasikan sebagai spesies tidak terancam dan tiada spesies terancam ditemui di dalam persekitaran Tapak Projek.
- ✓ Penemuan daripada pemerhatian am menunjukkan bahawa habitat fauna di dalam Tapak Projek telah diganggu oleh pertanian sedia ada (iaitu ladang kelapa sawit), aktiviti pekebunan dan bangunan sedia ada di selatan serta bangunan institusi di barat. Walaupun Tapak Projek boleh dianggap sebagai persekitaran yang terganggu, terdapat beberapa spesies burung, mamalia kecil, reptilia seperti biawak dan ular yang dijangka boleh ditemui di dalam Tapak Projek



KAWASAN SENSITIF ALAM SEKITAR (KSAS)

- ✓ Tapak Projek yang dicadangkan tidak terletak di dalam Kawasan Sensitif Alam Sekitar (KSAS) (RT MVV 2045).
- ✓ ESA terdekat adalah Hutan Simpan Galla (Pangkat 1 & 2) – 4.6km bahagian timurlaut dari Tapak Projek.



KAWASAN KEPENTINGAN BURUNG DAN BIODIVERSITI (IBA)

- ✓ Tapak Projek Cadangan tidak termasuk dalam 55 Kawasan Kepentingan Burung dan Biodiversiti (IBA) di Malaysia (www.birdlife.org).
- ✓ IBA terdekat ialah pantai utara-tengah Selangor (MY011) yang terletak kira-kira 60km baratlaut dari Tapak Projek yang dicadangkan



PERSEKITARAN SOSIO-EKONOMI DAN MANUSIA

SURVEI PERCEPSI SOSIAL

- ✓ Tinjauan secara dalam talian dan bersemuka/luar talian telah dijalankan untuk meraihkan lebih banyak maklumbalas daripada persepsi responden yang merangkumi Tunas Residensi, Nada Bidara, Taman Tiara Sendayan, Taman Gadong Jaya (kaji selidik dalam talian) dan kawasan institusi seperti Institut Pendidikan Guru Kampus Pendidikan Teknik Kompleks Pendidikan Nilai, Institut Amiruddin Baki, Politeknik Nilai, Kolej Tunku Kurshiah dan *English Language Teaching Centre*.

SOSIO-EKONOMI & PERSEKITARAN MANUSIA

PENILAIAN IMPAK DAN LANGKAH-LANGKAH MITIGASI

Pencemran Alam Sekitar

IMPAK

- Kemungkinan gangguan alam sekitar terutamanya bagi penduduk di sekitar seperti Tunas Residensi, Institut Pendidikan Guru Malaysia Kampus Pendidikan Teknik.
- Pencemaran air dalam Sg. Gadong dan Sg. Jijan.
- Debu dari jalan masuk ke Cadangan Tapak Projek.

LANGKAH-LANGKAH MITIGASI

- Pemantauan terhadap entiti alam sekitar seperti air, udara, bunyi dan getaran hendaklah dilakukan secara berkala (bulanan/suku tahunan).
- Langkah-langkah mitigasi seperti yang dicadangkan dalam laporan EIA juga hendaklah dipatuhi dan tertakluk kepada Audit Pihak Ketiga.
- Empat (4) persampelan kualiti air dan dua (2) stesen pensampelan untuk kualiti udara ambien, paras bunyi dan getaran yang dicadangkan.

Sisa Buangan Terjana Dari Tapak Projek

IMPAK

- Pengumpulan sisa buangan pepejal atau pembinaan dari Tapak Projek yang dicadangkan.

LANGKAH-LANGKAH MITIGASI

- Sisa buangan domestik terjana hendaklah diasingkan kepada terbiodegradasi dan tidak terbiodegradasi serta dibuang ke tapak pelupusan yang sah (Tapak Pelupusan Ladang Merah) oleh kontraktor dilantik.
- Kerja-kerja pengemasan/pembersihan hendaklah dijalankan di tapak kerja secara berkala.

Masalah Sosial

IMPAK

- Isu sosial antara pekerja asing dan warga tempatan.

LANGKAH-LANGKAH MITIGASI

- Pembangunan projek baru akan menyebabkan isu sosial. Oleh itu, adalah menjadi tanggungjawab Penggerak Projek untuk menangani isu-isu ini kerana ia merupakan hasil daripada pembangunan projek.
- Penggerak Projek hendaklah mengadakan dialog/pertemuan awam yang berterusan dengan penduduk sekitar kawasan. Keutamaan penduduk tempatan dalam penyediaan peluang pekerjaan, penganjuran latihan/kursus yang berkaitan dengan masyarakat.
- Pekerja asing perlu melakukan pemeriksaan kesihatan secara berkala bagi mengelakkan penyakit berjangkit yang dibawa oleh mereka.

Kesengsaraan Lalu Lintas

IMPAK

- Kemungkinan kesesakan trafik di sepanjang Jalan Nilai (FT 3265), Jalan Labu (FT 362) dan Jalan Felda Sendayan (FT 1265).
- Kerja-kerja pembinaan Jalan Nilai – Labu – Enstek (NLE) yang sedang dijalankan.

LANGKAH-LANGKAH MITIGASI

- Papan tanda amaran trafik yang mencukupi, lampu isyarat dan penghadang hendaklah dipamerkan dengan jelas serta papan menunjuk arah yang jelas untuk memaklumkan amaran kenderaan berat kepada pengguna bagi memastikan keselamatan semua pihak sebelum memasuki jalan awam.
- *Flagmen* mesti ditempatkan di persimpangan jalan masuk untuk mengawal dan mengarahkan lalu lintas, terutamanya di pintu masuk/keluar jalan awam.

Tebatan Banjir

IMPAK

- Kejadian banjir kilat terhadap sekitar kawasan.

LANGKAH-LANGKAH MITIGASI

- Semasa peringkat pembinaan, lapan (8) kolam perangkap mendap akan dibina sebelum dialirkan ke dalam anak sungai Sg. Gadong & Sg. Jijan.
- Semasa fasa operasi, lapan (8) kolam takungan air akan dibina untuk menampung air ribut.

Konflik Manusia-Haiwan

IMPAK

- Haiwan hidupan liar seperti Monyet, ular dan biawak muncul di kawasan institusi seperti Politeknik Nilai, English Language Teaching Centre dan Kolej Tunku Kurshiah kerana lokasi yang berdekatan dengan kawasan lading kelapa sawit.

LANGKAH-LANGKAH MITIGASI

- Pembukaan tanah akan dijalankan dalam lima (5) fasa untuk membenarkan hidupan liar (daratan dan langit) mempunyai masa dan ruang yang mencukupi untuk melarikan diri dan berundur.
- Pengemasan/pembersihan yang memadai di Tapak Projek untuk mengelakkan tarikan perosak.
- Latihan/Kesedaran pendidikan untuk pekerja mengenai akta hidupan liar.
- Laporkan sebarang perhatian atau kehadiran hidupan liar di dalam atau berhampiran Tapak Projek kepada pihak berkuasa.

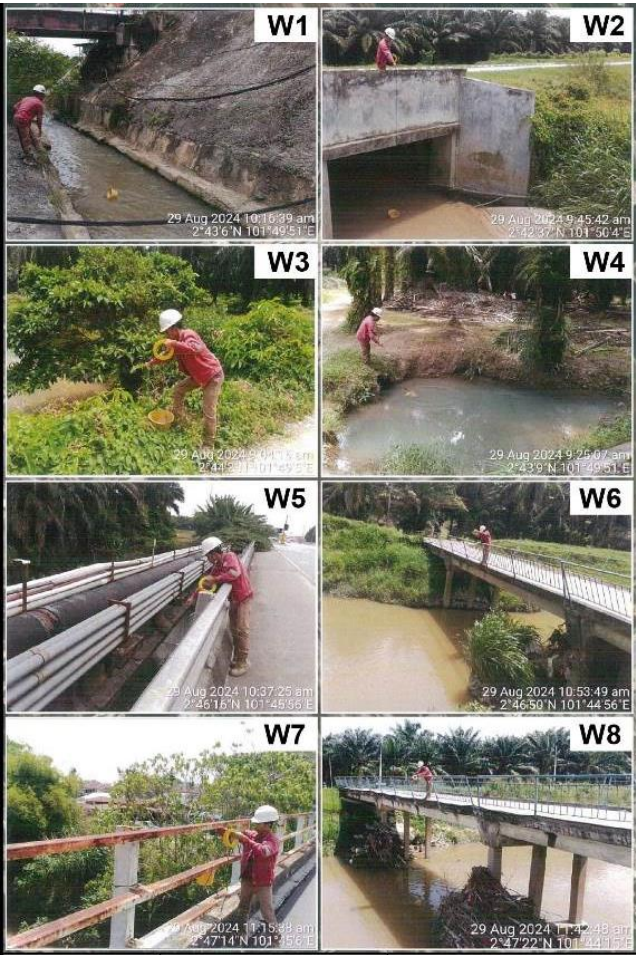
PERSAMPELAN ALAM SEKITAR DASAR



KUALITI AIR

- Berdasarkan Indeks Kualiti Air (IKA) menunjukkan kesemua lokasi persampelan berada di Kelas II Piawaian Kualiti Air Negara untuk Malaysia (NWQS).
- Umumnya, pengelasan kualiti air untuk semua titik persampelan air dikelaskan sebagai bersih.

Titik Persampelan	Klasifikasi IKA	
	Pagi	Petang
W1 Sg. Gadong (Hulu)	92, Kelas II	94, Kelas II
W2 Sg. Gadong (Hulu)	94, Kelas I	94, Kelas I
W3 Anak Sungai Sg. Jijan (Hulu)	96, Kelas I	91, Kelas II
W4 Sg. Jijan (Hilir)	94, Kelas II	96, Kelas I
W5 Sg. Jijan	87, Kelas II	92, Kelas II
W8 Sg. Chinchang	91, Kelas II	90, Kelas II
W9 Sg. Batang Labu (Hulu)	92, Kelas II	93, Kelas II
W10 Sg. Labu (Hilir)	87, Kelas II	93, Kelas II



KUALITI UDARA

- Mematuhi Piawaian Kualiti Udara Ambien Malaysia 2013, Piawaian 2020



GETARAN

- Dalam had yang dibenarkan untuk *Damage Risk in Building from Steady State Vibration, Schedule 1; Annex A: Schedule of Recommended Vibration Limits, 2021*.



BUNYI BISING

- Paras bunyi bising pada semua titik persampelan adalah berada dalam had yang dibenarkan oleh Garis Panduan untuk *Environmental Noise Limits & Control, Department of Environment, Third Edition, 2019* kecuali untuk N1, N2 dan N3.
- Punca bunyi bising adalah dari kenderaan, tapak pembinaan berdekatan, orang ramai, hujan dan haiwan (anjing menyalak pada waktu siang dan serangga pada waktu malam).

LOKASI PERSAMPELAN DASAR BAGI AIR, UDARA, BUNYI BISING & GETARAN

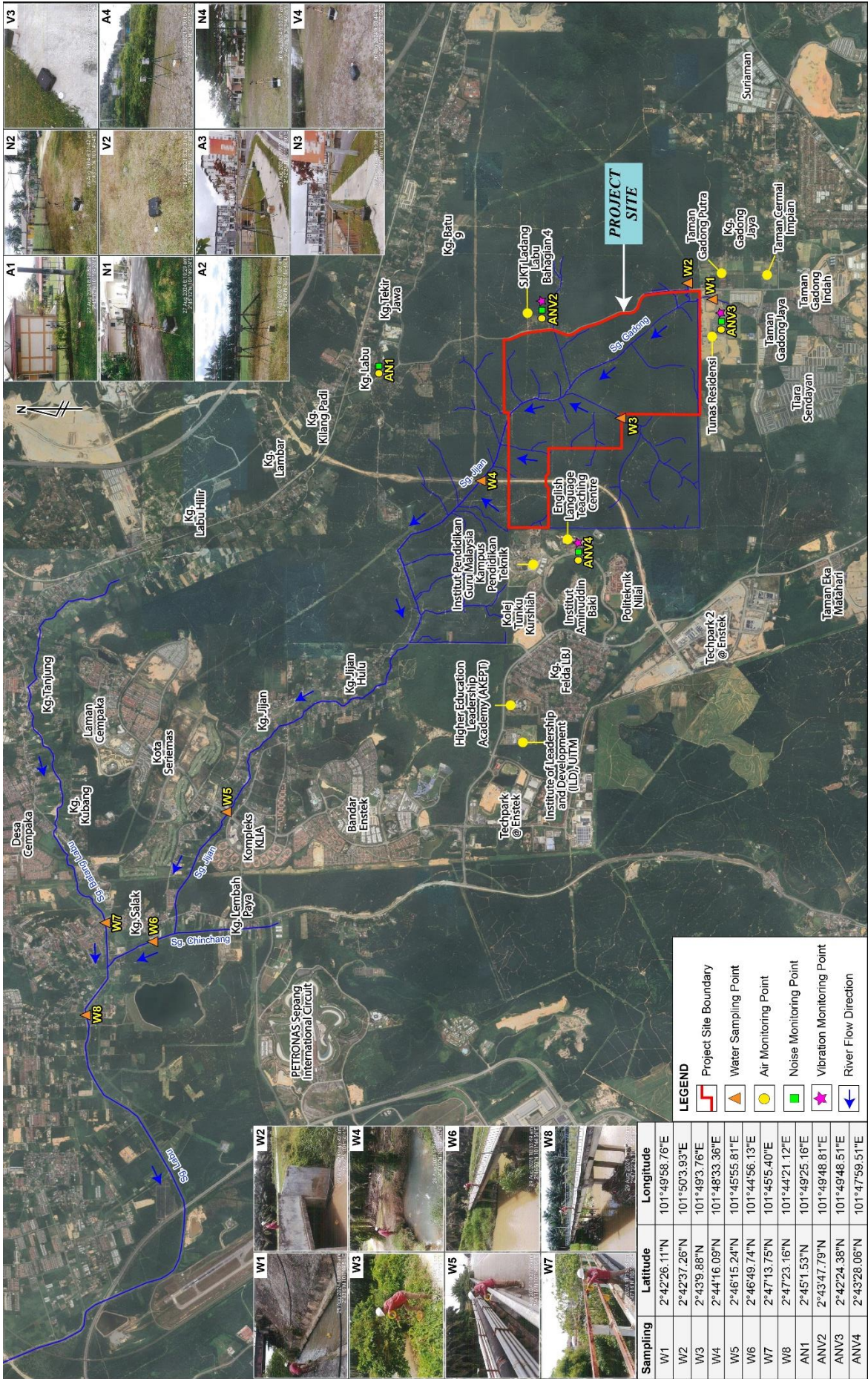


Figure 6.15: Baseline Sampling Location for Surface Water Quality, Ambient Air Quality and Noise & Vibration Levels

NOT TO SCALE

Source: Europasia Engineering Services Sdn. Bhd. (2024)

RINGKASAN KESAN ALAM SEKITAR DAN CADANGAN LANGKAH-LANGKAH MITIGASI

FASA PEMBINAAN



LALUAN LOGISTIK

Akses logistik: Jalan Nilai-Labu-Seremban (Jalan Persekutuan 362) dan Jalan Felda Sendayan (Jalan Persekutuan 1265) → Tapak Projek

Impak

- Gangguan bunyi bising dan debu.
- Risiko peningkatan trafik terutamanya oleh kenderaan berat melalui Jalan Nilai-Labu-Seremban (Jalan Persekutuan 362) dan Jalan Felda Sendayan (Jalan Persekutuan 1265).
- Kemungkinan tumpahan minyak dan tumpahan bahan binaan mentah ke jalan awam.
- Peningkatan bahaya lalu lintas.

