



**RINGKASAN
EKSEKUTIF**



Elite Environmental Consulting



RINGKASAN EKSEKUTIF

**PROPOSED MIXED DEVELOPMENT ON LOT
8746 WITH AN AREA 58.5604 HECTARES
(144.7059 ACRES) IN MUKIM CHENDERIAH,
DISTRICT OF BATANG PADANG, PERAK
DARUL RIDZUAN**

PENGERAK PROJEK

**TARAF NUSANTARA SDN BHD
(NO. SYARIKAT: 1115975 - K)**

No. 131, Persiaran PM 2/1, Pusat Bandar
Seri Manjung, seksyen 2, 32040 Seri
Manjung, Perak.

PERUNDING ALAM SEKITAR

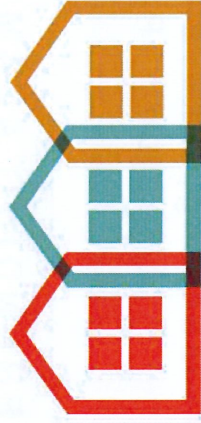
**ELITE ENVIRONMENTAL
CONSULTING**

(NO. SYARIKAT: 002700870 - D)

No. 3, Jalan LEP 6/10, Taman Lestari
Putra, Seksyen 6, 43300 Seri
Kembangan, selangor.

KEPERLUAN PERUNDANGAN

KUALITI ALAM SEKELILING (AKTIVITI YANG DITETAPKAN)(PENILAIAN KESAN KEPADA ALAM SEKELILING)2015



JADUAL PERTAMA

AKTIVITI 16

“PERUMAHAN: Pembangunan perumahan yang meliputi kawasan seluas 50 hektar atau lebih”

STATEMENT OF NEED

NATIONAL HOUSING POLICY

- Provides adequate and quality housing
- Enhance capability and accessibility to own or rent house
- Set future direction to ensure sustainability housing sector

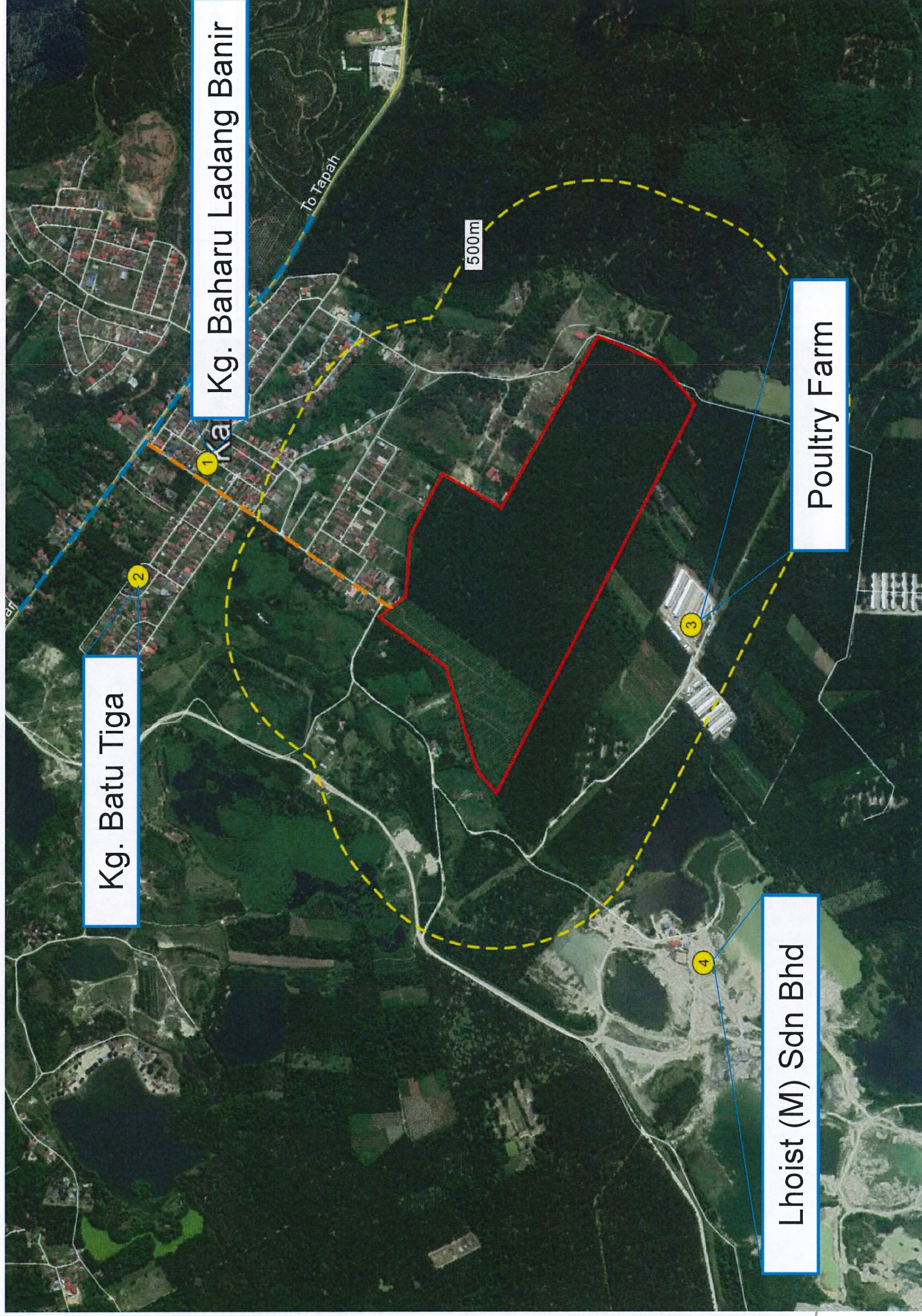
RANCANGAN STRUKTUR NEGERI PERAK 2020

- Pembangunan bandar & desa ke arah kemakmuran dan kesejahteraan hidup rakyat
- Mewujudkan persekitaran & ekosistem bandar dan & desa lebih moden

