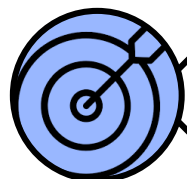


## INTRODUCTION

### PROPOSED EXPANSION FOR PLASTIC SCRAP RECYCLING FACILITY ON LOT PT 887 (PLANT 3), MUKIM PANTAI, DAERAH SEREMBAN, NEGERI SEMBILAN



#### **PROJECT CONCEPT**

To expand an existing plastic scrap recycling facility at Jalan Jelebu, Pantai [i.e. Acrylonitrile Butadiene Styrene (ABS), High Impact Polystyrene (HIPS), Polypropylene (PP), Polycarbonate ABS (PC-ABS), Flame Retardant ABS (ABS-FR) & Elastomer], with a monthly processing capacity of 1,800 tonnes/month



#### **RAW MATERIAL – PLASTIC SCRAP**

Type	Origin	Amount (Tonnes/Month)
ABS	Local	1,800
HIPS		
PP		
PC-ABS		
ABS-FR		
Elastomer (c/w plastic ABS, HIPS, PC-ABS & ABS-FR)		



#### **FINISHED PRODUCT**

Type	Product Form	Amount (Tonnes/Month)
<b>Main Product</b>		
ABS	Plastic Flakes/ Pellets	1,652.2
HIPS		
PP		
PC-ABS		
ABS-FR		
<b>By-Product</b>		
Elastomer Plastic	Flakes	122.8

## PROJECT PROPONENT AND EIA CONSULTANT



### **PROJECT PROPONENT**

#### **NEW POINT MANUFACTURING (M) SDN BHD**

PT 887, Batu 5 1/2,  
Jalan Jelebu,  
70400 Seremban, Negeri Sembilan.

Contact Person: Oh Teck Wee  
Phone Number: 016-966 1700  
Email: newpointmfg@gmail.com



### **EIA CONSULTING FIRM**

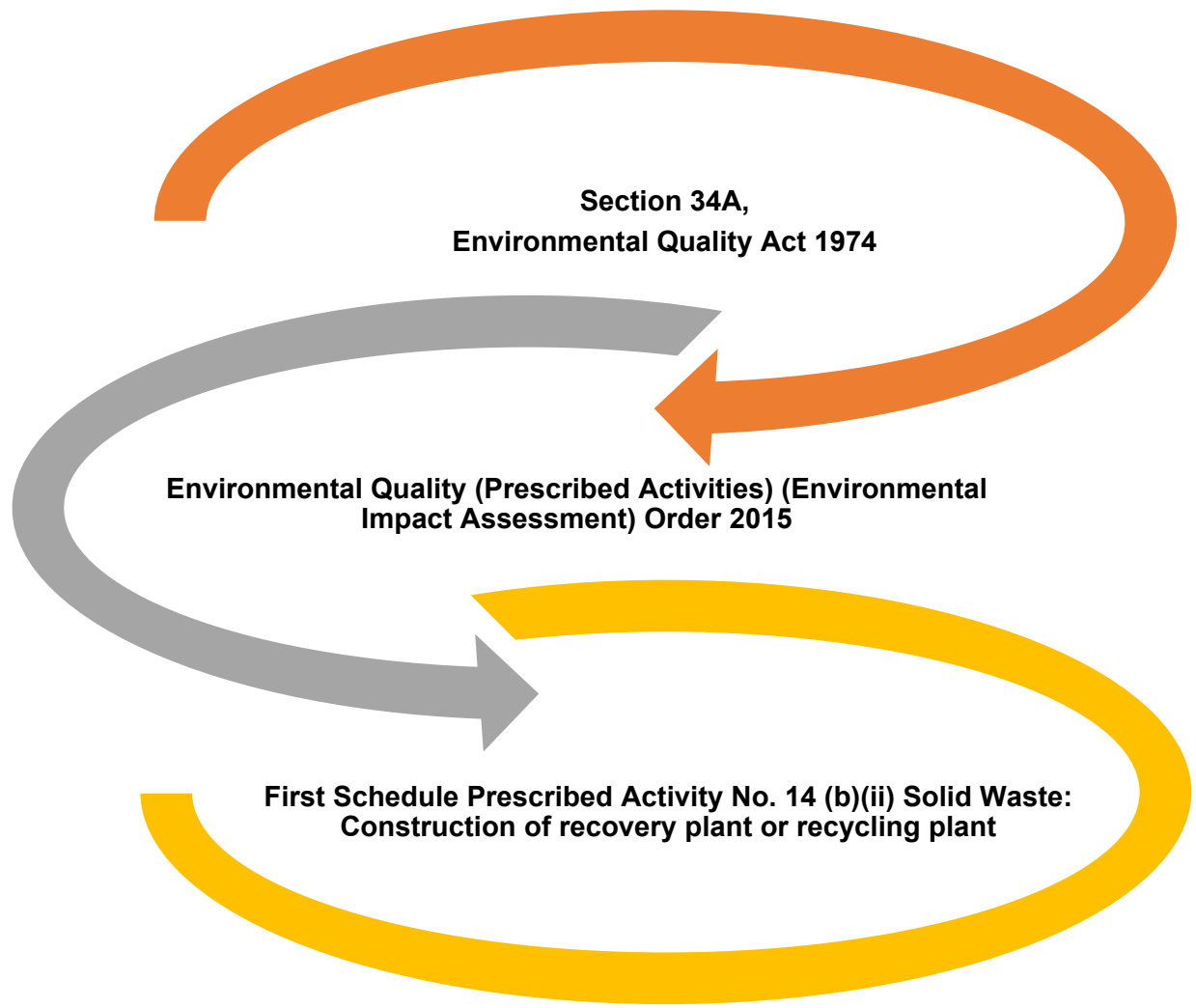
#### **GOLDEN ENVIRONMENTAL CONSULTANCY**