Langkah Mitigasi

- Membersihkan jalan masuk secara berkala.
- Flagmen mesti ditempatkan di persimpangan jalan masuk untuk mengawal lalu lintas.
- Kenderaan mesti mematuhi had laju.
- Tanda peringatan, isyarat atau lampu amaran yang betul dan penghadang disyorkan untuk memastikan keselamatan dan kelancaran aliran lalu lintas.
- Dua (2) Wash trough dicadangkan di pintu masuk/keluar Tapak Projek.



PENGINAPAN PEKERJA

- Dianggarkan 100 orang pekerja diperlukan ketika fasa pembinaan.
- Discaj kumbahan secara langsung boleh menyebabkan pencemaran air dan udara.

Impak

- Kesan berkaitan dengan penghasilan kumbahan dan sisa pepejal.
- Tanpa pengurusan kumbahan yang betul, kumbahan mentah yang tidak dirawat boleh menyebabkan pencemaran air dan membawa kepada penyebaran penyakit sehingga menimbulkan bahaya kepada masyarakat berhampiran.

Langkah Mitigasi

- Tempat tinggal pekerja dan pejabat lokasi hendaklah sentiasa bersih sepanjang masa.
- Mengekalkan kualiti pengemasan yang tinggi di tempat penginapan pekerja.
- Kemudahan asas yang mencukupi seperti air dan elektrik mesti ada.
- Tidak boleh dilakukan pembakaran sampah secara terbuka.
- Perlu mematuhi *Employees' Minimum Standard of Housing Accommodations and Amenities (Accommodation & Centralized Accommodation) Regulations 2020*.



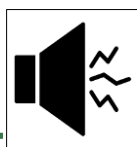
HAKISAN TANAH

Impak

- Dibawah scenario paling buruk dan tiada langkah-langkah kawalan mitigasi dilaksanakan kadar hakisan tanah bagi kerja tanah adalah dianggarkan sebanyak Tahap 1 – 96.27 tan/ha/tahun, Tahap 2 – 110.53 tan/ha/tahun, Tahap 3 – 147.02 tan/ha/tahun, Tahap 4 – 140.63 tan/ha/tahun dan Tahap 5 – 77.49 tan/ha/tahun.
- Jumlah sedimen terjana ialah 1,737.76 tan untuk Tahap 1, 1,956.67 tan untuk Tahap 2, 1,060.54 tan untuk Tahap 3, 808.64 tan untuk Tahap 4 dan 382.89 tan untuk Tahap 5.

Langkah Mitigasi

- Perlaksanaan LD-P2M2.
- Menyediakan lapan (8) kolam pemendapan sedimen.
- Penyelenggaraan system perparitan dan kolam perangkap mendap.
- Perlindungan bioteknik dan amalan mekanikal untuk menangani tanah yang terdedah.
- Pematuhan kepada Syarat-syarat Kelulusan EIA.



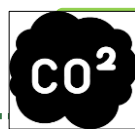
PENCEMARAN BUNYI

Impak

- Tahap bunyi bising yang tinggi akan menimbulkan gangguan dan menimbulkan kesan psikologi kepada reseptor, dan pada tahap tertentu boleh menyebabkan kesan fisiologi.

Langkah Mitigasi

- Aktiviti pembinaan hendaklah dilakukan pada waktu siang sahaja.
- Menyelenggara semua peralatan dan mesin.
- Pelantar tukul hidraulik boleh digunakan sebagai kaedah cerucuk dengan penyediaan penghadang bagi mengurangkan kesan bunyi bising terhadap penduduk.



PENCEMARAN UDARA

Impak

- Peningkatan tahap PM10 dan PM2.5 disebabkan oleh tumpahan atau habuk yang diterbangkan angin daripada bahan yang tidak bertutup.
- Pembakaran sisa domestik dan bahan binaan lain akan menghasilkan jelaga dan habuk.
- Pergerakan lalu lintas di jalan tanah akan bergolak permukaan dan boleh menyebabkan keadaan berjeribu terutamanya semasa musim kering dan berangin.
- Disebabkan oleh kekerapan angin yang berlaku dari arah timurlaut, ia mungkin akan memberi kesan kepada Institut Pendidikan Guru Malaysia, English Learning Teaching Centre, Politeknik Nilai and TechPark II.

Langkah Mitigasi

- Penyediaan wash trough di pintu keluar dari Tapak Projek.
- Pembasahan dan pembersihan berterusan laluan tanah .
- Penutupan bahan mentah dan timbunan tanah atas dengan betul.
- Pengurusan lalu lintas melalui had laju dan penyelenggaraan berkala kenderaan/jentera.
- Menyediakan penghadang seperti dicadangkan dalam LDP2M2.



PENJANAAN SISA BUANGAN

Impak

- Membuang sisa domestik secara sembarangan.
- Kumbahan yang akan dijana semasa peringkat pembinaan adalah pada 22,500 l/hari (anggaran 100 pekerja; yang bersamaan dengan 100 PE).
- Tumpahan minyak diesel atau hidraulik ke tanah menyebabkan pencemaran tanah.

Langkah Mitigasi

- Semua sisa biojisim, bangunan dan domestic akan dibuang di luar tapak ke tapak pelupusan yang sah (iaitu, Tapak Pelupusan Sanitasi Ladang Tanah Merah).
- Pembakaran terbuka sebarang bentuk sisa pepejal adalah dilarang sama sekali.
- Tandas sementara hendaklah diselenggara dengan kerap.
- Semua sisa terjadual mesti dikendalikan mengikut keperluan Peraturan-Peraturan Kualiti Alam Sekeliling (Buangan Terjadual) 2005.



PENGURUSAN SISA BUANGAN

Impak

- Pelepasan air sisa industri yang tidak dirawat secara sembarangan boleh menjejaskan kualiti air.
- Semua sistem perparitan dan paip akan tersumbat jika *sullage* dan sisa dapur dibuang tanpa perangkap yang sewajarnya.
- Pembuangan sisa pepejal yang tidak betul boleh menjejaskan kualiti estetik, sumber pencemaran air dan pembiakan vektor penyakit.

Langkah Mitigasi

- Penyediaan sistem rawatan efluen industri (IETS) untuk industri dan loji rawatan kumbahan (STP) untuk perumahan dan komersial, jika berkenaan.
- Sisa pepejal perlu dilupuskan di tapak pelupusan sampah yang diluluskan di bawah Majlis Bandaraya Seremban (MBS).



PENCEMARAN UDARA DAN BUNYI BISING

Impak

- Memandangkan jenis industri yang dicadangkan dalam pembangunan ini adalah industri ringan, sederhana dan berat, pelepasan udara (jika ada) dijangka di Tapak Projek ini mematuhi Peraturan Udara Bersih 2014.
- Peningkatan trafik menjadi faktor penyumbang pencemaran udara dan bunyi.

Langkah Mitigasi

- Penyediaan persimpangan yang berukuran cukup, papan tanda lalu lintas dan penyelenggaraan sistem rangkaian jalan raya yang betul.
- Prosedur peraturan atau kawalan pelepasan lalu lintas bagi mematuhi batas perundangan.
- Lanskap yang padat dapat digunakan untuk menampun persekitaran secara semula jadi.
- Penyediaan zon penampun yang mencukupi untuk Cadangan Pembangunan Perindustrian ringan, sederhana dan berat.



PENGURUSAN SISA BUANGAN TERJADUAL

Impak

- Sludge Cake (SW204) daripada Loji Rawatan Efluen Perindustrian, slag (SW104) daripada APCS, pelarut terpakai, sisa dakwat terpakai, pigmen pewarna bekas, minyak pelincir bekas, minyak hidraulik terpakai dan sisa logam.
- Contaminated rags (SW410) untuk kerja-kerja harian yang dijalankan oleh pekerja di premis tersebut.
- Potensi bahaya kepada kesihatan manusia atau alam sekitar (tanah dan air) apabila tidak dirawat, disimpan, diangkut atau dilupuskan atau diuruskan dengan tidak sempurna.

Langkah Mitigasi

- Pihak Penggerak Projek perlu memaklumkan sisa buangan terjadual kepada JAS Negeri Sembilan dan menyimpan rekod inventori seperti di Jadual Kedua (Peraturan 3) dan Jadual Keenam (Peraturan 12) di bawah Peraturan Kualiti Alam Sekitar (Buangan Terjadual) 2005.
- Contaminated rags (SW410), sludge cake (SW204) dan slag (SW104) yang dihasilkan daripada aktiviti industri sederhana perlu dilabel, dibungkus, disimpan dan dilupuskan dengan betul di premis yang ditetapkan yang diluluskan. Sebarang sisa berbahaya yang terhasil daripada kejadian yang tidak dirancang juga akan diuruskan dengan cara yang sama.
- Penjana sisa boleh menyimpan sisa buangan terjadual selama 180 hari atau kurang selepas penjanaannya dengan syarat kuantiti sisa terjadual terkumpul di tapak hendaklah tidak melebihi 20 tan metrik.
- Bekas yang digunakan untuk menyimpan sisa terjadual hendaklah dilabel dengan jelas dengan tarikh buangan terjadual mula-mula dijana serta nama, alamat dan nombor telefon penjana sisa seperti di Jadual Ketiga (Peraturan 10) Kualiti Alam Sekitar (Buangan Terjadual) Peraturan 2005.



PERSEKITARAN BIOLOGI

Impak

- Kesan biologi pada dasarnya adalah penanaman semula tanaman hijau dengan landskap.

Langkah Mitigasi

- Mewujudkan semula dan mempelbagaikan spesies flora dan fauna, walaupun nominal dalam Tapak.
- Spesis tumbuhan yang dipilih hendaklah daripada spesies yang terdapat di sekitar Malaysia yang sesuai dengan iklim dan keadaan persekitaran setempat melalui pemilihan spesies asli.
- Pelaksanaan landskap yang menarik dari segi estetika dan peningkatan visual akan menarik komuniti haiwan kecil dan menyediakan persekitaran yang mesra alam.



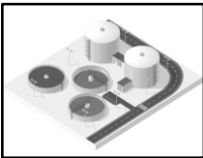
PENGURUSAN AIR RIBUT

Impak

- Pelepasan discaj puncak yang lebih tinggi dan pantas dijangkakan kerana peningkatan ketahanan yang ditimbulkan oleh kehadiran unit binaan dan sistem jalan berturap.

Langkah Mitigasi

- Semasa hujan rebut, semua air larian permukaan dari kawasan pembangunan akan mengalir ke dalam beberapa siri longkang dalaman yang dicadangkan sebelum dialirkan ke longkang kolektif yang mengalir ke dalam lapan (8) kolam takungan air yang dicadangkan untuk ditampung dahulu sebelum discaj terakhir ke dalam Sg. Gadong dan Sg. Jijan



EFLUEN INDUSTRI

Impak

- Pembuangan efluen industri yang tidak dirawat daripada IETS yang dicadangkan di bawah aliran sungai yang rendah (senario kes terburuk), kategori kualiti air keseluruhan di anak sungai Sg. Jijan akan ditukar daripada Kelas II kepada Kelas IV dan Kelas V semasa pelepasan purata dan pelepasan puncak masing-masing.

Langkah Mitigasi

- Sekiranya pelepasan efluen industriair kumbahan mematuhi had Piawaian A JAS, keseluruhan kategori kualiti air di hilir Tapak Projek dalam Sg. Labu akan kekal sebagai Kelas III.

No	Parameter @ Industrial Effluent (IETS) = 29,075,440 L/day or ~ 1,211.5m ³ /hr		*Water Quality Classification for River		Recommended Compliance Limits
			Final Discharge Receiving Location (Sg. Jijan)	W8 @ Sg Labu Water Intake (Sg Labu)	
1	Baseline	BOD	IIA/IIB	IIA/IIB	<u>IETS Discharge Limit</u> DOE Std A Limit BOD = 20mg/L
	Worst Case Scenario, mg/L	BOD (300)	V	V	
	DOE Std A Limit, mg/L	BOD (20)	IV	III	
2	Baseline	NH ₃ -N	I	IIA/IIB	<u>IETS Discharge Limit</u> DOE Std A Limit NH ₃ -N= 10mg/L
	Worst Case Scenario, mg/L	NH ₃ -N (50)	V	V	
	DOE Std A Limit, mg/L	NH ₃ -N (10)	V	IV	
3	Baseline	TSS	I	I	<u>IETS Discharge Limit</u> DOE Std A Limit TSS= 50mg/L
	Worst Case Scenario, mg/L	TSS (200)	III	IIA/IIB	
	DOE Std A Limit, mg/L	TSS (50)	IIA/IIB	I	
4	Baseline	COD	IIA/IIB	IIA/IIB	<u>IETS DOE Std A Limit</u> DOE Std A Limit COD = 80mg/L
	Worst Case Scenario, mg/L	COD (1,000)	V	V	
	DOE Std A Limit, mg/L	COD (80)	III	III	
5	Baseline	O&G	IIA/IIB	IIA/IIB	<u>IETS DOE Std A Limit</u> DOE Std A Limit O&G = 1mg/L
	Worst Case Scenario, mg/L	O&G (50)	IV	IV	
	DOE Std A Limit, mg/L	O&G (1)	IIA/IIB	IIA/IIB	

No.	Scenario for Industrial Effluent Discharge	* Water Quality Index & Category for River	
		Final Discharge Receiving Location (Sg. Labu)	W8 @ Sg Labu Water Intake (Sg Labu)
1	Baseline	II (90)	II (84)
2	Worst Case Scenario	IV (34)	IV (43)
3	DOE Std A Limit	III (62)	III (75)



PERSEKITARAN SOSIO EKONOMI

Impak

▪Meningkatkan taraf hidup semasa penduduk tempatan yang tinggal berhampiran dari segi kemudahan awam, infrastruktur dan meningkatkan peluang pekerjaan.