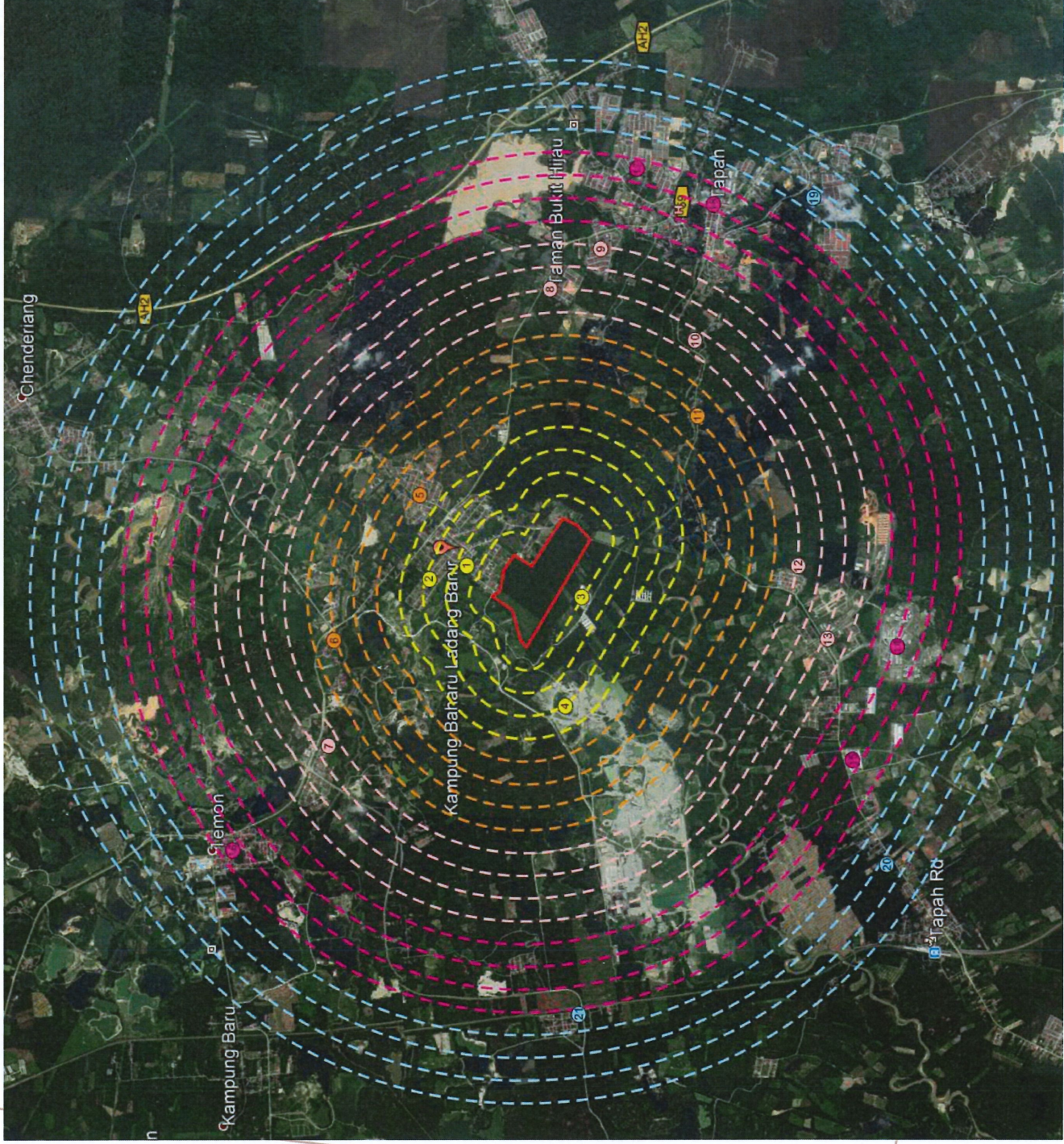
DASAR RANCANGAN STRUKTUR NEGERI PERAK 2020

- Meningkatkan kualiti hidup rakyat sejajar dengan peningkatan indeks kualiti hidup malaysia dan Pelan Intergriti Nasional

