

ENVIRONMENTAL IMPACT ASSESSMENT FOR

PROPOSED DEVELOPMENT OF KUANTAN MARITIME HUB AT MUKIM SUNGAI KARANG, KUANTAN, PAHANG DARUL MAKMUR

FOCUS GROUP DISCUSSION

Date: 3 March 2017

Time: 9.30 am – 12.00 pm

Venue: Meeting Room, Level 7, Lembaga Pelabuhan Kuantan, Kuantan Port

Attendance: See attached

MEETING NOTES

Name/ Agency	Feedbacks
Lembaga Pelabuhan Kuantan (LPK)	LPK welcomed the proposed development. Saw synergy with Kuantan Port and few new projects in the area. Project site is located within port limit. There will be operation permitting requirement.
Kuantan Port Consortium Sdn Bhd (KPC)	KPC noted on Project's dedicated navigation channel does not cross port's navigation channel and anchorage areas. Access road – KPC shared that workers on motorcycles and cars used Jalan Tanjung Gelang to commute to work places and increase of trucks from the proposed Project may have safety concerns. Suggest to consider widening the existing road network or build internal road instead of sharing Jalan Tanjung Gelang if possible. Ensure enough parking space within project area to avoid illegal parking along road side and cause traffic congestion on the public road. Stormwater management – flooding at upstream of Sungai Pengorak and along Federal Route 2 near Kg Selamat to Kuantan Port. Water cannot flow out during high tides and heavy rain events. Consider improvement of drainage along the road and upstream of Sungai Pengorak. Buffer zone from project to LPK Apartment. Chemsain informed that based on local plan, the LPK apartments are zoned as “kemudahan masyarakat” and next to industrial zone. Suggestion to use “Sand Blasting” instead of “Blasting” to avoid confusion and to include assessment on radioactive testing. Sand blasting and spray painting should be enclosed. Knowledgeable that spray paint can disperse and stick on public vehicle nearby.
Jabatan Alam Sekitar, Cawangan Gebeng (DOE)	Include information on sand source and disposal site for dredged material in EIA report. Shared that Sungai Pengorak receives discharges of bauxites stockpiles area and quarries. Suggest to indicate the category of the planned maritime industrial park as light and medium industries type.



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DARUL MAKMUR

PROPOSER: MUHIBBAH ENGINEERING (M) BHD

FOCUS GROUP SHARING SESSION

DATE: 03/03/2017

VENUE: LEMBAGA PELABUHAN KUANTAN

No	NAMA/NAME	KAMPUNG/VILLAGE/ORGANISASI/ ORGANISATION	JAWATAN/DESIGNATION	NO. TEL/TEL. NO.	TANDATANGAN/SIGNATURE
1.	DATO' ASHWINI NORDIN	LPKto.	SM Construction Operations		
2.	MOHD IBI AMIN	LPKto.	SM. Corp & Dev.	017-6494771	
3.	AHMAD FAMIL BIN SHAHARUDIN	KUANTAN PORT CORPORATION SON BHD	GM (Infra & Technical)	012-9210393	
4.	MOHD ZAHID BIN MOHAMMAD	" "	AST. MANAGER Civil & Infra	019-7991981	
5.	ROSLI BIN ISMIN	" "	Manager HSE	019-7781696	
6.	FIRDAUS RAMADAN	LPKto	Manic Manager	019-7777961	
7.	RUSLAN BIN MAN	LEMBAGA PELABUHAN KUANTAN	Persurung Telekom	0199152219	

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8.	Mohd Mamad Werdin	Muti Mahal Engineering	-	-	
9.	Che Mahmud Ismail	DOE Kuantan	Ketua Penolong Pengarah (Pembangunan)	09-5834702 09-5730636	
10.	Wan Nur Fadzliha bti. Wan Md. Naji	DOE Gebeng	Pegawai Kuantan	09-5834702	
11.	JASON TAN	Muhibbah Engineering (M) Bhd	Project Director	019-3803368	
12.	Lina Dan	Chemsain Consultant S/B	Consultant	0162161928	
13.	Chew Pin Chen	Chemsain Consultant Sdn Bhd.	Project Coordinator	0164921271	
14.					



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NAMA/NAME	ORGANISASI/ORGANISATION	JAWATAN/DESIGNATION	NO. TEL/TEL. NO.	TANDATANGAN/ SIGNATURE
Che Mohamed Ismail	BOC, Pahang	KPP	0195826039	

KOMEN /CADANGAN/COMMENT/SUGGESTION

projek ini adalah dibawah skema 34A Abt Kuali Alam Selatip
 -dibawah Isdawal kedua, Rautan Kuali Alam Selatip 2015
 -Rautan Isdawal kelulusan PCA sebelum mula projek



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NAMA/NAME	ORGANISASI/ORGANISATION	JAWATAN/DESIGNATION	NO. TEL/TEL. NO.	TANDATANGAN/ SIGNATURE
Wan Nur Fadzlinah bt. Wan Md. Najib	DOE Gubung	Pegawai Kawalan	016-4402069	<i>[Signature]</i>

KOMEN /CADANGAN/COMMENT/SUGGESTION

Projek Tutup GEA - Jalan Kedua. — DOE
Isa: 1) Source of sand.