Langkah Mitigasi

- Pekerjaan akan berubah daripada pekerja berkemahiran rendah kepada pekerjaan yang memerlukan kemahiran dan kelayakan yang lebih tinggi.
- Dengan jangkaan kemasukan pekerja ke rantau ini kerana banyak peluang pekerjaan.
- Isu kesihatan, jenayah dan keselamatan masyarakat yang dirasai yang dikaitkan dengan kedekatan pekerja asing tidak timbul kerana majoriti yang baru masuk ke dalam tenaga kerja berkemungkinan adalah rakyat Malaysia dari seluruh rantau ini.



TRAFIK

Impak

Penjanaan perjalanan untuk pembangunan yang dicadangkan berdasarkan kadar perjalanan dan komponen guna tanah.:

Kemuncak Pagi
Jana - 2,478 pcu/jam
Tarik - 4,920pcu/jam

Kemuncak Petang
Jana - 3,820 pcu/jam
Tarik - 2,479pcu/jam

Langkah Mitigasi

- Penambah-baikkan simpang jalan telah disyorkan untuk memastikan aliran trafik yang lancar dan selamat serta tahap prestasi perkhidmatan yang boleh diterima untuk sekitar persimpangan.

RINGKASAN PEMANTAUAN IMPAK, PEMANTAUAN PEMATUHAN DAN PEMANTAUAN PRESTASI

Impact/ Monitoring Aspect	Monitoring Parameter	Compliance Limit	Monitoring Frequency	Impact Monitoring (IM)	Compliance Monitoring (CM)	Performance Monitoring (PM)
CONSTRUCTION PHASE						
Water Quality	pH	6.0-9.0	Monthly	✓	✓	Not Applicable
	Temperature	-				
	Dissolve Oxygen	5mg/L – 7mg/L				
	Chemical Oxygen Demand	25mg/L				
	Biological oxygen demand	3mg/L				
	Total Suspended Solid	50mg/L				
	Oil & Grease	7;N				
	Ammoniacal Nitrogen	0.3mg/L				
	Feacal Coliform Count	100 (MPN/100mL)				
	Total Coliform Count Turbidity	5,000 (MPN/100mL) 250 NTU				
Sediment Basin	• Total Suspended Solid (TSS) • Turbidity	50mg/L 250NTU	(i) Monthly (ii) Biweekly (iii) Per rainfall event	Not Applicable	✓	✓
Check Dam		Not applicable	(i) Biweekly (ii) Per rainfall event	Not Applicable	Not Applicable	✓
Temporary Earth Drain/Bund						
Hoarding/ new jersey barrier						
Stabilized Construction Access						
Wash through						

RINGKASAN PEMANTAUAN IMPAK, PEMANTAUAN PEMATUHAN DAN PEMANTAUAN PRESTASI

Impact/ Monitoring Aspect	Monitoring Parameter	Compliance Limit	Monitoring Frequency	Impact Monitoring (IM)	Compliance Monitoring (CM)	Performance Monitoring (PM)
CONSTRUCTION PHASE						
Ambient Air Quality	- PM10 (24 hours) - PM2.5 (24 hours) - SO2 (24 hours) - CO (8 hours) - NO2 (1 hours) - Ozone (1 hours)	100µg/m ³ 35µg/m ³ 80µg/m ³ 10mg/m ³ 280µg/m ³ 180µg/m ³	Quarterly	✓	✓	Not Applicable
Noise Level	- L₁₀ - L₉₀ - L_{min} - L_{max}	For L _{eq} , Day-Time 60.0 dBA Night-Time 55.0 dBA				
Vibration Level	- Peak Particle Velocity at X-axis - Peak Particle Velocity at Y-axis - Peak Particle Velocity at Z-axis - Peak Vector Sum - Vertical Vibration Peak Velocity	The Planning Guidelines for Environmental Vibration Limits & Control, Department of Environment				

RINGKASAN PEMANTAUAN IMPAK, PEMANTAUAN PEMATUHAN DAN PEMANTAUAN PRESTASI

Impact/ Monitoring Aspect	Monitoring Parameter	Compliance Limit	Monitoring Frequency	Impact Monitoring (IM)	Compliance Monitoring (CM)	Performance Monitoring (PM)
OPERATIONAL PHASE						
Industrial Effluent Discharge (for Individual IETS Discharge)	• Temperature (on-site) • pH (on-site) • Biological Oxygen Demand, BOD*5 days @ 20°C • Suspended Solids • Mercury as Hg • Cadmium as Cd • Hexa-Chromium as Cr⁶⁺ • Tri-Chromium as Cr³⁺ • Arsenic as As • Cyanide as CN • Lead as Pb • Copper as Cu • Manganese as Mn • Nickel as Ni • Tin as Sn • Zinc as Zn • Boron as B • Iron as Fe • Silver as Ag • Aluminium as Al • Selenium as Se • Barium as Ba • Fluoride as F • Formaldehyde • Phenol • Free Chlorine as Cl₂ • Sulphide as S²⁻ • Oil & Grease • Ammoniacal Nitrogen, NH₃N • Color	40 6.0-9.0 20mg/L 50mg/L 0.005mg/L 0.01mg/L 0.05mg/L 0.20mg/L 0.05mg/L 0.05mg/L 0.10mg/L 0.20mg/L 0.20mg/L 0.20mg/L 0.20mg/L 2.0mg/L 1.0mg/L 1.0mg/L 0.10mg/L 10.0mg/L 0.02mg/L 1.0mg/L 2.0mg/L 1.0mg/L 0.001mg/L 1.0mg/L 0.50mg/L 1.0mg/L 10mg/L 100	As per legislative requirement	✓	✓	✓
Stack Monitoring (for Individual Stacks using CEMS) Note: - If applicable under Environmental Quality (Clean Air) Regulations 2014.	As per Environmental Quality (Clean Air) Regulations 2014 depends on Type of Industries, Processes and Equipment.	As per Environmental Quality (Clean Air) Regulations 2014	As per legislative requirement	✓	✓	✓

“Laporan ini telah menilai tiga (3) aspek utama entiti alam sekitar iaitu fizikal, biologi dan sosio-ekonomi penempatan manusia dengan penyepaduan cadangan pembangunan kediaman dan komersial. Kajian telah dilakukan di lokasi Tapak Projek dan di kawasan sekitarnya.”



PERANCANGAN

- Tapak Projek yang dicadangkan adalah terletak dalam Blok Perancangan (BP) 7- Labu dan selaras dengan unjuran guna tanah untuk Zon Pembangunan Bercampur (iaitu Perindustrian, Komersial dan Kediaman).
- Jenis Industri yang dibenarkan di dalam Tapak Projek adalah mengikut Rancangan Tempatan Malaysia Vision Valley 2045.
- Projek yang dicadangkan adalah pembangunan bercampur terangkum dalam :
 - a) Aktiviti Yang Ditetapkan 17 – Pembangunan Estet Industri; dan
 - b) Aktiviti Yang Ditetapkan 16 - Perumahan; dan
 - c) Aktiviti Yang Ditetapkan 18 - Bandar Baharu; dan

di bawah Jadual Pertama Perintah Kualiti Alam Sekeliling (Aktiviti Yang Ditetapkan) (Penilaian Kesan Kepada Alam Sekeliling), 2015 yang dibuat di bawah subseksyen 34A Akta Kualiti Alam Sekeliling (Pindaan) 2012.

- Cadangan pembangunan perindustrian ringan, sederhana dan berat ini selaras cadangan perindustrian Vision Business Park dan TechPark@Enstek III yang bercadang bersebelahan di sempadan barat daya Tapak Projek. Zon penampakan yang mencukupi telah dicadangkan untuk pembangunan industri ringan (50m), industri sederhana (150m) dan industri berat (300m).



FIZIKAL

- Tapak Projek adalah terletak di dalam lembah Sg. Gadong dan Sg. Jijan yang mengalir ke arah timur laut merentasi Kampung Jijan untuk bertemu dengan Sg. Chinchang berhampiran Taman Desa Merpati sebelum didiscajkan ke dalam Sg. Labu.
- Semua air larian permukaan dari kawasan pembangunan industri yang dicadangkan akan disalurkan ke dalam lapan (8) kolam takungan air melalui longkang tepi jalan dan sistem perparitan utama. Longkang tepi jalan direka bentuk untuk menyalurkan aliran sehingga 10 tahun *return period storm* manakala perparitan utama dan kolam takungan air direka bentuk untuk menyalurkan aliran sehingga 100 tahun *return period storm* bagi memastikan sistem saliran dan perparitan yang baik dapat disediakan supaya tidak menyebabkan masalah seperti banjir kilat dan seumpamanya.



FIZIKAL

- Langkah-langkah kawalan hakisan dan pemendapan mesti dilaksanakan mengikut saranan *Land Disturbing Pollution Prevention and Mitigation Measures* (LDP2M2). Cadangan lapan (8) kolam pemendapan sedimen, parit tanah sementara, *check dam*, *silt fence* dan *sand bags*, tempat cucian tayar dan penghadang untuk keseluruhan pembangunan hendaklah dilaksanakan bagi memastikan larian air permukaan berada pada tahap terus untuk memastikan pematuhan kepada had kawalan larian air permukaan serta melindungi kualiti air pada sungai sedia ada.
- Berdasarkan kejadian angin lazim dari arah timur laut, partikal-partikal udara daripada aktiviti di dalam Tapak Projek secara langsung boleh menjejaskan pekerja di dalam Tapak Projek dan penerima terdekat seperti English Language Teaching Centre, Politeknik Nilai and TechPark@ENSTEK II di kawasan barat daya daripada Tapak Projek.
- Dengan membandingkan jarak dan ramalan bunyi bagi jentera pembinaan yang tipikal semasa pelapangan tapak dan aktiviti kerja tanah, kita boleh membuat ramalan bahawa Institut Pendidikan Guru Malaysia, Kampus Pendidikan Teknik English Language Teaching Centre and Politeknik Nilai mungkin mengalami tahap bunyi bising yang berlebihan yang dikeluarkan daripada jentera pembinaan; jika tidak dikawal. Walau bagaimanapun, getaran daripada jentera pembinaan dijangka tidak menjana tahap getaran yang boleh dirasakan di kediaman/petempatan berhampiran sedia ada kerana jarak penyebaran yang agak jauh.
- Bahan buangan kumbahan yang dijana daripada jumlah kesetaraan populasi (PE) sebanyak 70,000 akan disalurkan ke loji pengolahan kumbahan (STP) yang terletak di bahagian utara Tapak Projek, untuk diolah sebelum dilepaskan ke Sg. Jijan dan seterusnya Sg. Labu. Takat pelepasan akhir STP yang dicadangkan hendaklah direka bentuk dan mematuhi Had Piawaian A JAS kerana terdapat tiga (3) muka sungai (iaitu titik pengambilan air Loji Rawatan Air Sg. Labu, Salak Tinggi, Labohan Dagang) masing-masing terletak kira-kira 14 km, 19 km dan 34 km di hilir Tapak Projek. Semasa operasi penuh STP yang dicadangkan, kira-kira 15,750,000 L/hari akan dijana semasa pelepasan purata.
- Semua sisa buangan pepejal (iaitu biojisim, sisa pepejal pembinaan dan sisa buangan domestik) akan dilupuskan ke tapak pelupusan yang sah (iaitu, Tapak Pelupusan Sanitari Ladang Tanah Merah) yang terletak kira-kira 12km mengikut jarak perjalanan kenderaan dari Tapak Projek manakala sisa buangan terjadual dari premis industri boleh dilupus ke kemudahan pelupusan sisa buangan berbahaya dan terjadual terdekat yang diurus dan dikendalikan oleh Kualiti Alam Sdn. Bhd. (sebelah dengan Tapak Pelupusan Sanitari Ladang Tanah Merah).



BIOLOGIKAL

- Berdasarkan Rancangan Tempatan Malaysia Vision Valley (RT MVV) 2045, Cadangan Tapak Projek adalah tidak terletak di Kawasan Sensitif Alam Sekitar (ESA). Kawasan ESA yang terdekat adalah Hutan Simpan Galla (ESA Peringkat 1 & 2) yang terletak 5.2km ke arah utara Tapak Projek.
- Tumbuhan yang dominan di kawasan ini adalah pokok-pokok kelapa sawit (*Elaeis guineensis*) yang matang dan tua yang meliputi keseluruhan Tapak Projek.
- Walaupun Tapak Projek merupakan persekitaran yang terganggu, terdapat spesies burung, mamalia kecil, reptilia seperti biawak dan ular yang dijangka boleh ditemui di dalam kawasan Tapak Projek.



SOSIO-EKONOMI

- Aktiviti Pembangunan Projek mesti mengambil kira reseptor sedia ada terdekat iaitu English Language Teaching Centre, Institut Pendidikan Guru dan Politeknik Nilai, Taman Gadong Jaya, Tiara Sendayan, Taman Eka Matahari dan pengguna jalan raya Jalan Nilai-Labu-Seremban (Jalan Persekutuan 362).) dan Jalan Felda Sendayan (Jalan Persekutuan 1265) serta Jalan Nilai-Labu-Enstek (NLE) untuk memastikan hanya gangguan minimum kepada kesejahteraan mereka.



EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

ENVIRONMENTAL IMPACT ASSESSMENT (EIA) FOR THE PROPOSED MIXED DEVELOPMENT ON LOT 5119, PT 53438, PT 53439, PT 53440, PT 53441, PT 53443 AND PT 53445, MUKIM LABU, DISTRICT OF SEREMBAN, NEGERI SEMBILAN DARUL KHUSUS.

INTRODUCTION TO THE PROPOSED PROJECT



PROJECT PROPONENT AND DEVELOPER

N9 MATRIX DEVELOPMENT SDN. BHD.
WISMA MATRIX, NO. 57, JALAN TUN DR. ISMAIL
70200 SEREMBAN, NEGERI SEMBILAN DARUL KHUSUS.
TEL.: 06-764 2688; FAX.: 03-764 6288
ATTN: MS. TAN SZE CHEE



CURRENT CONDITION

- The Project Site is dominated by oil palm plantation which is part of Labu estate in mid 2001 and 2011.
- There is no habitation/settlement present within the Project Site. The construction of Jalan Nilai-Labu-Enstek (NLE) is presently on-going in the northwestern portion of the Project Site.