500M RADIUS DARI TAPAK CADANGAN PROJEK DAN KAWASAN TERDEKAT



5KM RADIUS DARI TAPAK CADANGAN PROJEK DAN KAWASAN TERDEKAT

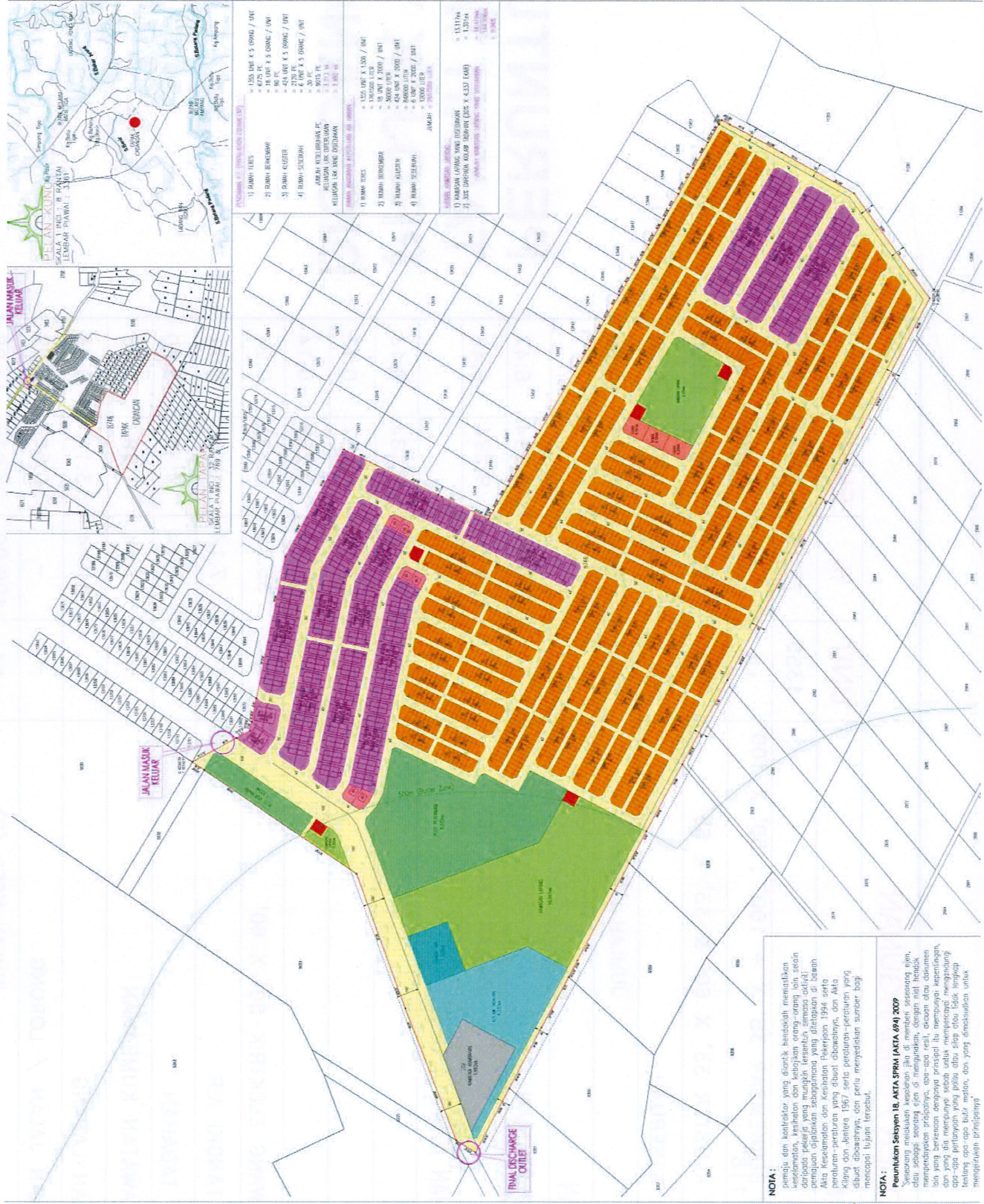


LEGEND



No.	Location
1	Kampung Baharu Ladang Banir
2	Kampung Batu Tiga
3	Poultry Farm
4	Lhoist Malaysia Sdn Bhd
5	Kampung Muhibbah Chenderiang
6	Kampung Pasir
7	Kampung Batu Masjid Temoh
8	Taman Bukit Hijau
9	Taman Anson
10	Kampung Raya
11	Kampung Ampang
12	Kampung Baharu Pekan Getah
13	Kampung Baharu Batu Empat
14	UITM Cawangan Tapah
15	Kampung Baru Lima
16	Bandar Temoh
17	Taman Tapah
18	Bandar Tapah
19	Kampung Baru Bukit Pagar
20	Kampung Changkat Dermawan
21	Kampung Dato' Banir

CADANGAN PELAN SUSUNATUR



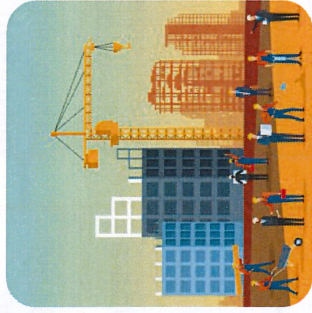
NOTA:
 1) BANGUNAN YANG DITUNJUKKAN
 2) JALAN DAN RUMAH RUMAH
 3) JALAN DAN RUMAH RUMAH
 4) JALAN DAN RUMAH RUMAH

NOTA:
 1) BANGUNAN YANG DITUNJUKKAN
 2) JALAN DAN RUMAH RUMAH
 3) JALAN DAN RUMAH RUMAH
 4) JALAN DAN RUMAH RUMAH

PERUNTUKAN TANAH TAPAK PROJEK YANG DICADANGKAN

KOMPONEN PEMBANGUNAN					
A - KEDIAMAN		UNIT	%	EKAR	%
	RUMAH TERES 20' X 65'	1355	73.15	48.274	33.36
	RUMAH BERKEMBAR 35' X + 100' , 50' X 100' 55' X 118'	18	1.00	1.845	1.27
	RUMAH KLUSTER 33' X 60' & 33' X 65'	424	23.52	19.774	13.66
	RUMAH SESEBUAH	6	0.33	0.581	0.40
	JUMLAH KECIL (A)	1803	100.00	70.474	48.69
B - PERTANIAN					
	PLOT PERTANIAN	1	100.00	9.294	6.42
	JUMLAH KECIL (B)	1	100.00	9.294	6.42
C - KEMUDAHAN AWAM / UTILITI					
	DEWAN	1	7.14	0.184	0.13
	SURAU	1	7.14	0.187	0.13
	TADIKA	1	7.14	0.209	0.14
	PENCAWANG ELEKTRIK 50' X 60'	5	35.72	0.346	0.24
	RIZAB TANGKI AIR	1	7.14	1.025	0.71
	KOLAM TADAHAN	1	7.14	4.337	3.00
	LOJI RAWATAN KUMBAHAN	1	7.14	1.992	1.38
	KAWASAN LAPANG	3	21.44	13.117	9.06
	SIMPANAN JALAN / LORONG	-	-	50.563	30.09
	JUMLAH KECIL (C)	14	100.00	64.938	44.88
	JUMLAH KESELURUHAN	1818	100.00	144.706	100.00

AKTIVITI PROJEK



PENYIASATAN

- *Land Surveying*
- *Soil Investigation*
- *Environmental Baseline Studies*
- *Penilaian Alam Sekitar*

PEMBINAAN

- *Pembersihan Kawasan tapak*
- *Kerja tanah*
- *Pembinaan infrastruktur, system saliran, kolam perangkap mendap, bangunan dan struktur.*
- *Landskap*
- *Pengurusan sisa pepejal*