- 2) Dumping ground existing and new. should be proposed in EIA Report / TOR
- 3) Bina di G. Payong. → Hydraulic Study.
- 4) Drainage and Road Development → Current Situation vs Future Situation
- 5) Layout of Residential, industrial → Buffer zone between.
- 6) Parking lot at Fabrication Yard and Shipyard.

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NAMA/NAME	ORGANISASI/ORGANISATION	JAWATAN/DESIGNATION	NO. TEL/TEL. NO.	TANDATANGAN/ SIGNATURE
Rozali Ismail	KPC	HSE Mgr	019-778168	Rohy

KOMEN /CADANGAN/COMMENT/SUGGESTION

- including KPC Flat Building
- 1) Buffer zone - Must ensure all residential areas are outside 500m buffer zone.
 - 2) Operation - Must ensure operation doesn't produce odor, dust, mist that affect surrounding
 - 3) Outlet/discharge - Must ensure ~~flat~~ the construction will not create flood in this area.
 - 4) Marine traffic - Must ensure the marine traffic including KPC ' Anchorage areas not affected.
 - 5) Flat Apartment is located beside fabrication yard Very near. Thus, need to ensure the area are not affected by Operations.

Proposed Development of Kuantan Maritime Hub at Mukim Sungai Karang, Kuantan, Pahang

3rd March 2017

Project Proponent:

Muhibbah Engineering (M) Bhd

EIA Consultant:

Chemsain Konsultant Sdn Bhd



The Project

The Proposed Project

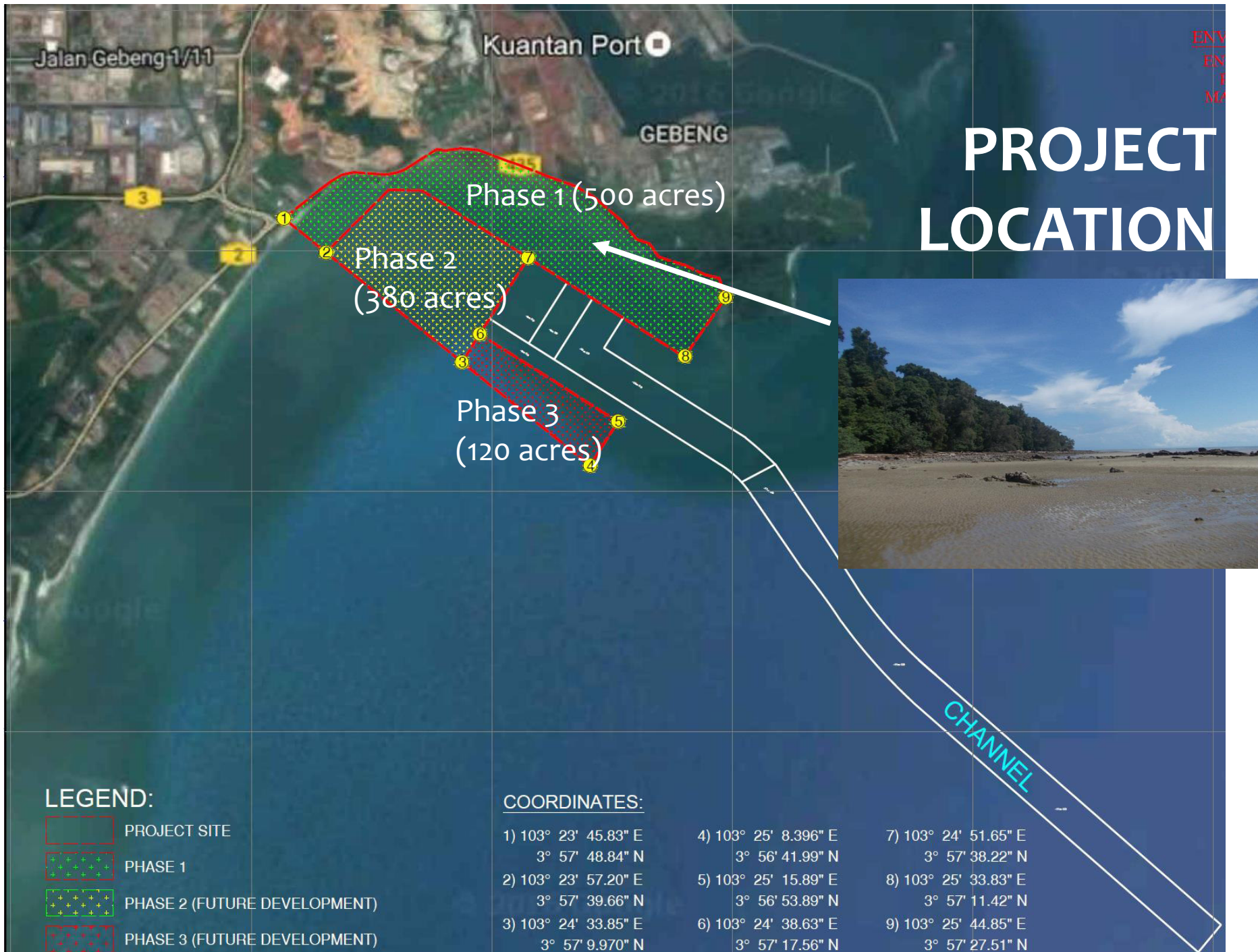
- * Proposed Project to be known as the **Kuantan Maritime Hub (KMH)**
- * Located fronting South China Sea, south of Kuantan Port and about 0.9km from Gebeng Industrial Estate.