ENVIRONMENTAL CONSULTANT

EUROPASIA ENGINEERING SERVICES SDN. BHD.
No. 63A-2 & 65-2, Petaling Utama Avenue,
Jalan PJS1/50, Taman Petaling Utama, 46150
Petaling Jaya, Selangor Darul Ehsan
Attn. : Puan Nur Arina Muhamad Affandi
(CEP – C0101)
(EIA Study Team Leader)



ACCESSIBILITY

Project Site is accessible from North-South Expressway via Jalan Nilai - Pajam (Federal Route 3265) and turn into Jalan Nilai-Labu-Seremban (Federal Route 362) and Jalan Felda Sendayan (Federal Route 1265), estate route of Labu Estate prior to entering the proposed Project Site



JURISDICTION

Majlis Bandaraya Seremban (MBS)



PROJECT AREA

- Total development area = 1,382.21 acres (559.26 ha)

LEGAL ASPECT



PRESCRIBED ACTIVITIES

a) Schedule 1 Activity : Item 17: Industrial Estate Development

Development Of Industrial estate covering an area of 20 hectares or more

- Construction of industrial lots with 656.79 acres (265.79 Ha) of Project Site which is 47.52% of the total development area.

b) Schedule 1 Activity No. 16: Housing

Housing development covering an area of 50 hectares or more

- Construction of residential and commercial with 256.67 acres (103.87 ha) of Project Site which is 18.57% of the total development area.

c) Activity No. 18: NEW TOWNSHIP

Construction of new township consisting of 2,000 housing accommodation units or more or covering an area of 100 hectares or more

- Construction of residential unit of 2,895 units.



ZONING COMPATIBILITY

- Based on the “Rancangan Tempatan Malaysia Vision Valley 2045 (RT MVV 2045)”, the proposed development is located within Blok Perancangan (BP) 7- Labu and compatible with the projected land use for Mixed Development Zone (i.e. Industrial, Commercial and Residential).

STATEMENT OF NEED

Strategic Location & High Accessibility

1

The proposed site has a high level of accessibility due to the presence of loops at the existing roads:-

- Lebuhraya Utara Selatan (PLUS) → Jalan Nilai (FT 3265) → Jalan Labu (FT 362) → Jalan Felda Sendayan (FT 1265) → Project Site.

In future, the access into the proposed industrial development can be accessible via the on-going construction of Jalan Nilai-Labu-Enstek (NLE).

Landuse Optimization

2

- Development of this mixed development would upgrade the economic state of land.
- The proposed project site will optimize the usage of land, which is presently dominated with oil palm estate within Ladang Labu.
- The proposed development will serve to complement the economic demands for industrial activities in the area.
- The development will indirectly increase the value of property in the surrounding areas and create more job opportunities.

Environmental Consideration

3

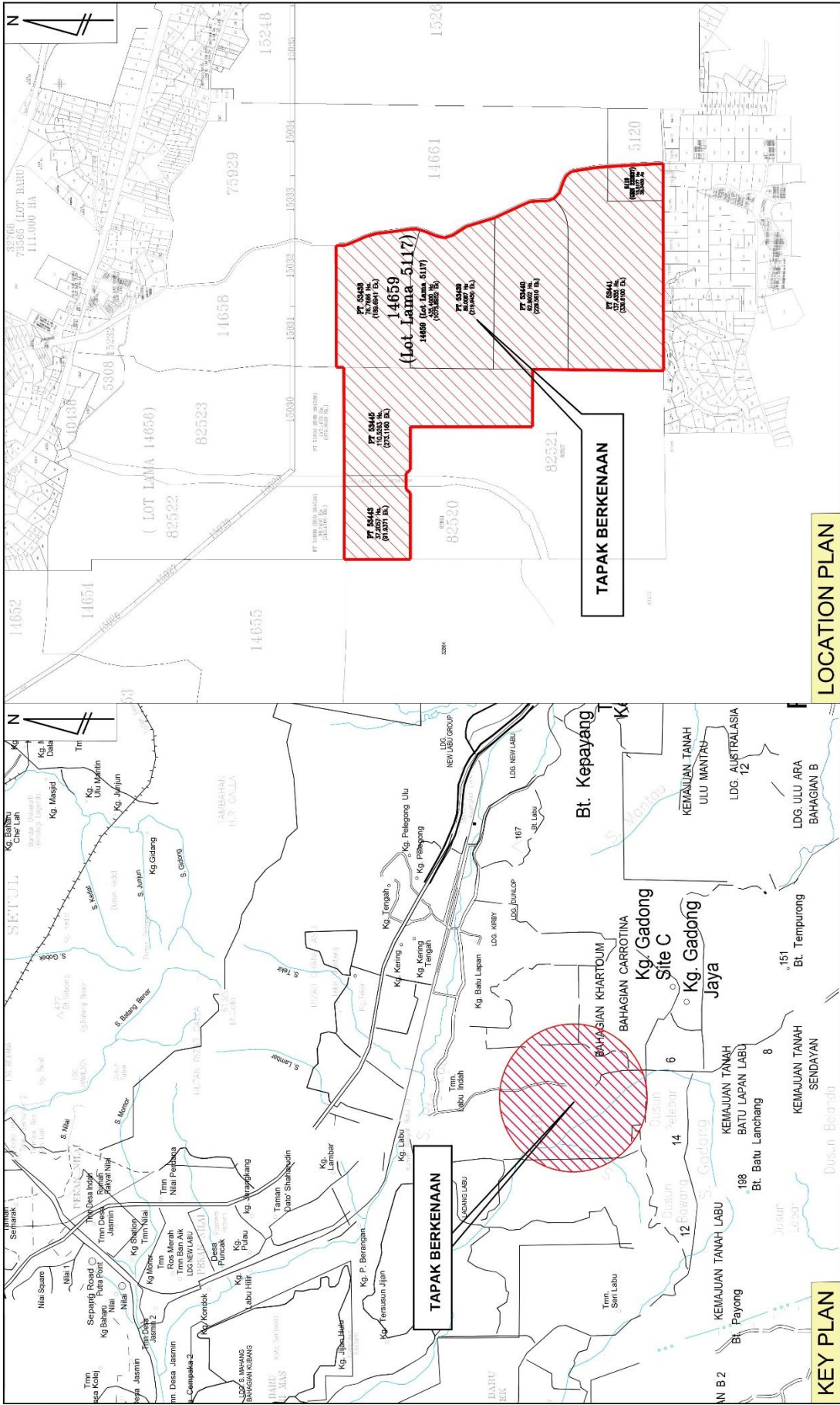
- Project site is not within or identified as Environmental Sensitive Area (ESA) (RT MVV 2045).
- From an ecological point of view, existing biological environment at the Project Site is limited to the flora and fauna composition similar to that of agricultural estates and shrubs in Peninsular Malaysia. Proposed Project Site has been disturbed area as the land have been converted to oil palm plantation for a while. Therefore, only certain wildlife species with high adaptability are able to survive outside of their habitat.
- The proposed development includes in its concept the development of lush green areas and appropriate buffer zone between the industrial estate and its surroundings. This is conducive for healthy living and further improving/reducing the anticipated urban pollution (i.e. air, noise, water, etc.) generated.
- The proposed industries activities within the Project Site are in line with industries categories listed in the *Rancangan Tempatan Malaysia Vision Valley 2045*.

Other Supporting Matters

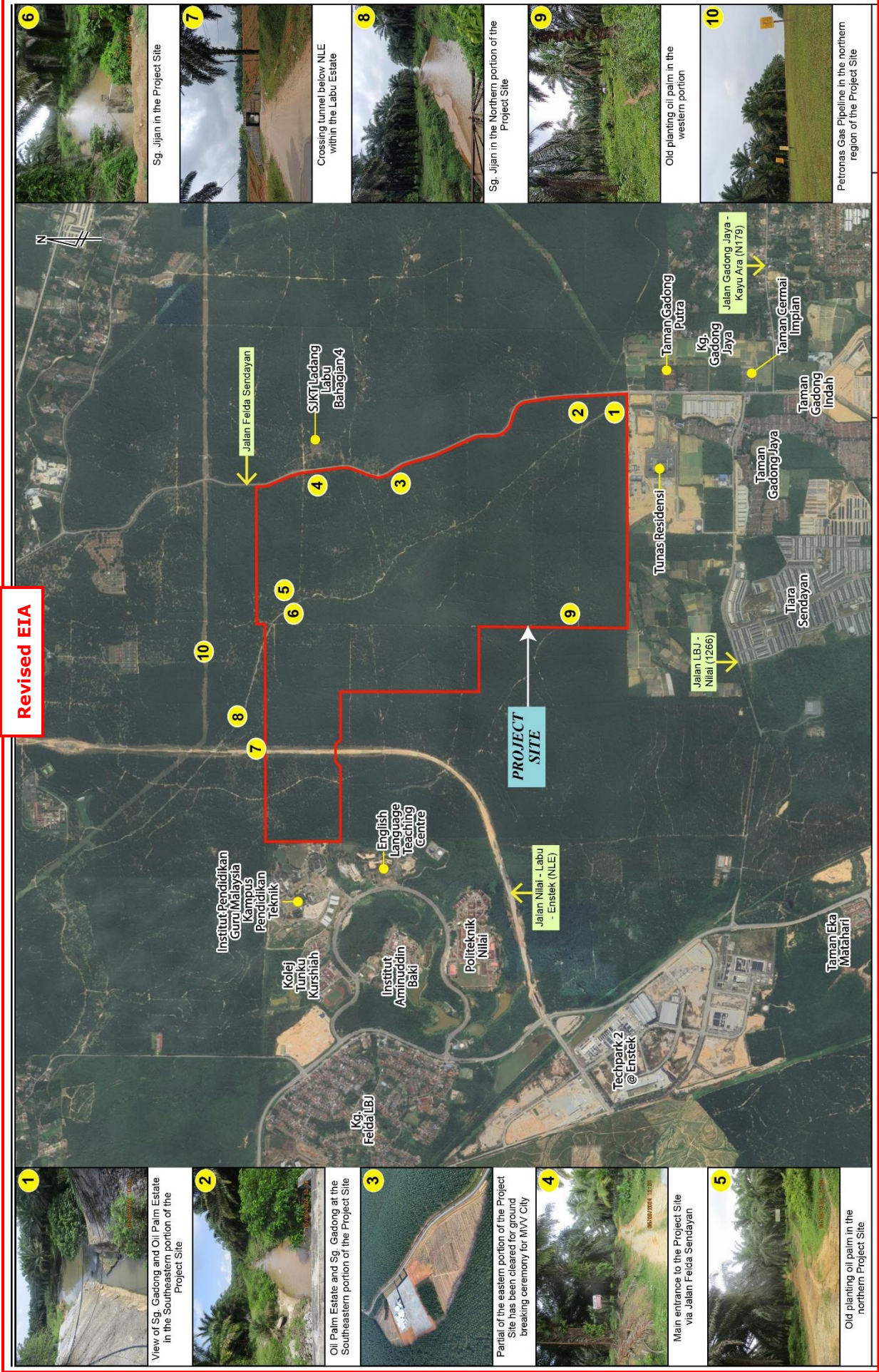
4

- Expands the employment market ranging from laborers (i.e. construction phase) to office/clerical works/factory workers (i.e. operational phase of the industrial enterprises).
- Increase in state and nation's revenue through issuance of licenses and collection of taxes.
- Provide business opportunities to the local businessmen to engage business within the area designated for industrial purposes.

KEY AND LOCATION PLAN



CURRENT CONDITION ON-SITE OF THE PROJECT SITE



NEAREST RECEPTORS TO THE PROJECT SITE

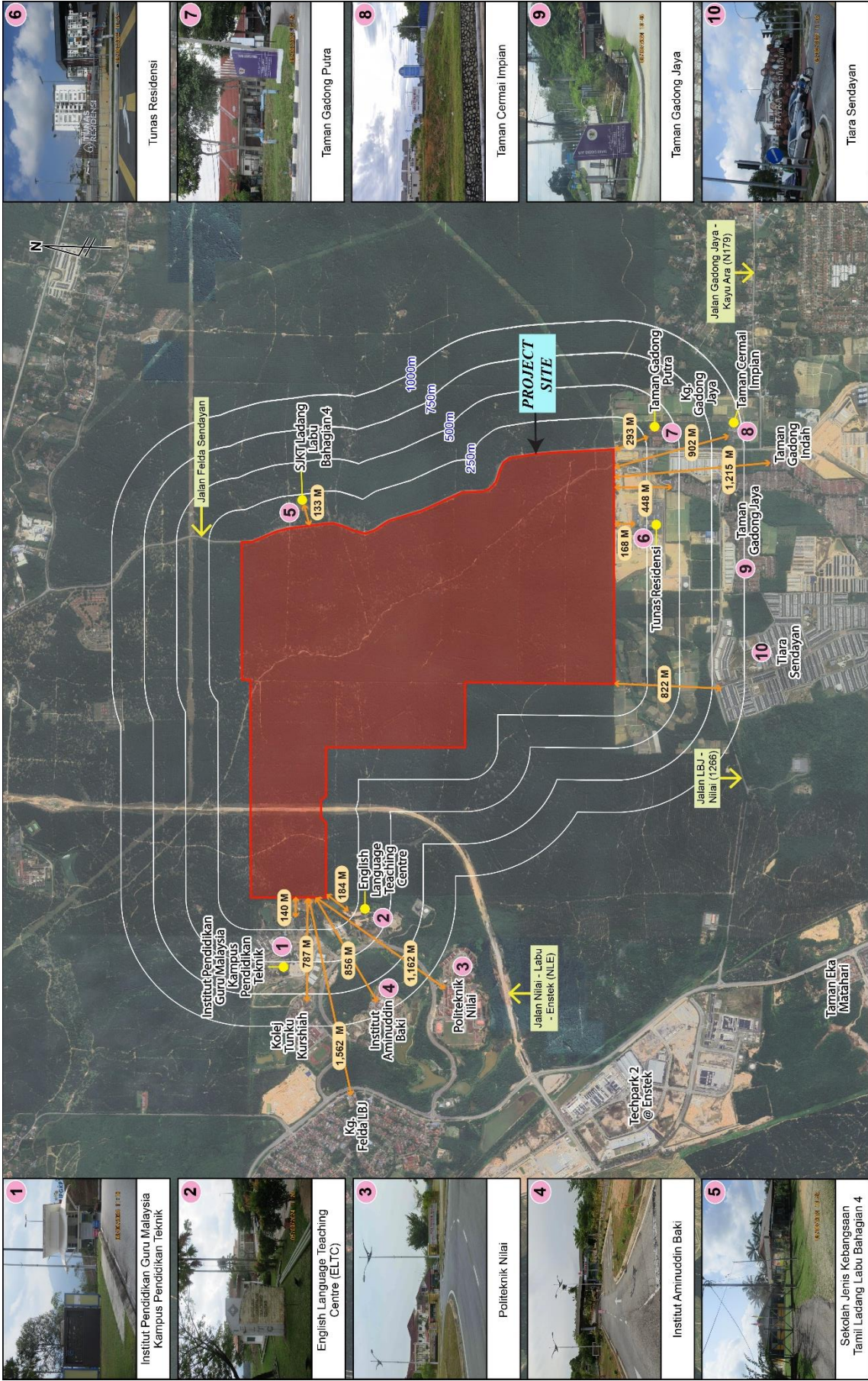


Figure 1.7: Distance to the Nearest Receptors of the Surrounding Areas

NOT TO SCALE

Source: Europasia Engineering Services Sdn. Bhd. (2024)

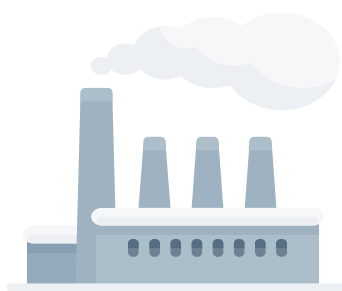
EURCPASIA
Engineering Services Sdn. Bhd.
No. 10, Jalan Puchong 1/23,
Jalan PUS 1/02, Taman Puchong Lama,
46150 Petaling Jaya, Selangor Darul Ehsan

PROJECT DESCRIPTION



INDUSTRIAL COMPONENTS

The primary aim of this development is in creating an industrial park for light to heavy industries with acreage of 656.79 acres (47.52%) to fulfill the needs of the current market. **This industrial development focuses on light, medium and heavy industries** so as to reduce soil, air and water pollution to the surrounding areas.