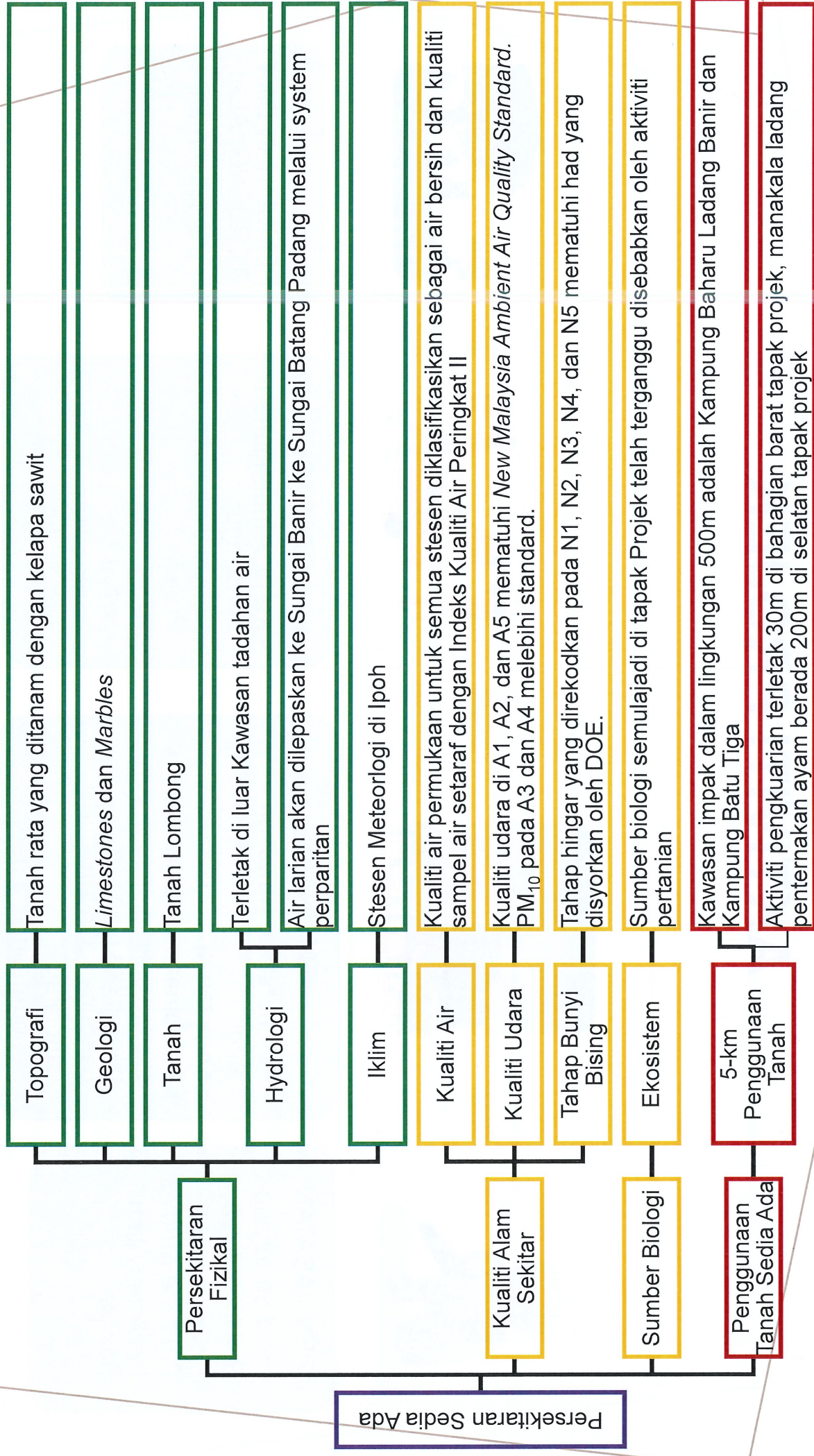
OPERASI

- *Kerja pembangunan bercampur*
- *Penyelenggaraan Projek*
- *Pengurusan sisa pepejal*
- *Pengurusan kumbahan*

PEMULIHAN DAN TERBENGKALAI

Pemuliharaan

PERSEKITARAN SEDIA ADA



CADANGAN PROGRAM PEMANTAUAN

PERFORMANCE MONITORING

Performance Monitoring (PM)	Lokasi	Langkah-langkah kawalan	Penyediaan		Status (Pemasangan)	Maklum balas daripada kontraktor bertarikh (Hari / bulan / tahun)(Penyenggara an: Balas kepada tarikh / bulan / tahun)	Pemerhatian /kajian /Cadangan (Pemeriksaan Terakhir - tarikh / bulan / tahun)	Pemerhatian /kajian /cadangan(Pemeriksaan Terkini - tarikh / bulan / tahun)	Diterima (✓/x)
			ESCP	Terperinci					
Kolam Perangkap dan kawasan sekitar	Kolam Perangkap	Kawalan Kelodak							
	Perlepasan Akhir								
	Jalan Akses	Kawalan Habuk							
Gabion Walls/ Silt fences and other control	Pejabat Tapak	Minyak & gris Buangan Terjadual (SW)							
	Jalan Akses	Kawalan Habuk							
	Kuarters Pekerja	Minyak & gris Buangan Terjadual (SW)							
	Jalan Akses Sementara (longkang/A lur air/ alur limbah)	Kawalan Kelodak							

CADANGAN PROGRAM PEMANTAUAN COMPLIANCE MONITORING

Compliance monitoring (CM)	Pemantauan Parameter	Stesen Pemantauan	Lokasi	Koordinat	Kekerapan pemantauan	Standard
Kolam perangkap	TSS	SP 1	Mewakili kolam perangkap di utara tapak Projek	4°12'30.76" N 101° 13'19.74" E	Setiap bulan	TSS ≤50 mg/l
Pemantauan tapak oleh CESSWI	-	-	Tapak Projek	-	Suku tahunan dan dalam tempoh 24 jam selepas storm event of ≥12.5mm	Syarat kelulusan EIA, LD P2M2, EMP and ESCP
Audit Alam Sekitar	-	-	Tapak Projek	-	Suku tahunan semasa peringkat kerja tanah, tahunan semasa peringkat operasi	Syarat-syarat DOE kelulusan EIA, undang-undang dan peraturan yang berkaitan

best-practice monitoring
COMPLIANCE MONITORING
CYBERJAYA b60c85w1 b60c85w1 b60c85w1

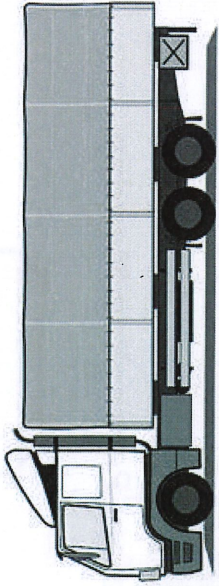
CADANGAN PROGRAM PEMANTAUAN IMPACT MONITORING

Impact Monitoring (IM)	Parameter Pemantauan	Stesen Pemantauan	Lokasi	Kordinat	Frekuensi Pemantauan	Standard
Pemantauan Kualiti Air	pH, temp, COD, BOD, DO, TSS, Oil and Grease, Ammoniacal Nitrogen	W1	Mewakili tahap kualiti air di Sungai Bahir, berdekatan tapak projek	4°12'30.76" N 101° 13'19.74" E	Tiga bulan sekali	Complied to IWQS Class II
		W2	Mewakili tahap kualiti air di kolam sediada terletak barat laut dari tapak projek	4°12'23.16" N 101° 12'39.00" E		
		W3	Mewakili tahap kualiti air di kolam sediada terletak barat dari tapak projek	4°13'06.29" N 101° 12'55.58" E		
		W4	Mewakili tahap kualiti air di Sungai Batang Padang (Downstream)	4°11'31.17" N 101° 11'56.06" E		
		W5	Mewakili tahap kualiti air di Sungai Batang Padang (Downstream)	4°11'42.26" N 101° 12'31.96" E		
		W6	Mewakili tahap kualiti air di Sungai Batang Padang (Downstream)	4°12'00.35" N 101° 14'03.76" E		
Pemantauan Kualiti Udara	PM ₁₀ , PM _{2.5} , NO ₂ , SO ₂ , CO, O ₃	A1	Mewakili tahap kualiti udara di sempadan tapak Projek	4°12'47.21" N 101° 12'56.08"E	Tiga bulan sekali	PM _{2.5} ≤35 µg/m ³ PM ₁₀ ≤100 µg/m ³ NO ₂ ≤280 µg/m ³ SO ₂ ≤80 µg/m ³ CO ≤10 µg/m ³ O ₃ ≤180 µg/m ³
		A2	Mewakili tahap kualiti udara di Sekolah Kebangsaan Batu Tiga	4°13'28.71" N 101°13'37.32" E		
		A3	Mewakili tahap kualiti udara di Kampung Batu Tiga	4°11'52.71" N 101° 13'49.12" E		
		A4	Mewakili tahap kualiti udara di Kampung Baharu Batu Empat	4°11'35.58" N 101° 13'48.83" E		
		A5	Mewakili tahap kualiti udara di Kampung Ampang	4°11'53.85" N 101° 14'20.61" E		