56-2A, Jalan Temenggung 1/9,  
Bandar Mahkota Cheras,  
43200 Cheras, Selangor.

Contact Person No.1: Ms Jessica Yong  
Phone Number: 018 – 384 2468  
Email: jessicayong.gec@gmail.com

Contact Person No. 2: Mr Loh Tong Loy  
DOE Registration Number: CEP-CS0009  
Phone Number: 013 – 351 8102

## LEGISLATIVE REQUIREMENTS



## STATEMENT OF NEED



- To tackle Malaysia's plastic waste and high consumption while meeting the rising demand for recycled plastics in the market.

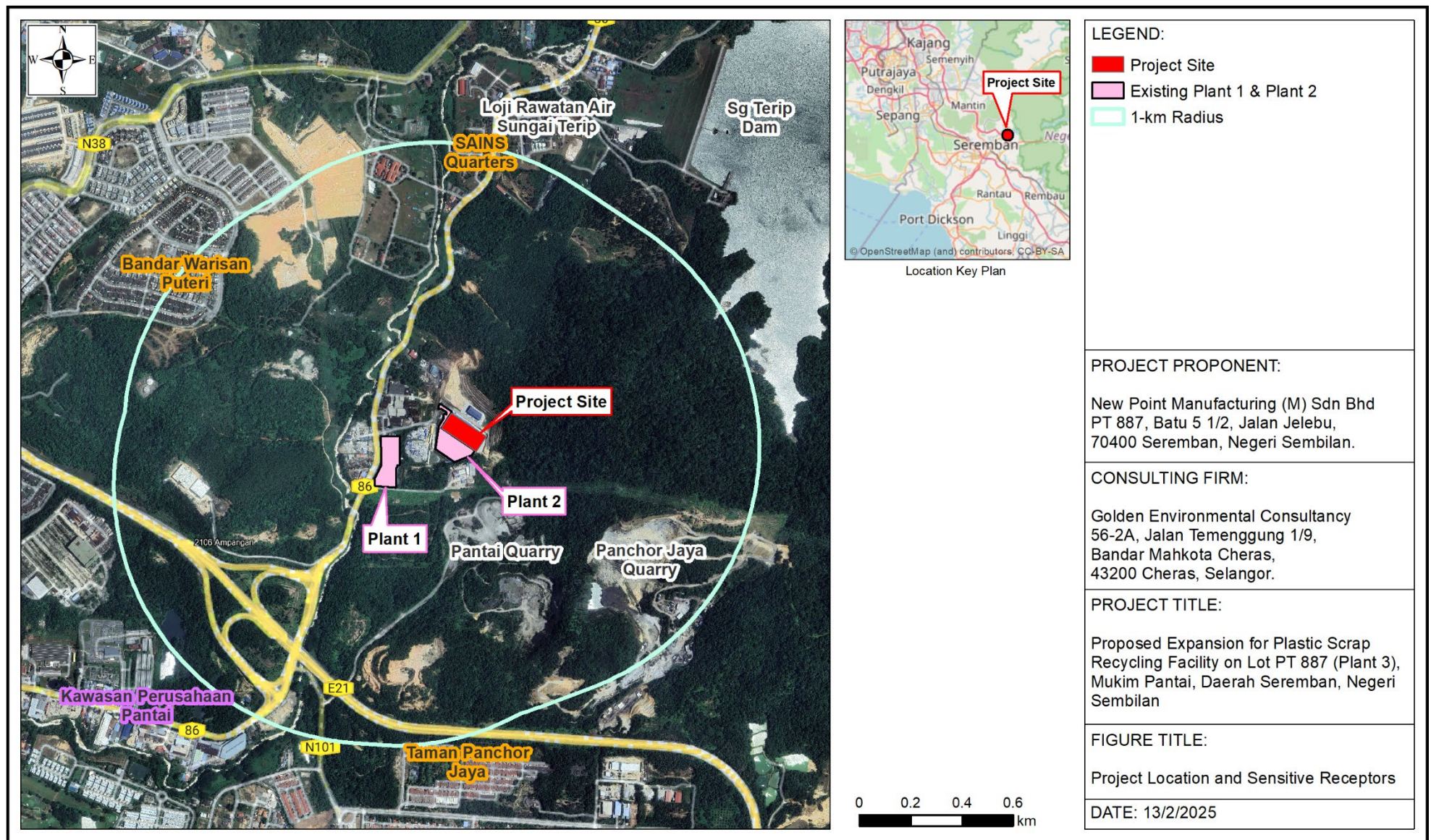


- To address environmental pollution, resource depletion and low recycling rates in Malaysia.



- Boost tax revenue, create jobs and grow GDP through increased plastic raw material production.