119

Individual Industrial Lots

610

Lots of Semi-Detached Industry

66

Lots of Terrace Industry

1

Centralized Labour Quarters (CLQ)



RESIDENTIAL

- Residential area will takes up an area of approximately 110.1 acres or 7.97 % of the total development area.



2,894

Housing units

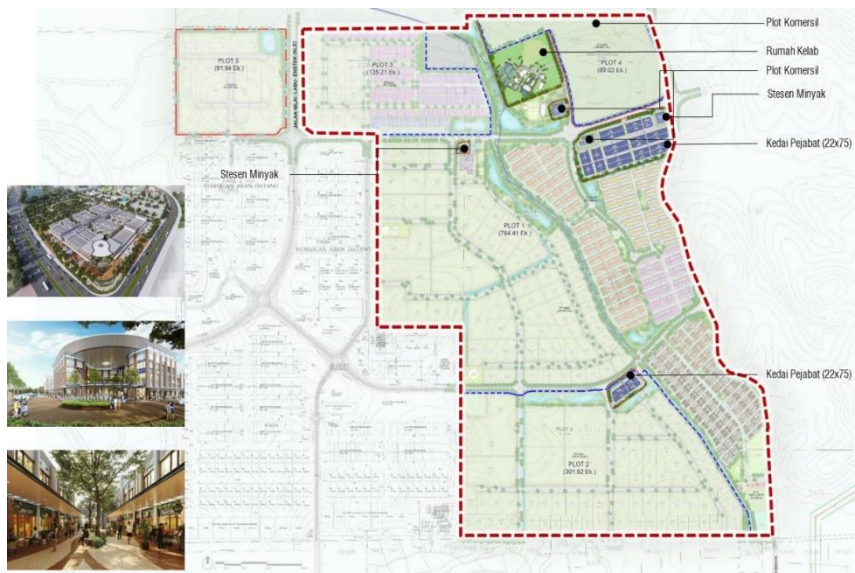


PROJECT DESCRIPTION

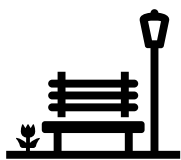


COMMERCIAL

Commercial area will takes up an area of approximately 145.57 acres or 10.60 % of the total development area.



- 361 2-storey shop-office
- 1 Club house
- 9 Commercial Plots
- 2 Petrol Station Plots



AMENITIES

Amenities area will takes up an area of approximately 13.42 acres or 0.97 % of the total development area.



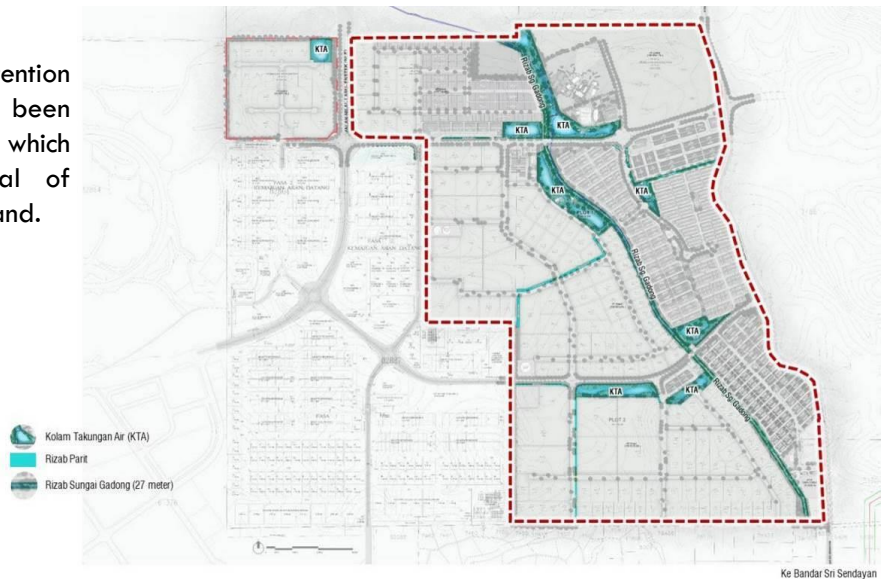
- 1 Primary School
- 2 Surau
- 1 Tapak Kubur
- 1 Hall
- 2 Tapak Gerai

PROJECT DESCRIPTION



UTILITIES AND INFRASTRUCTURE

- The utilities provided are Utilities (i.e. TNB Substations, water tank, pump house and sewage treatment plant) and Infrastructures (i.e., road networks and drainage system).
- For roadside drainage, it will be designed to accommodate storm events 1 in 10 years Average Recurrence Interval (ARI) while the main drains are designed to channel flow up to 100-years ARI.
- Eight (8) detention ponds have been proposed which covering a total of 68.86 acres of land.



OPEN AREA, RECREATIONAL AND LANDSCAPE RESERVE

- There are allocation for open spaces, green areas, water reservoirs, some ditch reserve, and road / lane reserve, with total area coverage of 83.28 acres (i.e., 6.025% of the Project Site).



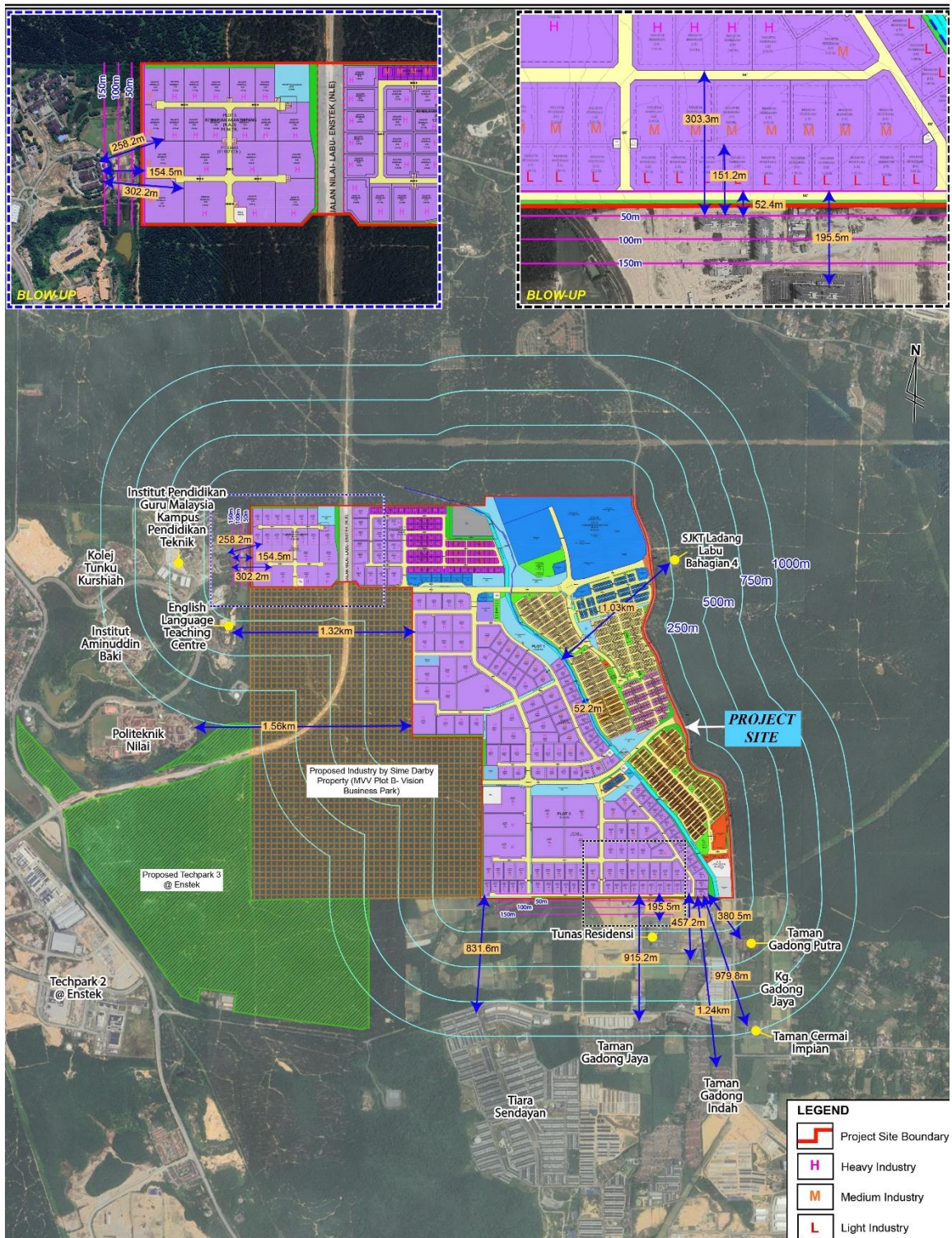
Note : For Illustration Proposes Only

PROJECT DESCRIPTION



PROVISION FOR BUFFER ZONE TO THE NEAREST RECEPTORS

- The industrial activities to be proposed shall be **light to heavy industrial**.
- The appropriate buffer zones have been taken into consideration according to The *Environmental Essentials for Siting of Industries in Malaysia* (DOE, 2017)
- There are existing educational institutions (i.e. Institut Pendidikan Guru, English Language Teaching Centre and Politeknik Nilai) and residential areas (Tunas Residensi, Tiara Sendayan, Taman Gadong Jaya and Taman Gadong Putra) located in the vicinity of the proposed industrial zone.



PROJECT DESCRIPTION



RECOMMENDED TYPE OF INDUSTRIES & ACTIVITIES WITHIN THE DEVELOPMENT

- The project proponent shall refer to several requirements and guidelines such as “*Rancangan Tempatan Malaysia Vision Valley 2045 (RT MVV 2045)*”, Guidelines for the Environmental Essentials for Siting Industries in Malaysia (DOE, 2017) and Malaysian Standard Industrial Classification (MSIC) 2008 for the allowable types of industrial activities to be operating within the Project Site.
- The future industrial activities within the Individual Industrial Lots shall be in accordance with the allowable buffer zones as set out in ‘Appendix B: Industries and Activities are Listed According to Malaysia Standard Industrial Classification 2008 (MSIC 2008) Version 1.0 (as of 2012)’ of the DOE’s Guidelines for the Environmental Essentials for Siting of Industries in Malaysia (DOE, 2017).
- The industrial activities proposed in this MVV City Development are limited only within light to heavy industries categories which are compatible with the *Jadual Kelas Kegunaan Tanah BP 7- Labu* under “*Rancangan Tempatan Malaysia Vision Valley 2045*” and the proposed industries activities within the Project Site shall complement Class 3: Light to Medium Industry except Kelas 3(d) *Industri Berat/Am Kelas B*.
- In line with the recommendations given in this EIA report in relation to the types of industries that can be allowed to operate in this site, N9 Matrix Development Sdn. Bhd. shall control the purchasers via their Sales and Purchase Agreement (SPA) to ensure only industrial activities that adhere to these recommendations are allowed.

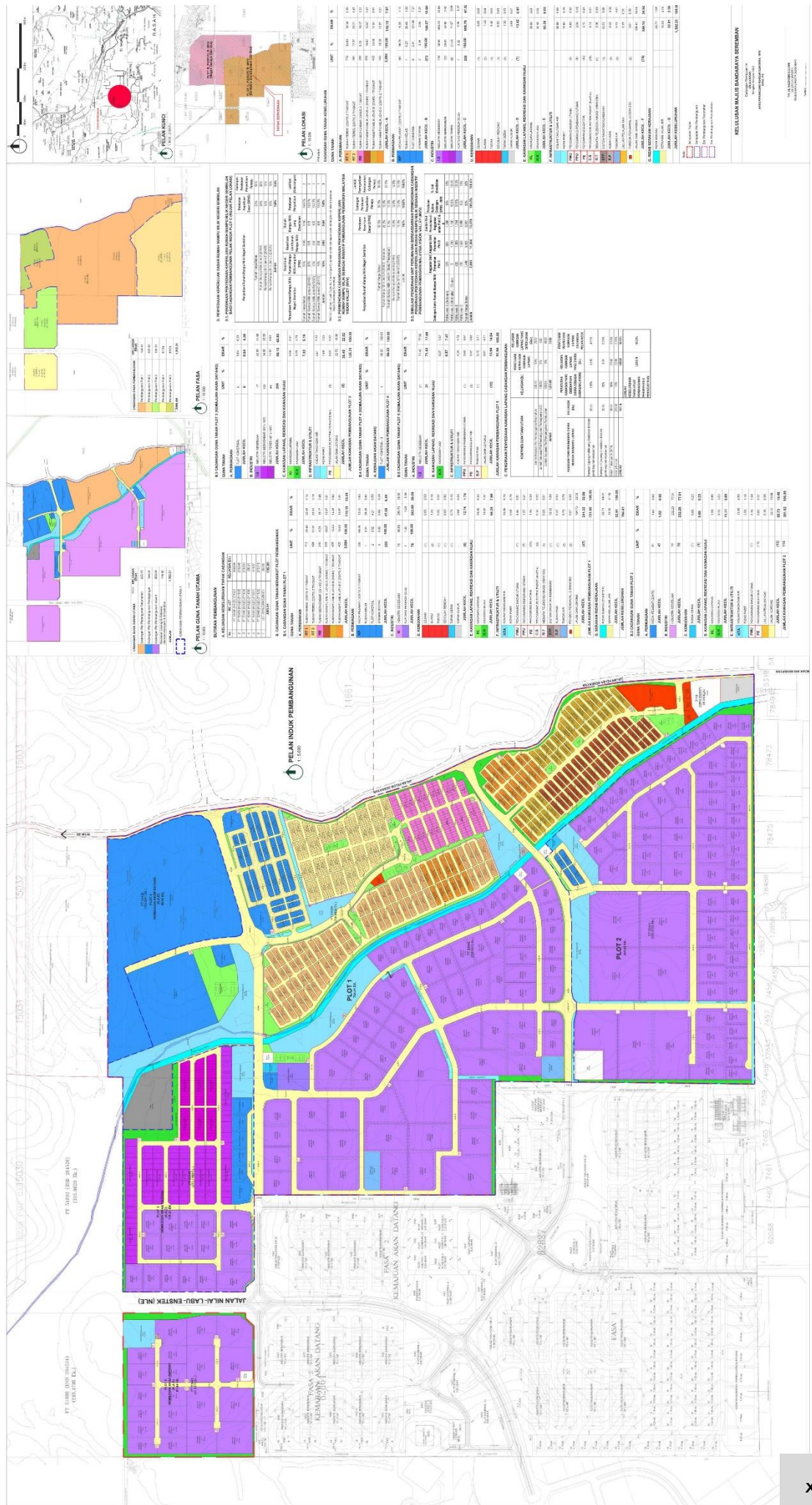


The scope of the development by N9 Matrix Development Sdn. Bhd. is to prepare the Individual Industrial Lots’ platform development, Semi-Detached Industrial Factory, Terraced Industrial Factory and main infrastructural works (i.e., road, water tank, drainage, sewage treatment plant).