CADANGAN PROGRAM PEMANTAUAN IMPACT MONITORING

Impact Monitoring (IM)	Parameter Pemantauan	Stesen Pemantauan	Lokasi	Kordinat	Frekuensi Pemantauan	Standard
Tahap Bising	L ₁₀ , L ₅₀ , L ₉₀ , Total Leq dB(A)	N1	Mewakili tahap bising di sempadan tapak projek	4°12'47.21" N 101° 12'56.08"E	Tiga bulan sekali	Total Leq (Daytime) Total Leq (Nighttime) ≤55
		N2	Mewakili tahap bising di Sekolah Kebangsaan Batu Tiga	4°13'28.71" N 101°13'37.32" E		
		N3	Mewakili tahap bising di Kampung Batu Tiga	4°11'52.71" N 101° 13'49.12" E		
		N4	Mewakili tahap bising di Kampung Baharu Batu Empat	4°11'35.58" N 101° 13'48.83" E		
		N5	Mewakili tahap bising di Kampung Ampang	4°11'53.85" N 101° 14'20.61" E		
Pemantauan Gegeran	Vibration Peak Velocity, V _{max} (mm/s)	V1	Mewakili tahap gegaran di sempadan tapak projek	4°12'47.21" N 101° 12'56.08"E	Tiga bulan sekali (Jika Perlu)	Safe Level: Less than 3

CADANGAN PENCEGAHAN PENCEMARAN DAN LANGKAH MITIGASI PENCEMARAN UDARA



Kenderaan yang membawa tanah keluar dari tapak perlu ditutup



Pengawasan Berkala



Landskap di Sempadan Projek



Browser Air



Tiada Pembakaran Terbuka di Kawasan Projek

CADANGAN PENCEGAHAN PENCEMARAN DAN LANGKAH MITIGASI

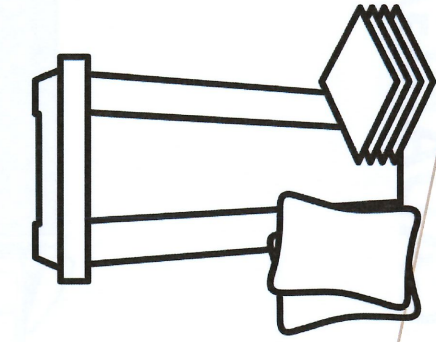
HAK ISAN TANAH DAN PENCEMARAN AIR



Kolam Perangkap Mendap



Longkang Tanah



Kit Tumpahan



Check Dam



Tanaman Tutup Bumi

CADANGAN PENCEGAHAN PENCEMARAN DAN LANGKAH MITGASI

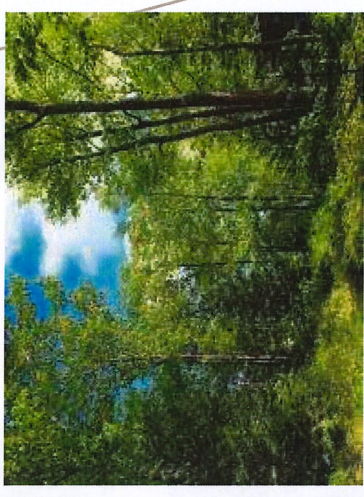
PENCEMARAN BUNYI DAN GEGARAN



Penutup Telinga



Plug Telinga



Zon Penanaman Semulajadi

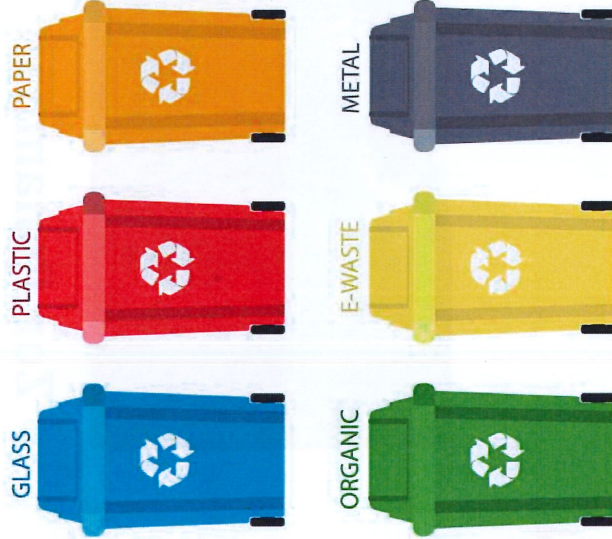


Pengawasan Berkala



Ujian Audiometrik

CADANGAN Pencegahan Pencemaran dan Langkah Mitigasi Pencemaran Sisa Pepejal dan Merbahaya





EXECUTIVE SUMMARY



Elite Environmental Consulting



EXECUTIVE SUMMARY

**PROPOSED MIXED DEVELOPMENT ON LOT
8746 WITH AN AREA 58.5604 HECTARES
(144.7059 ACRES) IN MUKIM CHENDERANG,
DISTRICT OF BATANG PADANG, PERAK
DARUL RIDZUAN**

PROJECT PROPONENT

**TARAF NUSANTARA SDN BHD
(COMPANY NO.: 1115975 - K)**

No. 131, Persiaran PM 2/1, Pusat Bandar
Seri Manjung, seksyen 2, 32040 Seri
Manjung, Perak.

EIA CONSULTANT

**ELITE ENVIRONMENTAL
CONSULTING**

(COMPANY NO.: 002700870 - D)

No. 3, Jalan LEP 6/10, Taman Lestari
Putra, Seksyen 6, 43300 Seri
Kembangan, selangor.

LEGISLATIVE REQUIREMENT

ENVIRONMENTAL QUALITY (PRESCRIBED ACTIVITIES)(ENVIRONMENTAL IMPACT ASSESSMENT)
ORDER 2015



FIRST SCHEDULE

PRESCRIBED ACTIVITY 16:

“HOUSING: Housing development covering
an area of 50 hectares or more”.

STATEMENT OF NEED

NATIONAL HOUSING POLICY

- Provides adequate and quality housing
- Enhance capability and accessibility to own or rent house
- Set future direction to ensure sustainability housing sector