## PROJECT LOCATION AND SENSITIVE RECEPTORS



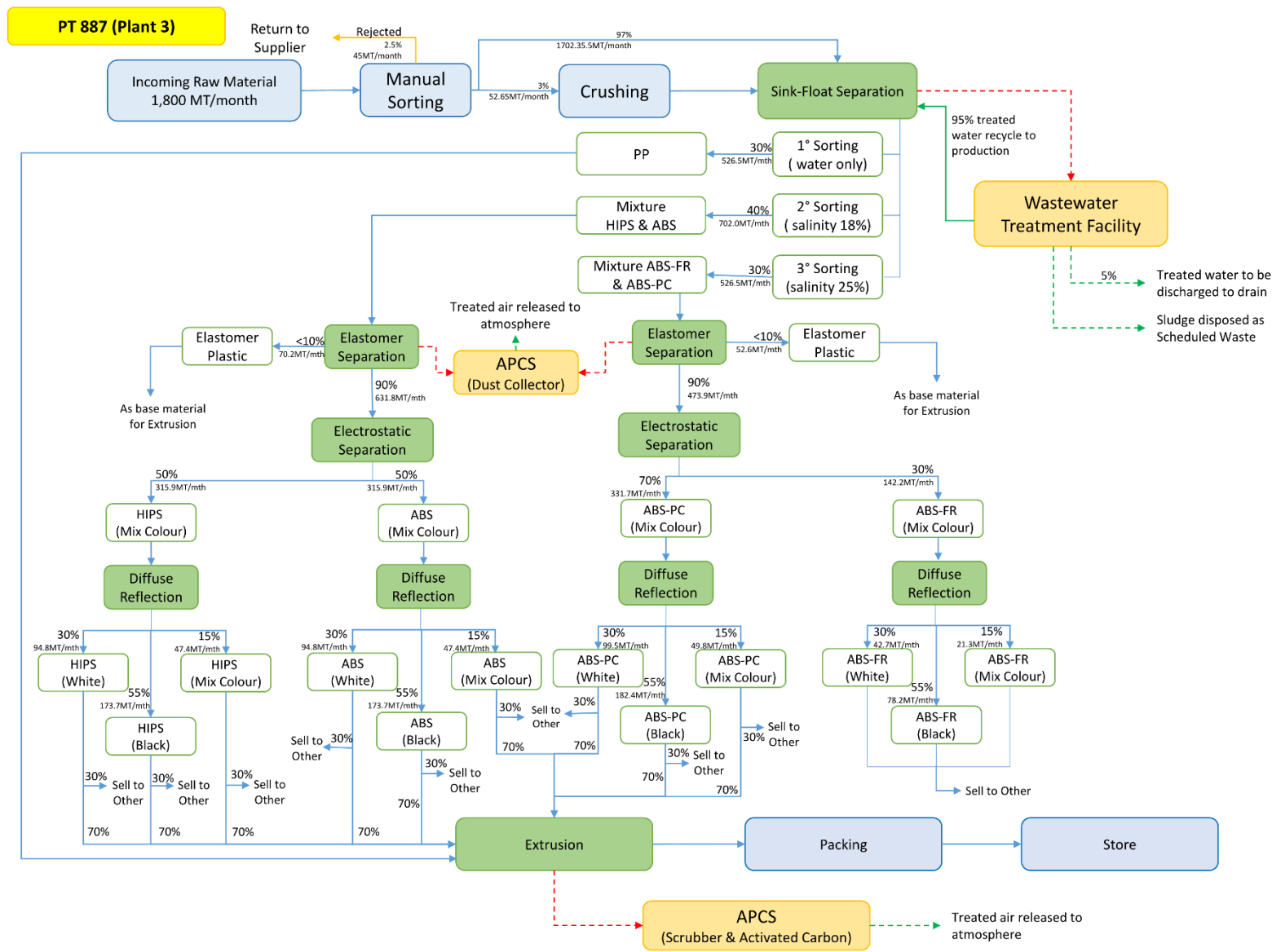
## PROJECT DESCRIPTION

- ❖ **Project Area Size: 1.1367 ha (11,367.3 m<sup>2</sup>)**
- ❖ **Project components:**
  - i. Loading/ Unloading Bay;
  - ii. Raw Material Storage Area;
  - iii. Product Storage Area;
  - iv. Flake Store (for Air Dry/ Extrusion Purpose);
  - v. Manual Sorting Area;
  - vi. Crushing Area;
  - vii. Sink-Float Density Separation Area;
  - viii. Separation Area (Secondary);
  - ix. Extrusion Area;
  - x. Effluent Collection Sump;
  - xi. Industrial Effluent Treatment System (IETS);
  - xii. Treated Water Holding Sump;
  - xiii. Air Pollution Control System (APCS);
  - xiv. Residue Store; and
  - xv. Scheduled Waste Store (with Collection Sump).

No.	Machine	Quantity	Processing Capacity	Remark
1.	Sink-Float Density Separator	3 lines	30 tonnes/day/line	Operate 2 lines; 1 line for standby
2.	Secondary Separator	3 units	8 tonnes/day/unit	-
3.	Crusher	3 units	8 tonnes/day/unit	-
4.	Extruder (with Pelletising Machine)	5 units	6 tonnes/day/unit	-



# PROCESS FLOW CHART

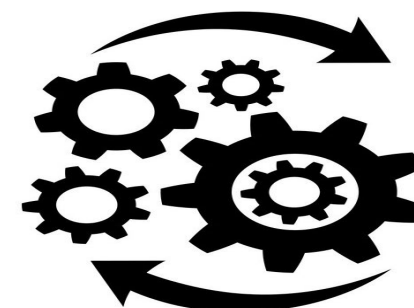


## PROJECT ACTIVITIES



### RENOVATION

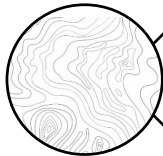
- Recruitment of renovation workers
- Transportation of renovation materials
- Strengthening concrete floor
- Construction of partition walls or demarcation
- Installation, testing & commissioning of equipment



### OPERATION

- Recruitment of workers
- Transport of raw materials and finished products
- Handling/ storage of raw materials and finished products
- Sorting & crushing of raw materials
- Plastic scrap 1<sup>st</sup> stage separation process
- Plastic scrap 2<sup>nd</sup> stage separation process
- Plastic scrap extrusion process

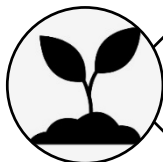
## EXISTING ENVIRONMENT



**Topography:** Flat land with existing factory building.



**Geology Formation:** Acid intrusives rocks (undifferentiated). No fault line.



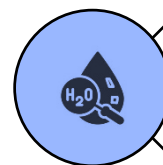
**Soil Type:** Rengam-Jerangau series.



**River and Drainage System:** Water from the Project site will be discharged into the existing drainage system. The drain water will flow into Sg Batang Penar (southwest) and finally into Straits of Melaka via Sg Linggi.