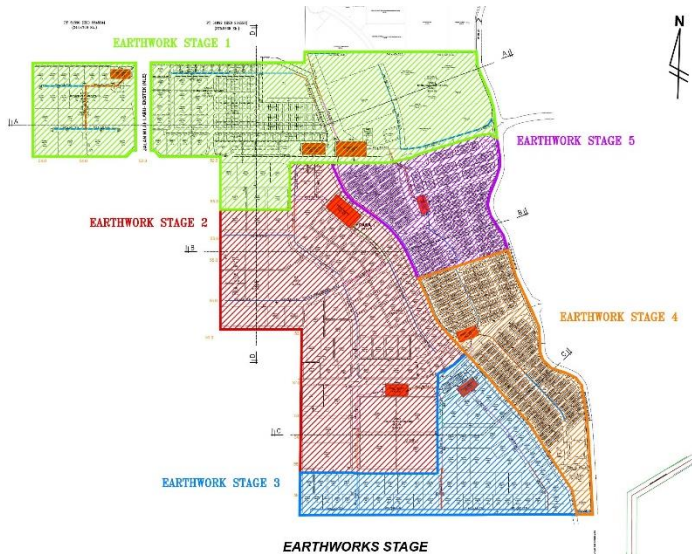
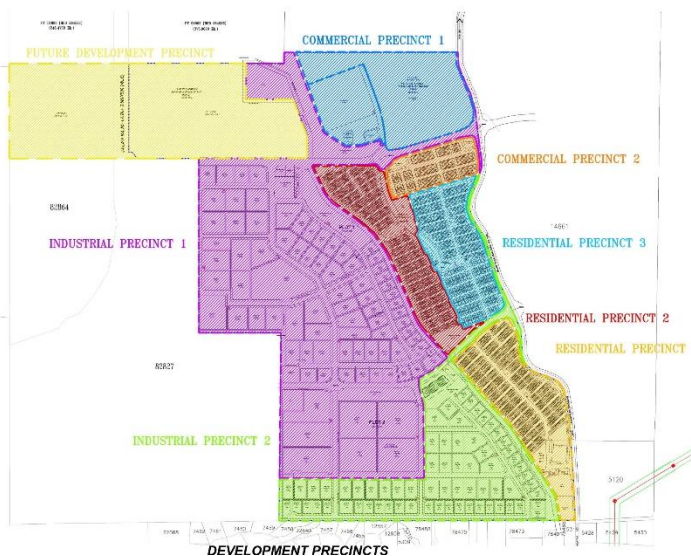


The Individual Industrial Lots will then be sold for individual factory building and operations.

LAYOUT PLAN OF THE PROJECT SITE



PROJECT DEVELOPMENT SCHEDULE



PRECINCTS	2025				2026				2027				2028				2029				2030				2031				2032				2033				2034				2035			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Site clearing	█																																											
Earthworks - stage 1	█	█	█	█																																								
Earthworks - stage 2		█	█	█	█	█																																						
Earthworks - stage 3			█	█	█	█	█																																					
Earthworks - stage 4				█	█	█	█	█																																				
Earthworks - stage 5					█	█	█	█	█																																			
Industrial precinct 1 & STP			█	█	█	█	█	█	█	█	█																																	
Industrial precinct 2				█	█	█	█	█	█	█	█	█																																
Residential precinct 1								█	█	█	█	█	█																															
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Residential precinct 3																	█	█	█	█	█	█																						
Commercial precinct 1			█	█	█	█	█	█	█	█																																		
Commercial precinct 2								█	█	█	█	█	█	█	█																													
Future developments																																												

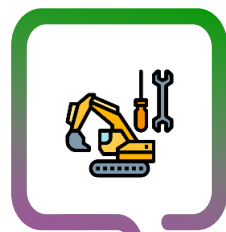
- It is estimated that the Project Site development will be carried out in Five (5) Earthworks Stages, i.e., Stage 1 to Stage 5 and Eight (8) Development Precincts, i.e., Industrial Precinct 1 to Precinct 2, Residential Precinct 1 to Precinct 3, Commercial Precinct 1 to Precinct 2 and Future Development Precinct for a total duration of approximately eleven (11) years from Quarter 1 2025 to Quarter 4 2035.
- Building works, mechanical & electrical works, and infrastructure works shall be carried out once earthworks are completed and platform have been established.

PROJECT ACTIVITIES



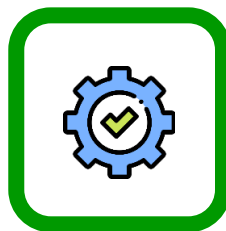
PRE-CONSTRUCTION STAGE

- ✓ Land Survey
- ✓ Subsurface Investigation
- ✓ Social Perception Survey
- ✓ Environmental Studies
- ✓ Engineering Studies



CONSTRUCTION STAGE

- Site Preparation and Vegetation Clearing
- Mobilization of Workers and Equipment
- Site Office
- Landscaping and Re-vegetation
- Waste Generation, Management and Disposal



OPERATIONAL STAGE

- Sewerage System for the Mixed Development
- Solid Waste Generation
- Industrial Effluent Discharge
- Industrial Emission
- Scheduled Wastes Generation by Industries
- All proposed industrial lots might have one IETS/1 stack/1 Scheduled Waste Storage Area

ESTIMATED UTILITIES DEMAND & GENERATION

CONSTRUCTION STAGE

Sewage generation is 22,500 L/day (100 PE).

Generation solid waste is 100 kg/day (100 PE).



Maximum electricity demand **179.605 MVA.**



Total water demand figure has been approximated to be **29,075,440 l/day.**



The sewage generation is expected to be 15,750,000 L/day based on typical generation of sewage of 225 L/day per capita for 70,000 PE.



Generation solid waste is 81,900 kg/day.

EXISTING ENVIRONMENT

PHYSICAL ENVIRONMENT



TOPOGRAPHY

Project Site is characterized by nearly flat to gentle terrains surrounding the valley of the tributary of Sg. Gadong and Sg. Jijan with an average elevations ranging from approximately 30m to 60m above mean sea level.

The highest ground (approximately 74.066m) is located on the hillcrest in the southern portion of the Project Site while the lowest ground (approximately 26.193m) lies within the valley of the tributary of Sg. Jijan in the northern boundary of the Project Site.



HYDROLOGY

Project Site generally lies within the Sg. Langat river catchment area and is located approximately 13 km upstream of the Sg. Labu and approximately 86 km upstream of the Sg. Langat estuary at Kuala Langat.

In particular, the southern and middle portions of the Project Site is drained by the tributary of Sg. Gadong which flows towards northwest and meets with Sg. Jijan whilst northern portion will directly drained into Sg. Jijan before discharging into Sg. Labu. All surface runoff then flows toward northwest across Jalan Nilai-Labu-Enstek (NLE) and Kampung Jijan and meets Sg. Chinchang near Taman Desa Merpati prior to draining into Sg. Labu. The surface runoff from the northern portion of the Project Site also drains into Sg. Jijan before discharging into Sg. Labu which flows westwards and drains into Sg. Langat near the under construction Maju Expressway II (MEX II) and KLIA Toll Plaza of North-South Expressway (NSE).

There are ten (10) existing water intake points within the Sg. Langat river. Among these water intake points, Sg. Labu, Salak Tinggi, Labohan Dagang Water Treatment Plants' water intake points are located approximately 14 km, 19 km and 34 km downstream of the Project Site.



GEOLOGICAL TERRAIN MAPPING

Class I areas (0° - 15°) cover approximately 99.77% of the proposed Project Site. No Class III and IV areas within the Project Site.



GENERAL GEOLOGY

Project Site is situated on Main Range Granite except the northwestern portion of the Project Site which is situated on the metasediments of schists rock type namely Jelebu Schist Formation.



SOIL INVESTIGATION (SI)

Based on the SI conducted by Geodata Engineering Sdn. Bhd., four (4) numbers of exploratory borehole have been drilled within the Project Site.

The top subsoil layer consists of mainly very soft sand SILT of SPT-N values between 0 to 4 blows. The hard layer consists SILT of SPT-N values greater than 50 blows after boreholes depth exceeding 30.0m. No bedrock layer were encountered for all the boreholes

As for this Project Site, no blasting work is to be carried out.



HYDROGEOLOGY & GROUNDWATER

Project Site is located on low potential aquifer regime of this region except the northwestern portion of the Project Site is located on high potential aquifer regime of this region.



LANDUSE

Major type of land use in the impact area belongs to agricultural component (i.e. oil palm and rubber plantations, orchards and short term crops) with a total of 23,246.61 ac or 67.40% of the total impact area.

Project Site which covers approximately 4.01% of the total impact area mainly comprises of oil palm plantation.

EXISTING ENVIRONMENT

BIOLOGICAL ENVIRONMENT



FLORA AND FAUNA

- ✓ Predominant vegetation in this area is oil palm (*Elaeis guineensis*) covering the whole Project Site.
- ✓ These plantation areas also covered with common undergrowth i.e., grasses, weeds and common epiphytes. Along the earthen access within the oil palm plantations, weeds and grasses are abundant.
- ✓ Generally, from the observation carried out the plantation and pioneer shrubs areas mainly presence with trees and bushes which can be classified as unthreatened species and there was no endangered species were found in and around the Project Site.
- ✓ Findings of the general observation show that fauna habitats within the Project Site have been disturbed by the existing agricultural (i.e., oil palm plantation), existing farming and building activities on the south and institutional building on the west. Although most of the Project Site can be considered as disturbed environment, there are several bird species, small mammals, reptiles such as lizards and snakes which are expected can be found within the Project Site.



ENVIRONMENTAL SENSITIVE AREA (ESA)

- ✓ Proposed project site is not within or identified as Environmental Sensitive Area (ESA) (RT MVV 2045)
- ✓ Nearest ESA is Galla Forest Reserve (Rank 1 & 2) – 4.6km north-eastern region from the Project Site



IMPORTANT BIRDS AND BIODIVERSITY AREA (IBA)

- ✓ Proposed Project Site does not fall within the 55 Important Birds and Biodiversity Area (IBA) in Malaysia (www.birdlife.org).
- ✓ Nearest IBA is North-central Selangor coast (MY011) which located about 60km northwest from proposed project site.



SOCIO-ECONOMIC AND HUMAN ENVIRONMENT

SOCIAL PERCEPTION SURVEY

- ✓ Online and face-to-face/ offline survey were conducted to gauge more responses from respondent's perception which include Tunas Residensi, Nada Bidara, Taman Tiara Sendayan, Taman Gadong Jaya and institution areas such as Institut Pendidikan Guru Kampus Pendidikan Teknik, Kompleks Pendidikan Nilai, Institut Amiruddin Baki, Politeknik Nilai, Kolej Tunku Kurshiah and English Language Teaching Centre.

SOCIO-ECONOMIC & HUMAN ENVIRONMENT

EVALUATION OF IMPACT AND MITIGATION MEASURES

Environmental Pollution

IMPACTS

- Possible environmental nuisances especially for surrounding residents such as Tunas Residensi, Institut Pendidikan Guru Malaysia Kampus Pendidikan Teknik.
- Water pollution on Sg. Gadong and Sg. Jijan.
- Dust from access road to proposed Project Site.

MITIGATION MEASURES

- Monitoring on environmental entities such as water, air, noise, and vibration shall be carried out periodically (monthly/ quarterly).
- Mitigating measures as proposed in the EIA report shall also be adhered and shall be subjected to 3rd Party Audit.
- Four (4) water quality sampling and two (2) sampling stations for ambient air quality, noise level and vibration nuisance proposed.

Traffic Woes

IMPACTS

- Possible Heavy traffic along Jalan Nilai (FT 3265), Jalan Labu (FT 362) and Jalan Felda Sendayan (FT 1265).
- On-going construction works of Jalan Nilai – Labu – Enstek (NLE).

MITIGATION MEASURES

- Adequate warning and traffic signages, lamp light and barricades should be clearly be displayed along with clear directional boards to inform users of heavy vehicles are needed to ensure the safety of all parties prior to entering public roads.
- Flagmen must be stationed at the access road junction to control and direct traffic, especially at the entrance/exit of public roads.

Waste Generated From Project Site

IMPACTS

- Solid or construction waste accumulation from proposed Project Site.

MITIGATION MEASURES

- Domestic waste generated should be segregated into biodegradable and non-biodegradable and disposed off to legal dumpsite (Ladang Merah Landfill) by the appointed contractor.
- Housekeeping work should be carried out at the working area periodically.

Flood Mitigation

IMPACTS

- Flash flood incidents towards surrounding area.

MITIGATION MEASURES

- During construction stages, eight (8) sediment basins will be constructed before flowing into the tributaries of Sg. Gadong and Sg. Jijan.
- During operational phase, eight (8) detention ponds will be constructed to cater stormwater.