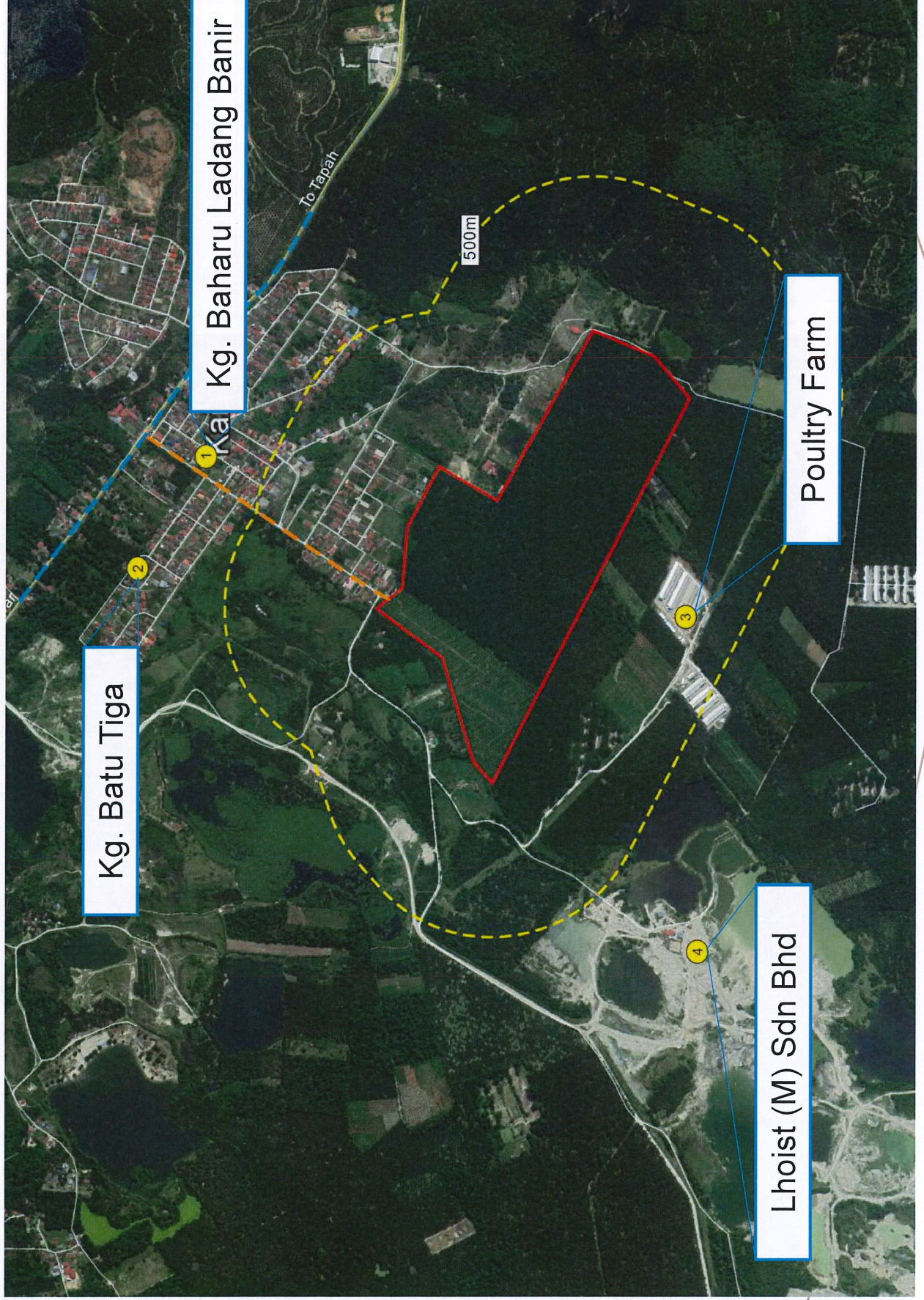
RANCANGAN STRUKTUR NEGERI PERAK 2020

- *Pembangunan bandar & desa ke arah kemakmuran dan kesejahteraan hidup rakyat*
- *Mewujudkan persekitaran & ekosistem bandar dan & desa lebih moden*

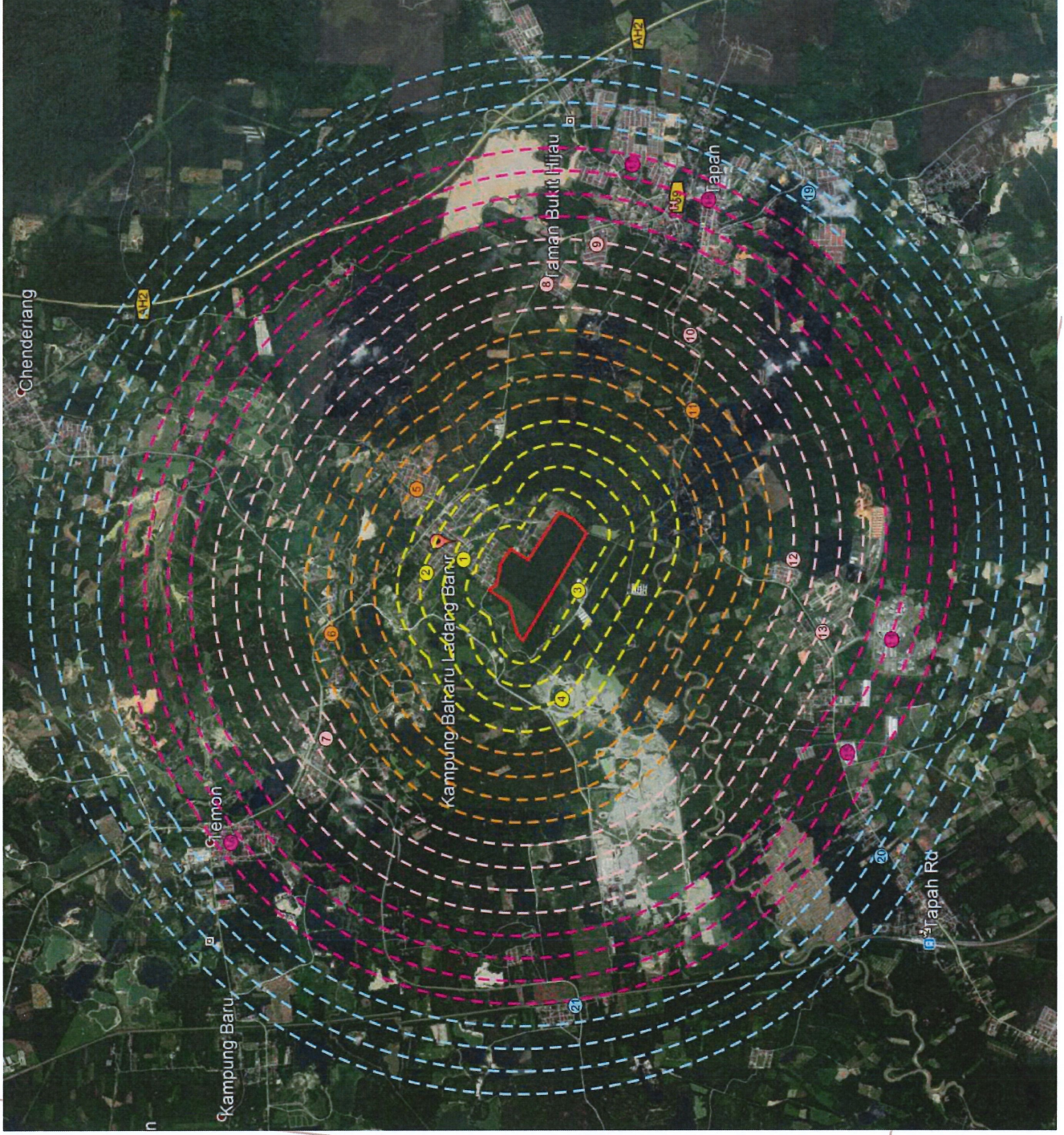
DASAR RANCANGAN STRUKTUR NEGERI PERAK 2020