**Climate:** Humid tropical climate with heavy seasonal rains. Heaviest mean monthly rainfall = 261.7 mm (November); lowest mean monthly rainfall = 73.7 mm (July); prevailing wind = northeast and south (both 14.1%), followed by west and southwest (both 12.8%).



**Water Quality:** Drain water upstream & downstream of the Project site (W1, W2A and W2B) was slightly polluted/ polluted (Class III/ IV). Similarly, river water at Sg Batang Penar (W3 and W4) and Sg Linggi (W5) was also slightly polluted/ polluted (Class III).

## EXISTING ENVIRONMENT



**Air Quality:** Air quality at all sampling locations (A1 – Project boundary; A2 – Bandar Warisan Puteri; A3 – nearest kampong house; A4 – Taman Panchor Jaya) had complied with the Standard 2020 under the Malaysian Ambient Air Quality Standard (MAAQS).



**Noise Level:** Noise level at all sampling locations (N1 – Project boundary; N2 – Bandar Warisan Puteri; N3 – nearest kampong house; N4 – Taman Panchor Jaya) had complied with the permissible sound levels under the Second Schedule of Guidelines for Environmental Noise Limits and Control (3<sup>rd</sup> Edition) (DOE, 2019).



**Flora and Fauna:** No significant flora and fauna within and near the Project site.



**Landuse:** Within 500-m radius - the Project site is surrounded by existing factories and a kampong house is located ~620 m north of the Project site. Within 5-km radius – major landuse is green area (forest and agricultural land), followed by built-up area (141 settlements, 32 educational institutions and 2 industrial parks).



**General Demographic Profile:** Total population in Daerah Seremban is 536,147. The main ethnic group is Bumiputera (52.14%); followed by Chinese (24.24%), Indian (15.78%), Non-Malaysian (7.41%) and others (0.43%).

## POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential Impacts	Sources of Impacts	Significance	Proposed Pollution Prevention and Mitigation Measures	Page EIA
<b>Renovation Phase</b>				
Noise pollution	<ul style="list-style-type: none"> <li>Renovation of existing factory building</li> </ul>	Not significant	<ul style="list-style-type: none"> <li>Select low noise equipment. Avoid equipment which generates impulsive noise.</li> <li>Avoid metal-to-metal contact on equipment.</li> <li>Ensure machineries are at optimum operation conditions.</li> <li>All machinery should be shut down when not in used.</li> <li>Use hydraulic or electric controlled units where feasible and reasonable.</li> <li>Direct transportation of equipment and materials to less noise sensitive route.</li> <li>Turn off all transportation vehicles during unloading activities or when they are in idle mode.</li> <li>Noise level monitoring.</li> </ul>	Page 8-3
Air pollution	<ul style="list-style-type: none"> <li>Vehicle movements</li> </ul>	Not significant	<ul style="list-style-type: none"> <li>Control vehicle speed.</li> <li>Air quality monitoring.</li> </ul>	Page 8-3
Water pollution	<ul style="list-style-type: none"> <li>Improper management of wastes</li> </ul>	Not significant	<ul style="list-style-type: none"> <li>Provide barrier with waterproof platform or containment tray for fuel and chemical storage.</li> <li>Spill kit to be provided at site.</li> <li>Prohibition of any wastes disposal into any waterway.</li> <li>Only surface runoff is allowed to be discharged directly into the drainage system.</li> <li>Sewage must be treated before being discharged.</li> <li>Provide proper toilet and conduct regular maintenance.</li> <li>Water quality monitoring.</li> </ul>	Page 8-3 & 8-4
Wastes generation	<ul style="list-style-type: none"> <li>Domestic wastes and sewage by workers</li> <li>Renovation wastes</li> <li>Scheduled wastes</li> </ul>	Can be significant	<ul style="list-style-type: none"> <li>Burning of wastes and disposal into any waterway are prohibited.</li> <li>Provide adequate rubbish bins and the collected wastes should be disposed to a landfill/ dumpsite approved by the local authority.</li> <li>Manage scheduled wastes in accordance with the Environmental Quality (Scheduled Wastes) Regulations 2005.</li> <li>Conduct periodic maintenance on the toilets.</li> </ul>	Page 8-4 & 8-5
Traffic congestion	<ul style="list-style-type: none"> <li>Transportation vehicle movements</li> </ul>	Not significant	<ul style="list-style-type: none"> <li>Provide alert signage at entrance/ exit.</li> <li>Proper planned transportation schedule and logistic route.</li> </ul>	Page 8-5
Occupation safety and health issues	<ul style="list-style-type: none"> <li>Accidents throughout the renovation phase</li> </ul>	Significant	<ul style="list-style-type: none"> <li>Provide personal protective equipment (PPE) and ensure they are used.</li> <li>Ensure all workers understand all safety measures.</li> <li>Discourage overtime work whenever possible.</li> <li>A first aid kit must be available and easily accessible.</li> </ul>	Page 8-5 & 8-6

## POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential Impacts	Sources of Impacts	Significance	Proposed Pollution Prevention and Mitigation Measures	Page EIA
<b>Operational Phase</b>				
Noise pollution	<ul style="list-style-type: none"> <li>Machines in production area, APCS, IETS and engines from vehicles</li> </ul>	Not significant	<ul style="list-style-type: none"> <li>Provide enclosure or silencer to the high noise emission equipment</li> <li>Carry out periodical inspection and maintenance of machinery.</li> <li>Reduce frictional resistance by reducing friction between rotating, sliding or moving parts in mechanical systems.</li> <li>Turn off engine of transportation vehicles during loading and unloading activities and when they are in idle mode</li> <li>Noise level monitoring.</li> </ul>	Page 8-6
Air pollution	<ul style="list-style-type: none"> <li>Malfunction of APCS</li> <li>Movement of transport vehicle</li> </ul>	Significant	<ul style="list-style-type: none"> <li>The APCS must be operated by competent person and conduct regular maintenance of APCS.</li> <li>Temporary shut down the Facility if any unusual condition detected.</li> <li>Emission from chimney must comply with Environmental Quality (Clean Air) Regulations 2014.</li> <li>Adopt good practice in handling and transferring of raw materials &amp; products.</li> <li>Air quality monitoring.</li> </ul>	Page 8-7
Water pollution	<ul style="list-style-type: none"> <li>Improper management of wastes</li> </ul>	Can be significant	<ul style="list-style-type: none"> <li>Effluent from IETS must comply with Standard A of the Environmental Quality (Industrial Effluent) Regulations 2009.</li> <li>The IETS must be operated by competent person.</li> <li>All preventive and mitigative design measures must be implemented to prevent and mitigate spills or accidental discharges.</li> <li>Water quality monitoring.</li> </ul>	Page 8-7
Public safety and health issues	<ul style="list-style-type: none"> <li>Hiring of foreigner workers</li> <li>Pollution</li> </ul>	Can be significant	<ul style="list-style-type: none"> <li>Brief foreigner workers on local culture.</li> <li>Implement all air pollution and noise control measures.</li> <li>Implement good traffic management plan.</li> <li>Attend any complaints by local communities immediately.</li> </ul>	Page 8-8

## POTENTIAL IMPACTS AND MITIGATION MEASURES

Potential Impacts	Sources of Impacts	Significance	Proposed Pollution Prevention and Mitigation Measures	Page EIA
<b>Operational Phase (Continue)</b>				
Occupation safety and health issues	<ul style="list-style-type: none"> <li>• Hazard from handling and storage of materials</li> <li>• Transport hazard</li> <li>• Fire hazard</li> <li>• General working hazards</li> </ul>	Significant	<ul style="list-style-type: none"> <li>• All workers are required to undergo proper medical check-ups.</li> <li>• All migrant workers are required to be screened for infectious diseases.</li> <li>• Establish clearly defined detailed operating procedures.</li> <li>• Plan maintenance schedule for optimal performance.</li> <li>• Implement fire or explosion preventive measures.</li> <li>• Each worker to be provided with one set of PPE.</li> <li>• Provide training on handling of hazardous materials and fire.</li> <li>• Ensure works are conducted as per standard operation procedures (SOP)</li> <li>• Formulate ERP.</li> <li>• Good logistic plan.</li> <li>• Provide emergency response equipment on transportation vehicles.</li> <li>• Check vehicles condition every time before the journey.</li> </ul>	Page 8-8 & 8-9
Wastes generation	<ul style="list-style-type: none"> <li>• Scheduled wastes from machineries maintenance</li> <li>• Domestic wastes and sewage &amp; sillage from workers</li> </ul>	Can be significant	<ul style="list-style-type: none"> <li>• Manage all scheduled wastes in accordance with the Environmental Quality (Scheduled Wastes) Regulations 2005.</li> <li>• Maintain and submit up-to-date inventory of scheduled wastes to DOE.</li> <li>• Appoint competent person to supervise and handle scheduled wastes.</li> <li>• Open burning of any wastes and disposal into any watercourses are prohibited.</li> <li>• Provide adequate rubbish bins and the collected wastes should be disposed to a landfill/ dumpsite approved by the local authority.</li> <li>• Regular maintenance of toilets.</li> </ul>	Page 8-9 & 8-10
Traffic congestion	<ul style="list-style-type: none"> <li>• Road blockage due to dropped materials</li> <li>• Transportation vehicles</li> </ul>	Not significant	<ul style="list-style-type: none"> <li>• Any materials dropped on the road must be immediately cleared.</li> <li>• Proper planned transportation schedule and logistic route.</li> </ul>	Page 8-10