Social Matters

IMPACTS

- Social issues among foreign workers with locals.

MITIGATION MEASURES

- Development of new project will bring about issues to the extent some social matters. Therefore, it is the responsibility of the project proponent to tackle these issues as it is the result of the project development. The project proponent shall have constant public dialogues/meeting with residents of the surrounding areas. Priorities for the local on the provision of job opportunities, organising trainings/courses relevant to the communities.
- Foreign workers should do health screening regularly to avoid communicable diseases that were brought by these foreigners.

Human-animal Conflicts

IMPACTS

- Wildlife animals such as Monkey, snake and monitor Lizard appeared in the institution areas such as Politeknik Nilai, English Learning Teaching Centre and Kolej Tunku Kurshiah due to the locations near to oil palm estates.

MITIGATION MEASURES

- Land clearing to be conducted in five (5) phases to allow wildlife (terrestrial and arboreal) to take refuge in by allowing sufficient time and space for escape and retreat.
- Proper housekeeping on site to avoid pest attraction.
- Training / Educational awareness for workers on wildlife act.
- Report any sighting or presence of wildlife within or near project site to authorities.

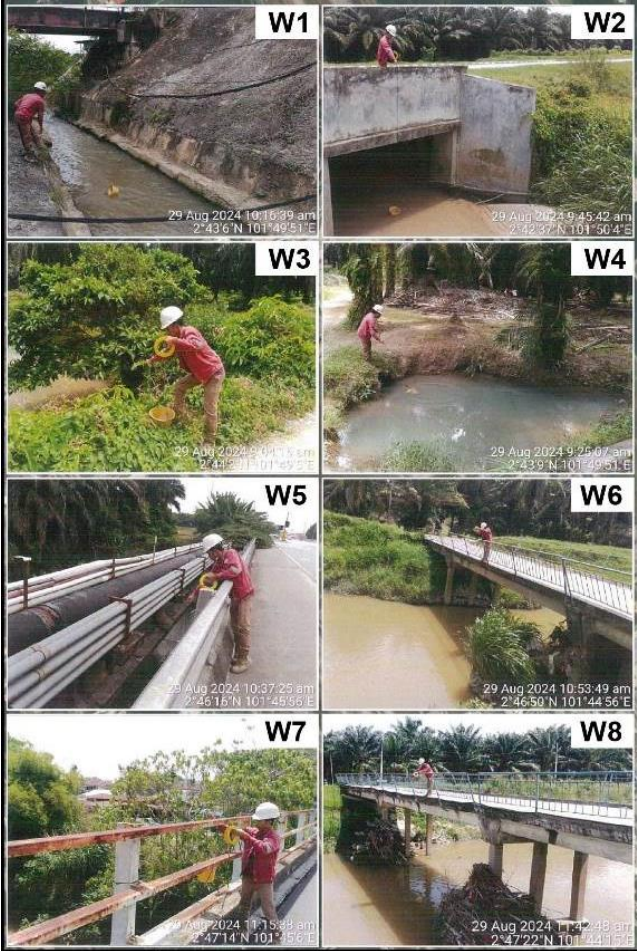
BASELINE ENVIRONMENTAL MONITORING



WATER QUALITY

- Based on the water quality indices (WQI), the computed results showed that all sampling points fall under Class II of the National Water Quality Standards for Malaysia.
- Generally, water quality classification for the whole sampling points is clean.

Sampling Point	WQI Classification	
	Morning	Evening
W1 Sg. Gadong (Upstream)	92, Class II	94, Class I
W2 Sg. Gadong (Upstream)	94, Class I	94, Class I
W3 Tributary of Sg. Jijan (Upstream)	96, Class I	91, Class II
W4 Sg. Jijan (Downstream)	94, Class II	96, Class I
W5 Sg. Jijan	87, Class II	92, Class II
W6 Sg. Chinchang	91, Class II	90, Class II
W8 Sg. Batang Labu (Upstream)	92, Class II	93, Class I
W10 Sg. Labu (Downstream)	87, Class II	93, Class I



AIR QUALITY

- Comply to Malaysian Ambient Air Quality Standards 2013, Standard 2020



VIBRATION

- Within the First Schedule: Recommended Generic Vibration Criteria for Human Occupancy and Sensitive Receptors, Guidelines for Environmental Vibration Limits and Control, 3rd Edition, 2021



NOISE

- Noise level at all points were within the permissible limits The Planning Guidelines for Environmental Noise Limits & Control, Department of Environment, Third Edition, 2019 except for N1, N2 and N4.
- Sources for the noise are from vehicles, nearby construction site, people, raining and animals (dogs barking during the day and insects during the night).

LOCATION FOR WATER, AIR, NOISE & VIBRATION BASELINE SAMPLING

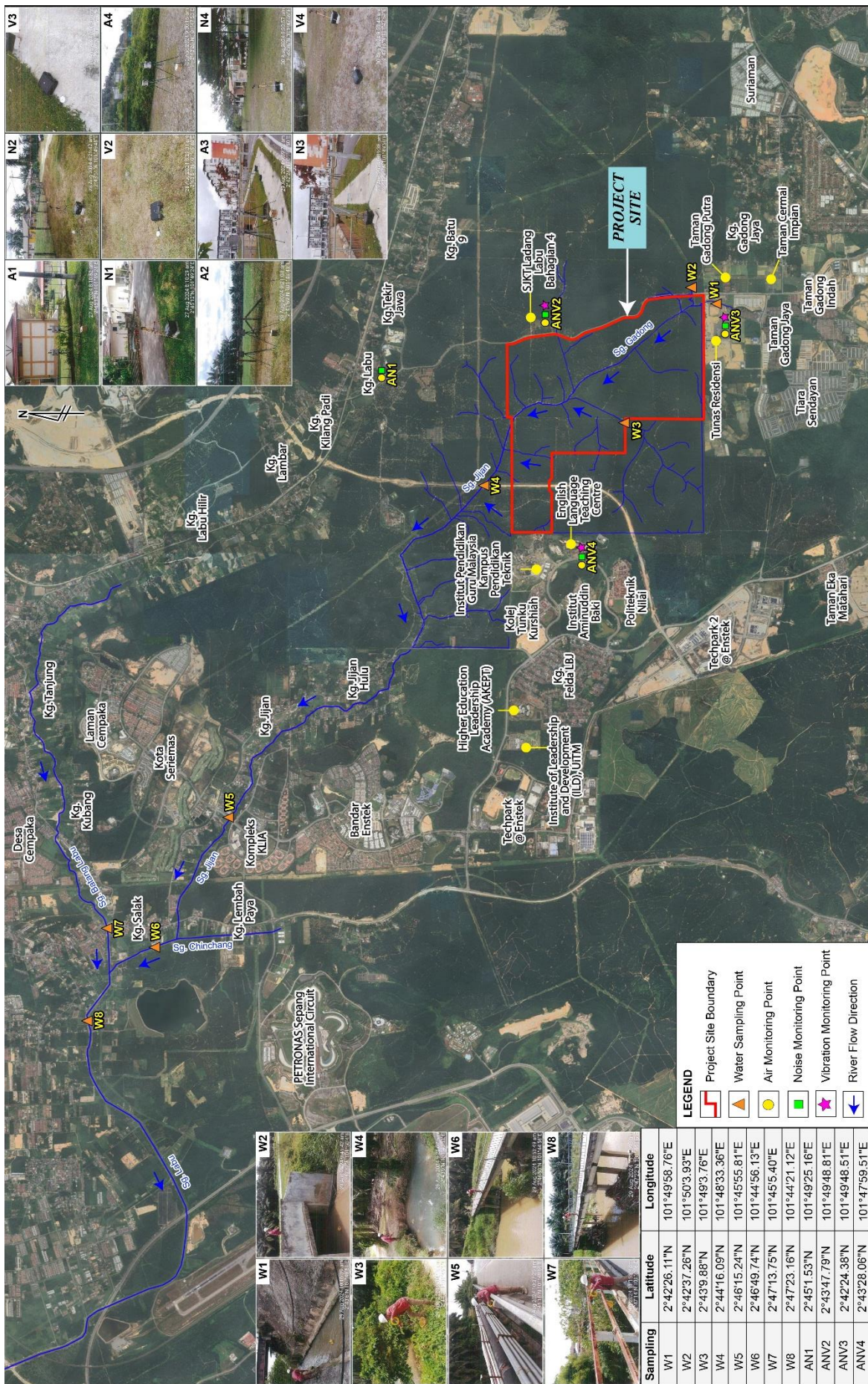


Figure 6.15: Baseline Sampling Location for Surface Water Quality, Ambient Air Quality and Noise & Vibration Levels

Source: Europasia Engineering Services Sdn. Bhd. (2024)

NOT TO SCALE

EUROPASIA
Engineering Services Sdn. Bhd.
No. 63A-2 & 65-2, Petaling Utama Avenue,
Jalan PJS 1/50, Taman Petaling Utama,
46150 Petaling Jaya, Selangor Darul Ehsan

SUMMARY OF ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATING MEASURES

CONSTRUCTION PHASE



LOGISTIC ROUTES

Logistic access: Jalan Nilai-Labu-Seremban (Federal Route 362) and Jalan Felda Sendayan (Federal Route 1265) → Project Site

Impact

- Noise and dust disturbances.
- Increment of traffic risks especially by heavy vehicles plying Jalan Nilai-Labu-Seremban (Federal Route 362) and Jalan Felda Sendayan (Federal Route 1265).
- Possible oil spillage and spillage of raw construction materials onto public roads.
- The increase of traffic hazards.

Mitigation Measures

- Regular sweeping / cleaning of access roads
- Flagmen must be stationed at the access road junctions to control and direct traffic.
- Vehicles will have to observe speed limits
- Proper warning signs, signals or warning light and barricade are recommended to ensure safety and smooth flow of traffic.
- Two (2) wash troughs are proposed at the Project site's entrance/exit gateway.



WORKERS ACCOMMODATION

- It is estimated that 100 workers shall be needed during construction stage.
- Direct discharge of untreated sewage can cause water and air pollution.

Impact

- Impact related to generation of sewage and solid waste.
- Without proper sewage management untreated raw sewage could cause water pollution and lead to spread of disease and thus creating hazards to the communities nearby

Mitigation Measures

- Workers accommodation and the site office should be kept clean at all time.
- Maintain high quality of housekeeping within the workers accommodation.
- Sufficient basic amenities such as water and electricity must be available.
- No open-burning of rubbish should be carried out .
- Comply with the Employees' Minimum Standard of Housing Accommodations and Amenities (Accommodation & Centralized Accommodation) Regulations 2020.



SOIL EROSION

Impact

- Under the worst-case scenario and no erosion control mitigation measures are implemented, the erosion rates of soil loss are estimated to be 96.27 tons/ha/year for the Stage 1, 110.53 tons/ha/year for the Stage 2, 147.02 tons/ha/year for the Stage 3, 140.63 tons/ha/year for the Stage 4, and 77.49 tons/ha/year for the Stage 5.
- The estimated sediment yield is 1,737.76 tons for the Stage 1, 1,956.67 tons for the Stage 2, 1,060.54 tons for the Stage 3, 808.64 tons for the Stage 4, and 382.89 tons for the Stage 5

Mitigation Measures

- Implementation of LD- P2M2.
- Provision of eight (8) sediment basins.
- Maintenance of the drainage network and sediment basin.
- Biotechnical protection and mechanical practices to attend to the exposed soil.
- Compliance to COAs



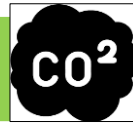
NOISE POLLUTION

Impact

- High noise level will create nuisance and pose psychological effect to the receptors, and to some extent may cause physiological effect.

Mitigation Measures

- Construction activities should be done only during day-time.
- Maintain all and equipment machinery.
- Provision of hoardings in order to reduce the impact of noise towards the residents and receptors.



AIR POLLUTION

Impact

- Increased level of PM10 and PM2.5 due to spillage or wind-blown dust from uncovered material.
- Burning of domestic waste and other construction material will generate soot and dust.
- Traffic movement on dirt road will churn up the surface and may incite hazy condition especially during dry and windy periods.
- As the prevailing wind from the Northwest in this region, it might affect the Institut Pendidikan Guru Malaysia, English Learning Teaching Centre, Politeknik Nilai and TechPark II.

Mitigation Measures

- Provision of wash trough.
- Constant wetting and cleaning of roads connecting the Site to external public roads.
- Proper covering of raw materials and topsoil stockpiles.
- Traffic management trough speed limits and regular maintenance of vehicles / machinery.
- To erect hoarding as specified in LDP2M2 Layout



WASTE GENERATION

Impact

- Indiscriminately dumping of domestic waste.
- Sewage to be generated during the construction stage is at 22,500 l/day (~estimated 100 workers; which is equivalent to 100 PE).
- Diesel or hydraulic oil spill onto soil causing the soil contamination.

Mitigation Measures

- All biomass, building and domestic waste will be disposed off site to an approved dumpsite (i.e. Ladang Tanah Merah Sanitary Landfill).
- No burning of waste
- Temporary toilets should be desludged regularly.
- All scheduled waste must be handled as per requirements of the Environmental Quality (Scheduled Wastes) Regulations 2005.



WASTE MANAGEMENT

Impact

- Indiscriminate, discharge of untreated industrial wastewater and residential sewage can be detrimental to the water quality.
- All drainage systems and piping will be clogged if the sillage and kitchen wastes are discharged without a proper trap.
- Improper disposal of solid waste may affect aesthetic quality, a source of water contamination and proliferation of disease vectors.

- Provision of industrial effluent treatment system (IETS) for Industry and Sewerage Treatment Plant for residential and commercial, if applicable.
- Solid waste shall only be disposed at an approved dumpsite landfill under the jurisdiction of Majlis Bandaraya Seremban (MBS).



SCHEDULE WASTE MANAGEMENT

Impact

- Sludge cake (SW204) from the Industrial Effluent Treatment Plant, slag (SW104) from APCS, spent solvents, spent ink waste, spent dyeing pigment, spent lubricating oil, spent hydraulic oil and metal waste.
- Contaminated rags (SW410) for the daily works conducted by the workers in the premises.
- A potential hazard to the human health or the environment (soil and water) when improperly treated, stored, transported or disposed off or managed.



AIR AND NOISE

Impact

- Since the type of industries proposed in this development are light to heavy industry, air emission (if any) is expected at this Project Site to comply with Clean Air Regulations 2014.
- Increasing of traffic contributing factors to air and noise pollution.

Mitigation Measures

- Provision of sufficiently sized junctions, traffic signages and proper maintenance of road network system.
- Regulatory procedures or control of traffic emissions to comply with the legislative limits.
- Heavy landscaping can be used to naturally screen the surroundings.
- Provision of sufficient buffer zone for the Proposed light, medium and heavy Industrial Development.