- *Meningkatkan kualiti hidup rakyat sejajar dengan peningkatan indeks kualiti hidup malaysia dan Pelan Integriti Nasional*

500M RADIUS OF THE PROPOSED PROJECT SITE AND NEAREST RECEPTORS



5KM RADIUS OF THE PROPOSED PROJECT SITE AND NEAREST RECEPTOR



LEGEND

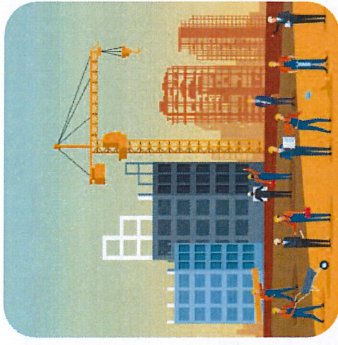


No.	Location
1	Kampung Baharu Ladang Banir
2	Kampung Batu Tiga
3	Poultry Farm
4	Lhoist Malaysia Sdn Bhd
5	Kampung Muhibbah Chenderiang
6	Kampung Pasir
7	Kampung Batu Masjid Temoh
8	Taman Bukit Hijau
9	Taman Anson
10	Kampung Raya
11	Kampung Ampang
12	Kampung Baharu Pekan Getah
13	Kampung Baharu Batu Empat
14	UITM Cawangan Tapah
15	Kampung Baru Lima
16	Bandar Temoh
17	Taman Tapah
18	Bandar Tapah
19	Kampung Baru Bukit Pagar
20	Kampung Changkat Dermawan
21	Kampung Dato' Banir

LAND ALLOCATION OF THE PROPOSED PROJECT SITE

KOMPONEN PEMBANGUNAN					
A - KEDIAMAN		UNIT	%	EKAR	%
	RUMAH TERES 20' X 65'	1355	73.15	48.274	33.36
	RUMAH BERKEMBAR 35' X + 100' , 50' X 100' 55' X 118'	18	1.00	1.845	1.27
	RUMAH KLUSTER 33' X 60' & 33' X 65'	424	23.52	19.774	13.66
	RUMAH SESEBUAH	6	0.33	0.581	0.40
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	PLOT PERTANIAN	1	100.00	9.294	6.42
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	SURAU	1	7.14	0.187	0.13
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	SIMPANAN JALAN / LORONG	-	-	50.563	30.09
	JUMLAH KECIL (C)	14	100.00	64.938	44.88
	JUMLAH KESELURUHAN	1818	100.00	144.706	100.00

PROJECT ACTIVITIES



INVESTIGATION

- Land Surveying
- Soil Investigation
- Environmental Baseline Studies
- Environmental Impact Assessment

CONSTRUCTION

- Site Clearing
- Earthwork
- Construction of Infrastructure, drainage system, sediment basin, buildings and structures
- Landscaping
- Managing wastes

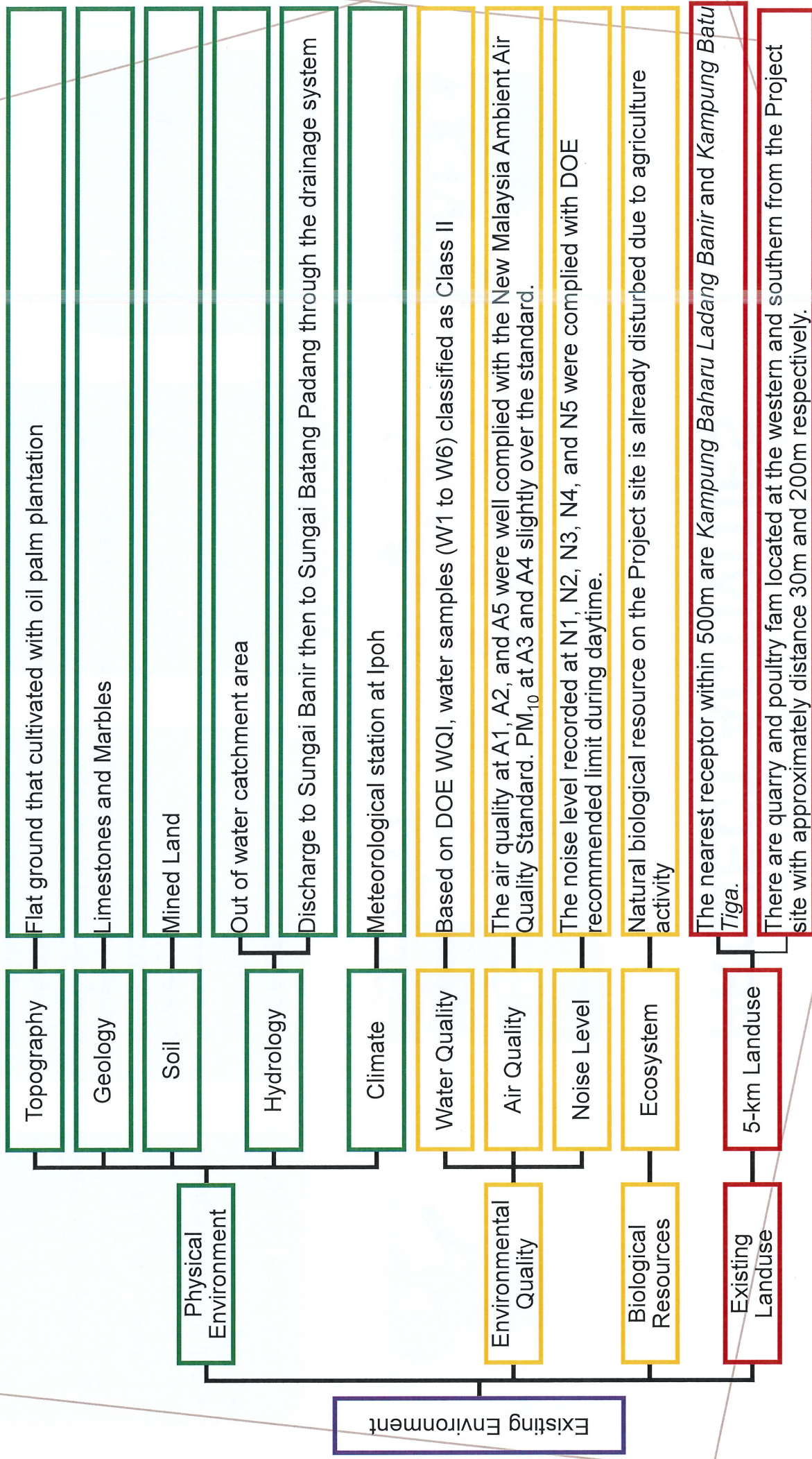
OPERATION

- Development work for mixed development
- Project Maintenance
- Solid waste collection
- Wastewater handling