**PERFORMANCE MONITORING PROGRAMME**

**PROPOSED PERFORMANCE MONITORING PROGRAMME**

<b>Pollution Control Equipment</b>	<b>Description</b>	<b>Daily</b>	<b>Weekly</b>	<b>Monthly</b>	<b>Quarterly</b>	<b>Half-Yearly</b>	<b>Yearly</b>
APCS	Performance monitoring on APCS; e.g. pressure drop, temperature, pH, air flow rate, liquid flow rate & opacity	√					
	Preventive maintenance on equipment	√	√	√		√	√
	Corrective action	Whenever necessary					
IETS	Monitoring on performance of IETS; e.g. flow rate; wastewater quality at chemical treatment tank, recycling tank, carbon filter; chemical dosage; effluent's quality	√	√				
	Preventive maintenance on equipment	√					
	Corrective action	Whenever necessary					

## COMPLIANCE MONITORING PROGRAMME

### PROPOSED COMPLIANCE MONITORING PROGRAMME FOR AIR EMISSION

Location	Description	Parameter	Compliance Standard	Frequency
<b>First Monitoring</b>				
<b>Chimneys No.1</b>	Treated air emitted from the Wet Scrubber & Activated Carbon Chamber	Total VOCs	<i>Fifth Schedule [Regulation 15]: Emissions Standards for Hazardous Substances, Category (3) Gaseous and Volatile Organic Substances, Class (1) of Environmental Quality (Clean Air) Regulations 2014</i>	<u>Monitoring and Reporting</u> : ≥ 3 to ≤ 6 months after operation is started
<b>Chimneys No. 2 to 4</b>	Treated air emitted from the Dust Collector	PM <sub>10</sub>	<i>Second Schedule [Regulation 13]: Limit Values and Technical Standards (General) of Environmental Quality (Clean Air) Regulations 2014</i>	<u>Monitoring and Reporting</u> : ≥ 3 to ≤ 6 months after operation is started
<b>Subsequent Monitoring</b>				
<b>Chimneys No.1</b>	Treated air emitted from the Wet Scrubber & Activated Carbon Chamber	Total VOCs	<i>Fifth Schedule [Regulation 15]: Emissions Standards for Hazardous Substances, Category (3) Gaseous and Volatile Organic Substances, Class (1) of Environmental Quality (Clean Air) Regulations 2014</i>	<u>Monitoring</u> : Yearly <u>Reporting</u> : Yearly
<b>Chimneys No. 2 to 4</b>	Treated air emitted from the Dust Collector	PM <sub>10</sub>	<i>Second Schedule [Regulation 13]: Limit Values and Technical Standards (General) of Environmental Quality (Clean Air) Regulations 2014</i>	<u>Monitoring</u> : Yearly <u>Reporting</u> : Yearly

### PROPOSED COMPLIANCE MONITORING PROGRAMME FOR TREATED EFFLUENT

Location	Description	Parameter	Compliance Standard	Frequency
<b>Final Discharge Point of IETS</b>	Treated industrial effluent from the IETS	COD and 30 parameters listed in Fifth Schedule of Environmental Quality (Industrial Effluent) Regulations 2009	Standard A of Environmental Quality (Industrial Effluent) Regulations 2009	<u>Monitoring</u> : Monthly <u>Reporting</u> : Monthly