Mitigation Measures

- The Project Proponent needs to notify DOE (Negeri Sembilan) and keep the inventory records as per Second Schedule (Regulation 3) and Sixth Schedule (Regulation 12) under Environmental Quality (Scheduled Wastes) Regulations 2005.
- The contaminated rags (SW410), slag (SW104) and sludge cake (SW204) generated from the medium and heavy industrial activities needs to be labelled, packed, stored and disposed of properly at approved prescribed premises. Any hazardous wastes generated from unplanned incidents will also be managed in a similar manner.
- A waste generator may store scheduled wastes generated for 180 days or less after its generation provided that the quantity of scheduled wastes accumulated on site shall not exceed 20 metric tonnes.
- The containers that are used to store scheduled wastes shall be clearly labeled with the date when the scheduled wastes are first generated as well as the name, address and telephone number of the waste generator as per Third Schedule (Regulation 10) Environmental Quality (Scheduled Wastes) Regulations 2005.



BIOLOGICAL ENVIRONMENT

Impact

- Biological impacts are basically upon re-planting of greeneries by landscaping.

Mitigation Measures

- Re-establish and diversify the flora and fauna species, albeit nominal in the Site.
- The selected plant species should be from the species found around Malaysia that are suitable for the climate and local environmental conditions through the selection of native species.
- Implementation of aesthetically pleasing, visually enhancing and extensive landscaping will attract a community of small animals and provide a wholesome environment.



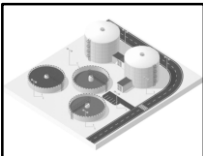
STORMWATER MANAGEMENT

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

- During a rain storm, all the surfaces runoff from the development area flows into a series of proposed internal drains before being discharged into collective drains and being conveyed into the proposed eight (8) numbers of detention ponds to be retained first before being final discharged into Sg. Gadong and Sg. Jijan.



INDUSTRIAL WASTEWATER

Impact

- The untreated industrial effluent discharge from the proposed IETS under the low river flow (worst case scenario), the overall water quality category in the tributary of Sg. Jijan will be changed from Class II to Class IV and Class V during the average discharge and peak discharge respectively.

Mitigation Measures

- If the industrial effluent discharge complies with DOE Standard A limit, the overall water quality category at the downstream of the Project Site in Sg. Labu will remain as Class III.

OPERATIONAL PHASE

No	Parameter @ Industrial Effluent (IETS) = 29,075,440 L/day or ~ 1,211.5m ³ /hr		*Water Quality Classification for River		Recommended Compliance Limits
			Final Discharge Receiving Location (Sg. Jijan)	W8 @ Sg Labu Water Intake (Sg Labu)	
1	Baseline	BOD	IIA/IIB	IIA/IIB	<u>IETS Discharge Limit</u> DOE Std A Limit BOD = 20mg/L
	Worst Case Scenario, mg/L	BOD (300)	V	V	
	DOE Std A Limit, mg/L	BOD (20)	IV	III	
2	Baseline	NH ₃ -N	I	IIA/IIB	<u>IETS Discharge Limit</u> DOE Std A Limit NH ₃ -N= 10mg/L
	Worst Case Scenario, mg/L	NH ₃ -N (50)	V	V	
	DOE Std A Limit, mg/L	NH ₃ -N (10)	V	IV	
3	Baseline	TSS	I	I	<u>IETS Discharge Limit</u> DOE Std A Limit TSS= 50mg/L
	Worst Case Scenario, mg/L	TSS (200)	III	IIA/IIB	
	DOE Std A Limit, mg/L	TSS (50)	IIA/IIB	I	
4	Baseline	COD	IIA/IIB	IIA/IIB	<u>IETS DOE Std A Limit</u> DOE Std A Limit COD = 80mg/L
	Worst Case Scenario, mg/L	COD (1,000)	V	V	
	DOE Std A Limit, mg/L	COD (80)	III	III	
5	Baseline	O&G	IIA/IIB	IIA/IIB	<u>IETS DOE Std A Limit</u> DOE Std A Limit O&G = 1mg/L
	Worst Case Scenario, mg/L	O&G (50)	IV	IV	
	DOE Std A Limit, mg/L	O&G (1)	IIA/IIB	IIA/IIB	

No.	Scenario for Industrial Effluent Discharge	* Water Quality Index & Category for River	
		Final Discharge Receiving Location (Sg. Labu)	W8 @ Sg Labu Water Intake (Sg Labu)
1	Baseline	II (90)	II (84)
2	Worst Case Scenario	IV (34)	IV (43)
3	DOE Std A Limit	III (62)	III (75)



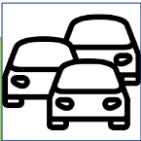
SOCIO-ECONOMIC ENVIRONMENT

Impact

▪Increase current status of living of the local population residing nearby in terms of public utilities, amenities, infrastructures and increase employment opportunities.

Mitigation Measures

- Employment will change from low-skilled workers to jobs requiring higher skills and qualifications.
- With the anticipated influx of workers to the region due to numerous job opportunity.
- The perceived health issues, crime and community safety associated with the proximity of foreign workers do not arise as the majority of the new entrants into the workforce would likely be Malaysians from around the region.



TRAFFIC

Impact

Trip generation for the proposed development based on trip rates and land use components.:

Morning Peak

- Generate - 2,478 pcu/hr
- Attract - 4,920 pcu/hr

Evening Peak

- Generate - 3,820 pcu/hr
- Attract - 2,479 pcu/hr

Mitigation Measures

- Junction improvements have been recommended to ensure smooth and safe flow of traffic and acceptable level of service performance for the surrounding junctions.

SUMMARY OF IMPACT MONITORING, COMPLIANCE MONITORING AND PERFORMANCE MONITORING

Impact/ Monitoring Aspect	Monitoring Parameter	Compliance Limit	Monitoring Frequency	Impact Monitoring (IM)	Compliance Monitoring (CM)	Performanc e Monitoring (PM)
CONSTRUCTION PHASE						
Water Quality	pH	6.0-9.0	Monthly	√	√	Not Applicable
	Temperature	-				
	Dissolve Oxygen	5mg/L – 7mg/L				
	Chemical Oxygen Demand	25mg/L				
	Biological Oxygen Demand	3mg/L				
	Total	50mg/L				
	Suspended Solid					
	Oil & Grease	7;N				
	Ammoniacal Nitrogen	0.3mg/L				
	Feacal Coliform Count	100 (MPN/100mL)				
	Total Coliform Count	5,000 (MPN/100mL)				
	Turbidity	250 NTU				
Sediment Basin	• Total Suspended Solid (TSS) • Turbidity	50mg/L 250NTU	(i) Monthly (ii) Biweekly (iii) Per rainfall event	Not Applicable	√	√
Check Dam		Not applicable	(i) Biweekly (ii) Per rainfall event	Not Applicable	Not Applicable	√
Temporary Earth Drain/Bund						
Hoarding/ new jersey barrier						
Stabilized Construction Access						
Wash through						

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	• PM10 (24 hours)	100µg/m ³	Quarterly	✓	✓	Not Applicable
	• PM2.5 (24 hours)	35µg/m ³				
	• SO2 (24 hours)	80µg/m ³				
	• CO (8 hours)	10mg/m ³				
	• NO2 (1 hours)	280µg/m ³				
	• Ozone (1 hours)	180µg/m ³				
Noise Level	• L₁₀ • L₉₀ • L_{min} • L_{max}	For L _{eq} , Day-Time 65.0 dBA Night-Time 60.0 dBA	Quarterly	✓	✓	Not Applicable
Vibration Level	• Peak Particle Velocity at X-axis • Peak Particle Velocity at Y-axis • Peak Particle Velocity at Z-axis • Peak Vector Sum • Vertical Vibration Peak Velocity	The Planning Guidelines for Environmental Vibration Limits & Control, Department of Environment				

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)
OPERATIONAL PHASE						
Industrial Effluent Discharge (for Individual IETS Discharge)	• Temperature (on-site) • pH (on-site) • Biological Oxygen Demand, BOD*5 days @ 20°C • Suspended Solids • Mercury as Hg • Cadmium as Cd • Hexa-Chromium as Cr⁶⁺ • Tri-Chromium as Cr³⁺ • Arsenic as As • Cyanide as CN • Lead as Pb • Copper as Cu • Manganese as Mn • Nickel as Ni • Tin as Sn • Zinc as Zn • Boron as B • Iron as Fe • Silver as Ag • Aluminium as Al • Selenium as Se • Barium as Ba • Fluoride as F • Formaldehyde • Phenol • Free Chlorine as Cl₂ • Sulphide as S²⁻ • Oil & Grease • Ammoniacal Nitrogen, NH₃N • Color	40 6.0-9.0 20mg/L 50mg/L 0.005mg/L 0.01mg/L 0.05mg/L 0.20mg/L 0.05mg/L 0.05mg/L 0.10mg/L 0.20mg/L 0.20mg/L 0.20mg/L 2.0mg/L 1.0mg/L 1.0mg/L 0.10mg/L 10.0mg/L 0.02mg/L 1.0mg/L 2.0mg/L 1.0mg/L 0.001mg/L 1.0mg/L 0.50mg/L 1.0mg/L 10mg/L 100	As per legislative requirement	✓	✓	✓
Stack Monitoring (for Individual Stacks using CEMS) Note: - If applicable under Environmental Quality (Clean Air) Regulations 2014.	As per Environmental Quality (Clean Air) Regulations 2014 depends on Type of Industries, Processes and Equipment.	As per Environmental Quality (Clean Air) Regulations 2014	As per legislative requirement	✓	✓	✓

“The report has assessed the three (3) main facets of environmental entities i.e. physical, biological and socio-economics of the human settlements with the integration of the proposed residential and commercial development. Studies were carried out within the project site itself and its surrounding areas.”



PLANNING

- The proposed Project Site is located within *Blok Perancangan (BP) 7- Labu* and compatible with the projected land use for Mixed Development Zone (i.e. Industrial, Commercial and Residential).
- Types of Industry to be allowed within the Project Site are following RT MVV 2045.
- The proposed Project is a mixed development which falls under :
 - a) Prescribed Activities 17 – Industrial Estate Development; and
 - b) Prescribed Activities 16 – Housing; and
 - c) Prescribed Activities 18 – New Township; and

under the First Schedule of the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order, 2015 made under subsection 34A of the Environmental Quality (Amendment) Act 2012.

- This proposed light, medium and heavy industrial development complements the adjacent proposed industrial of Vision Business Park and TechPark@Enstek III in the southwestern boundary. Adequate buffer have been provided for Light industrial development (50m), medium industrial development (150m) and Heavy industrial development (300m).



PHYSICAL

- The Project Site was located within the valley of the Sg. Gadong and Sg. Jijan which flows towards northwest across Kampung Jijan to meet Sg. Chinchang near Taman Desa Merpati prior to discharging into Sg. Labu.
- All surface run-off from the proposed industrial development catchment area is channeled into eight (8) detention ponds via the roadside drains and main drain system. Roadside drains are designed to channel flow up to 10-years return period storm while the main drains and detention ponds are designed to channel flow up to 100-years return period storm to ensure a good drainage and drainage system can be provided so as not to cause problems such as flash floods and the like.



PHYSICAL

- Erosion and sedimentation control measures must be instituted as per the recommendations of the Land Disturbing Pollution Prevention and Mitigation Measures (LDP2M2). The proposal of eight (8) sediment basins, temporary earth drains, check dam, silt fences and sand bags, wash troughs and hoarding for the overall development must be carried out in order to ensure that the surface runoff is at a manageable level to ensure compliance to limits on surface runoff control as well as to protect the water quality of the existing rivers.
- Based on the prevailing wind occurrence from northeast direction, the air-borne particulates from the activities within the Project Site might directly affect workers within the Project Site and nearest receptors such as English Language Teaching Centre, Politeknik Nilai and TechPark@ENSTEK II in the southwestern region from the Project Site.
- Comparing the distance and noise prediction of the typical construction equipment during site clearing and earthworks activities, it can conclude that Institut Pendidikan Guru Malaysia, Kampus Pendidikan Teknik English Language Teaching Centre and Politeknik Nilai might experience excessive noise levels emitted from construction machineries; if not mitigated. However, vibration from the construction machineries is not anticipated to generate perceptible levels of vibration at nearby established residences/ settlements due to the considerable propagation distances.
- The the generated sewage discharge from total population equivalent (PE) of 70,000 will be channeled to the proposed sewage treatment plant (STP), which is located in the northern portion of the Project Site, to be treated prior to discharging into Sg. Jijan and subsequently Sg. Labu. As for water quality, the final discharge of the proposed STP shall be designed and compliance to DOE Standard A Limit as there are three (3) water intake points (i.e. Sg. Labu, Salak Tinggi, Labohan Dagang Water Treatment Plants' water intake points) located approximately 14 km, 19 km and 34 km downstream of the Project Site respectively. During the full operational of the proposed STP, an approximately 15,750,000 L/day will be generated at the average discharge.
- All the solid wastes (i.e. biomass, construction debris and domestic waste) will be disposed off site to a legal dumpsite (i.e., Ladang Tanah Merah Sanitary Landfill) which is located approximately 12km by vehicle journey distance from the Project Site while the scheduled waste from the industrial premises can be disposed off to the nearest hazardous and scheduled waste disposal facility which is managed and operated by Kualiti Alam Sdn. Bhd. (beside Ladang Tanah Merah Sanitary Landfill).



BIOLOGICAL

- Based on the *Rancangan Tempatan Malaysia Vision Valley (RT MVV) 2045*, the Proposed Project Site is not located in an Environmentally Sensitive Area (ESA). The nearest ESA is Galla Forest Reserve (ESA Rank 1 & 2) which is located 5.2km north of the Project Site.
- The predominant vegetation in this area is mature to old planting oil palm (*Elaeis guineensis*) covering the whole Project Site.
- Although the Project Site can be considered as disturbed environment, there are bird species, small mammals, reptiles such as lizards and snakes which are expected can be found within the Project Site.



SOCIO-ECONOMIC

- Project Development activities must take into the consideration of the nearest existing receptors which are Tunas Residensi, Nada Bidara, English Language Teaching Centre, Institut Pendidikan Guru and Politeknik Nilai, Taman Gadong Jaya, Tiara Sendayan, Taman Eka Matahari and road users of Jalan Nilai-Labu-Seremban (Federal Route 362) and Jalan Felda Sendayan (Federal Route 1265) as well as Jalan Nilai-Labu-Enstek (NLE) to ensure there are minimal disruptions to their well being.