REHABILITATION AND ABANDONMENT

Rehabilitation

EXISTING ENVIRONMENT



PROPOSED MONITORING PROGRAMME

PERFORMANCE MONITORING

Performance Monitoring (PM)	Location	Control measures	Provision		Status (Installation)	Response from contractor dated (day/month/year) (Maintenance: Reply to date/month/year)	Observations/Findings/Suggestions (Recent inspection – date/month/year)	Observations/Findings/Suggestions (Latest inspection – date/month/year)	Accepted (✓/x)
			ESCP	Actual					
Sediment basin and vicinity area	Sediment basin	Silt control							
	Final Discharge Access Road	Silt control Dust control							
Gabion Walls/Silt fences and other control	Site Office	Oil & Grease Scheduled Waste (SW)							
	Access road	Dust control							
	Worker quarters	Oil & Grease Scheduled Waste (SW)							
	Temporary access road (drain/stream/Spillway)	Silt control							

PROPOSED MONITORING PROGRAMME

COMPLIANCE MONITORING

Compliance monitoring (CM)	Monitoring Parameter	Monitoring Station	Location	Coordinate	Monitoring Frequency	Applicable Standard
Sedimentation Pond	TSS	SP 1	Presenting the sedimentation pond at western of Project area	4°12'30.76" N 101° 13'19.74" E	Monthly	TSS ≤50 mg/l
Site Inspection by CESSWI	-	-	Project Site	-	Quarterly, and within 24 hours after storm event of ≥12.5mm	EIA approval condition, LD P2M2, EMP and ESCP
Environmental Audit	-	-	Project Site	-	Quarterly during earthwork stage, Yearly during operation stage	EIA approval condition, LD P2M2, EMP and ESCP

PROPOSED MONITORING PROGRAMME

IMPACT MONITORING

Impact Monitoring (IM)	Monitoring Parameter	Monitoring Station	Location	Coordinate	Monitoring Frequency	Applicable Standard
Water Quality Monitoring	pH, temp, COD, BOD, DO, TSS, Oil and Grease, Ammoniacal Nitrogen	W1	Representing water quality level at Sungai Banir, near to proposed project area.	4°12'30.76" N 101° 13'19.74" E	Once every three months	Complied to IWQS Class II
		W2	Representing water quality level at existing pond, located southwest from project site	4°12'23.16" N 101° 12'39.00" E		
		W3	Representing water quality level at existing pond, located western from project site	4°13'06.29" N 101° 12'55.58" E		
		W4	Representing water quality level at Sungai Batang Padang, downstream from project site	4°11'31.17" N 101° 11'56.06" E		
		W5	Representing water quality level at Sungai Batang Padang, downstream from project site	4°11'42.26" N 101° 12'31.96" E		
		W6	Representing water quality level at Sungai Batang Padang, downstream from project site	4°12'00.35" N 101° 14'03.76" E		
Ambient Air Quality Monitoring	PM ₁₀ , PM _{2.5} , NO ₂ , SO ₂ , CO, O ₃	A1	Presenting the ambient air quality at Project Boundary	4°12'47.21" N 101° 12'56.08"E	Once every three months	PM _{2.5} ≤35 µg/m ³
		A2	Presenting the ambient air quality at Sekolah Kebangsaan Batu Tiga	4°13'28.71" N 101°13'37.32" E		PM ₁₀ ≤100 µg/m ³
		A3	Presenting the ambient air quality at Kampung Batu Tiga	4°11'52.71" N 101° 13'49.12" E		NO ₂ ≤280 µg/m ³
		A4	Presenting the ambient air quality at Kampung Baharu Batu Empat	4°11'35.58" N 101° 13'48.83" E		SO ₂ ≤80 µg/m ³
		A5	Presenting the ambient air quality at Kampung Ampang	4°11'53.85" N 101° 14'20.61" E		CO ≤10 µg/m ³ O ₃ ≤180 µg/m ³

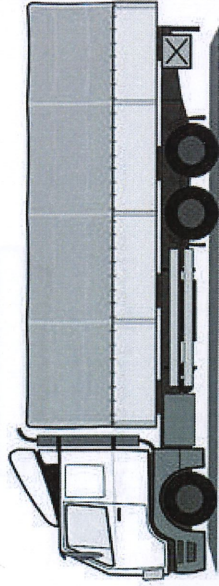
PROPOSED MONITORING PROGRAMME

IMPACT MONITORING

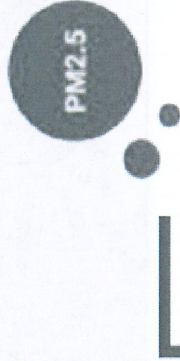
Impact Monitoring (IM)	Monitoring Parameter	Monitoring Station	Location	Coordinate	Monitoring Frequency	Applicable Standard
Noise Level Monitoring	L ₁₀ , L ₅₀ , L ₉₀ , Total Leq dB(A)	N1	Presenting the ambient noise quality at Project Boundary	4°12'47.21" N	Once every three months	Total Leq (Daytime)
		N2	Presenting the ambient noise quality at Sekolah Kebangsaan Batu Tiga	101° 12'56.08"E 4°13'28.71" N		
		N3	Presenting the ambient noise quality at Kampung Batu Tiga	101°13'37.32" E 4°11'52.71" N		
		N4	Presenting the ambient air quality at Kampung Baharu Batu Empat	101° 13'49.12" E 4°11'35.58" N		
		N5	Presenting the ambient air quality at Kampung Ampang	101° 13'48.83" E 4°11'53.85" N		
Vibration level Monitoring	Vibration Peak Velocity, V _{max} (mm/s)	V1	Presenting the vibration level at Project Boundary	101° 14'20.61" E 4°12'47.21" N	Once every three months (if applicable)	Total Leq (Nighttime)
				101° 12'56.08"E		

PROPOSED POLLUTION AND MITIGATION MEASURES

AIR POLLUTION



Vehicles that carried materials out from project site need to be covered up



Regular Monitoring Programme



Water Browser



No Open Burning on Site



Landscaping at the project boundary

PROPOSED POLLUTION AND MITIGATION MEASURES

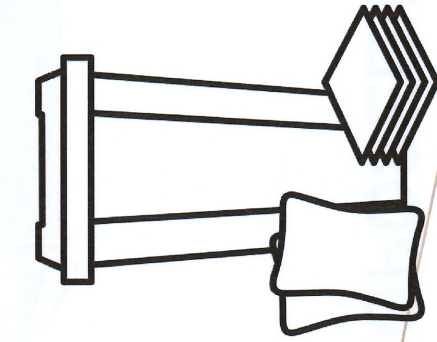
EROSION AND WATER POLLUTION



Sediment Basin



Earth Drain



Spillage Kits



Check Dam



Cover Crop

PROPOSED POLLUTION AND MITIGATION MEASURES

NOISE AND VIBRATION POLLUTION



Ear muffler



Ear Plug



Natural Buffer Zone



Regular Monitoring



Audiometric Test

PROPOSED POLLUTION AND MITIGATION MEASURES

SOLID AND HAZARDOUS WASTE POLLUTION