## IMPACT MONITORING PROGRAMME

Environmental Component	Proposed Sampling Location			Frequency		Parameters	Compliance Requirement
	Point	Description	Coordinates	Sampling	Reporting		
<b>Renovation Phase</b>							
Water Quality	W1	Drain at upstream of the site	N 2.74780° E 101.99454°	Monthly	Quarterly	pH, Temperature, BOD, COD, DO, TSS, O&G, faecal coliform and AN	<ul style="list-style-type: none"> <li>Class IIA Limits of NWQS for Malaysia</li> <li>Baseline quality</li> </ul>
	W2	Drain at immediate downstream of the site	N 2.74747° E 101.99386°				
	W3	Sg Batang Penar, upstream of the site	N 2.75035° E 101.99275°				
	W4	Sg Batang Penar, immediately downstream of the site	N 2.74252° E 101.99026°				
	W5	Sg Linggi, about 5 km downstream of the site	N 2.73009° E 101.96283°				
Ambient Air Quality	A1	Project Boundary	N 2.74948° E 101.99506°	Monthly	Quarterly	PM <sub>2.5</sub> , PM <sub>10</sub> , CO, SO <sub>2</sub> , NO <sub>2</sub> and O <sub>3</sub>	Standard 2020, Malaysian Ambient Air Quality Standard (MAAQS) (DOE, 2013)
	A2	Bandar Warisan Puteri	N 2.75284° E 101.98700°				
	A3	Nearest kampong house	N 2.75492° E 101.99563°				
	A4	Taman Panchor Jaya	N 2.73757° E 101.99364°				
Noise Level	N1	Project Boundary	N 2.74948° E 101.99506°	Monthly	Quarterly	Noise levels i.e. L <sub>10</sub> for day, evening and night time	<i>Industrial Landuse</i> under the <u>Sixth Schedule</u> of Guidelines for Environmental Noise Limits and Control (Third Edition) (DOE, 2019)
	N2	Bandar Warisan Puteri	N 2.75284° E 101.98700°			Noise levels i.e. L <sub>10</sub> , L <sub>max</sub> & L <sub>Aeq</sub> for day, evening and night time	<i>Residential Area, Sensitive Areas</i> under the <u>Sixth Schedule</u> of Guidelines for Environmental Noise Limits and Control (Third Edition) (DOE, 2019)
	N3	Nearest kampong house	N 2.75492° E 101.99563°				
	N4	Taman Panchor Jaya	N 2.73757° E 101.99364°				

## IMPACT MONITORING PROGRAMME

Environmental Component	Proposed Sampling Location			Frequency		Parameters	Compliance Requirement
	Point	Description	Coordinates	Sampling	Reporting		
<b>Operational Phase</b>							
Water Quality	W1	Drain at upstream of the site	N 2.74780° E 101.99454°	Quarterly	Quarterly	pH, Temperature, BOD, COD, DO, TSS, O&G, faecal coliform and AN	<ul style="list-style-type: none"> <li>Class IIA Limits of NWQS for Malaysia</li> <li>Baseline quality</li> </ul>
	W2	Drain at immediate downstream of the site	N 2.74747° E 101.99386°				
	W3	Sg Batang Penar, upstream of the site	N 2.75035° E 101.99275°				
	W4	Sg Batang Penar, immediately downstream of the site	N 2.74252° E 101.99026°				
	W5	Sg Linggi, about 5 km downstream of the site	N 2.73009° E 101.96283°				
Ambient Air Quality	A1	Project Boundary	N 2.74948° E 101.99506°	Quarterly	Quarterly	PM <sub>2.5</sub> , PM <sub>10</sub> , CO, SO <sub>2</sub> , NO <sub>2</sub> and O <sub>3</sub>  Total VOC	Standard 2020, MAAQS (DOE, 2013)  Arizona Ambient Air Quality Guidelines (AAAQG) (Arizona Department of Environmental Quality Air Programs Division, 1999)
	A2	Bandar Warisan Puteri	N 2.75284° E 101.98700°				
	A3	Nearest kampong house	N 2.75492° E 101.99563°				
	A4	Taman Panchor Jaya	N 2.73757° E 101.99364°				
Noise Level	N1	Project Boundary	N 2.74948° E 101.99506°	Quarterly	Quarterly	Noise levels for L <sub>Aeq</sub> daytime and night time.	<i>Designated Industrial Zones</i> under the <u>Second Schedule</u> of Guidelines for Environmental Noise Limits and Control (Third Edition) (DOE, 2019)
	N2	Bandar Warisan Puteri	N 2.75284° E 101.98700°				
	N3	Nearest kampong house	N 2.75492° E 101.99563°				<i>Urban Residential</i> under the <u>Second Schedule</u> of Guidelines for Environmental Noise Limits and Control (Third Edition) (DOE, 2019)
	N4	Taman Panchor Jaya	N 2.73757° E 101.99364°				