* Consist of:

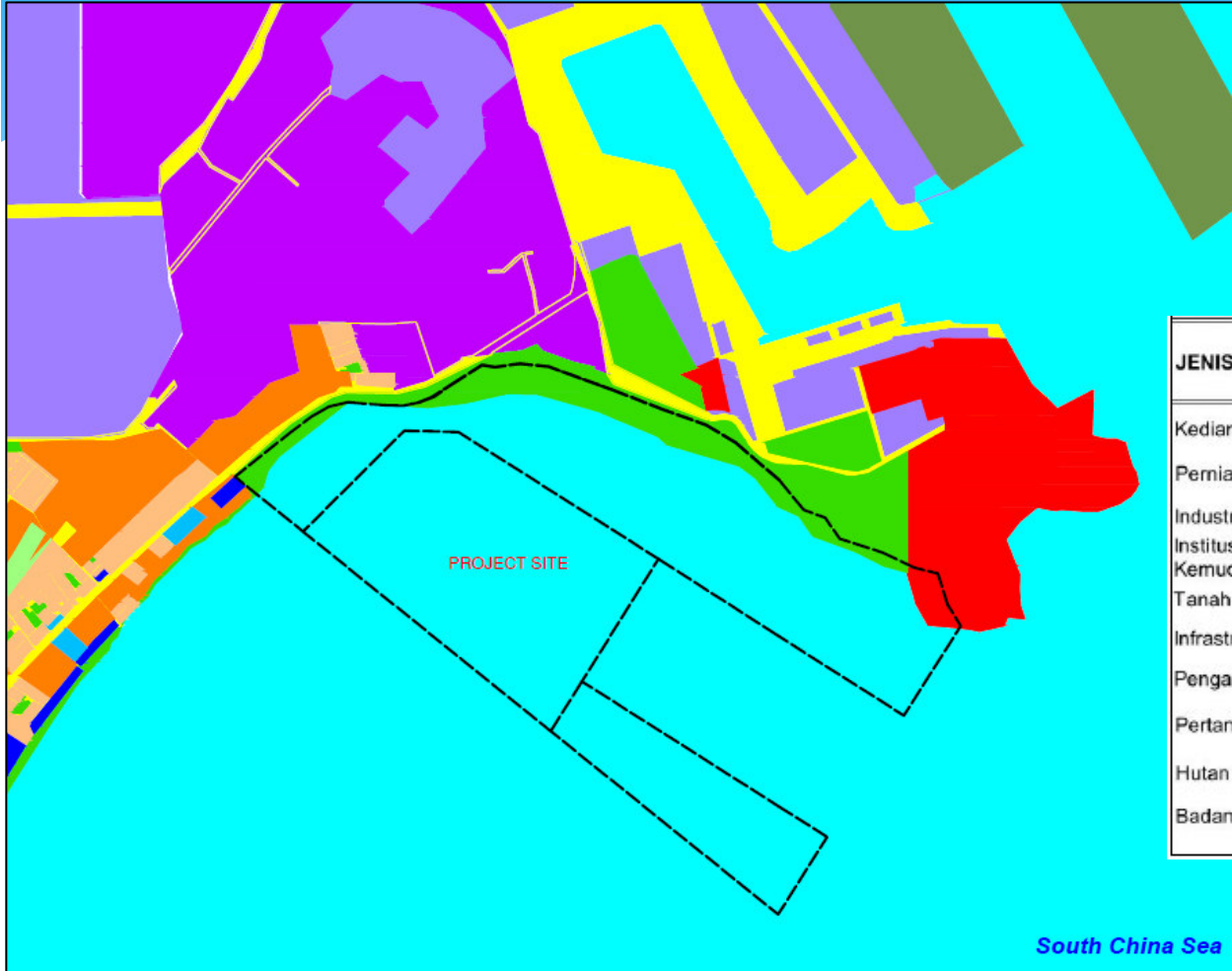
Development Phase 1	Acreage (acre)
Shipyard	120
Fabrication Yard	200
Institution	30
Maritime Industrial Park	100
Business and Residential Park	50
Total	500

- * Project site will need to be reclaimed in phases with currently approved land size of 500 acres and future development being considered in study is reclamation of additional 500 acres (for Phases 2 and 3).
- * Require a capital dredging along the proposed navigation channel.

PROJECT LOCATION



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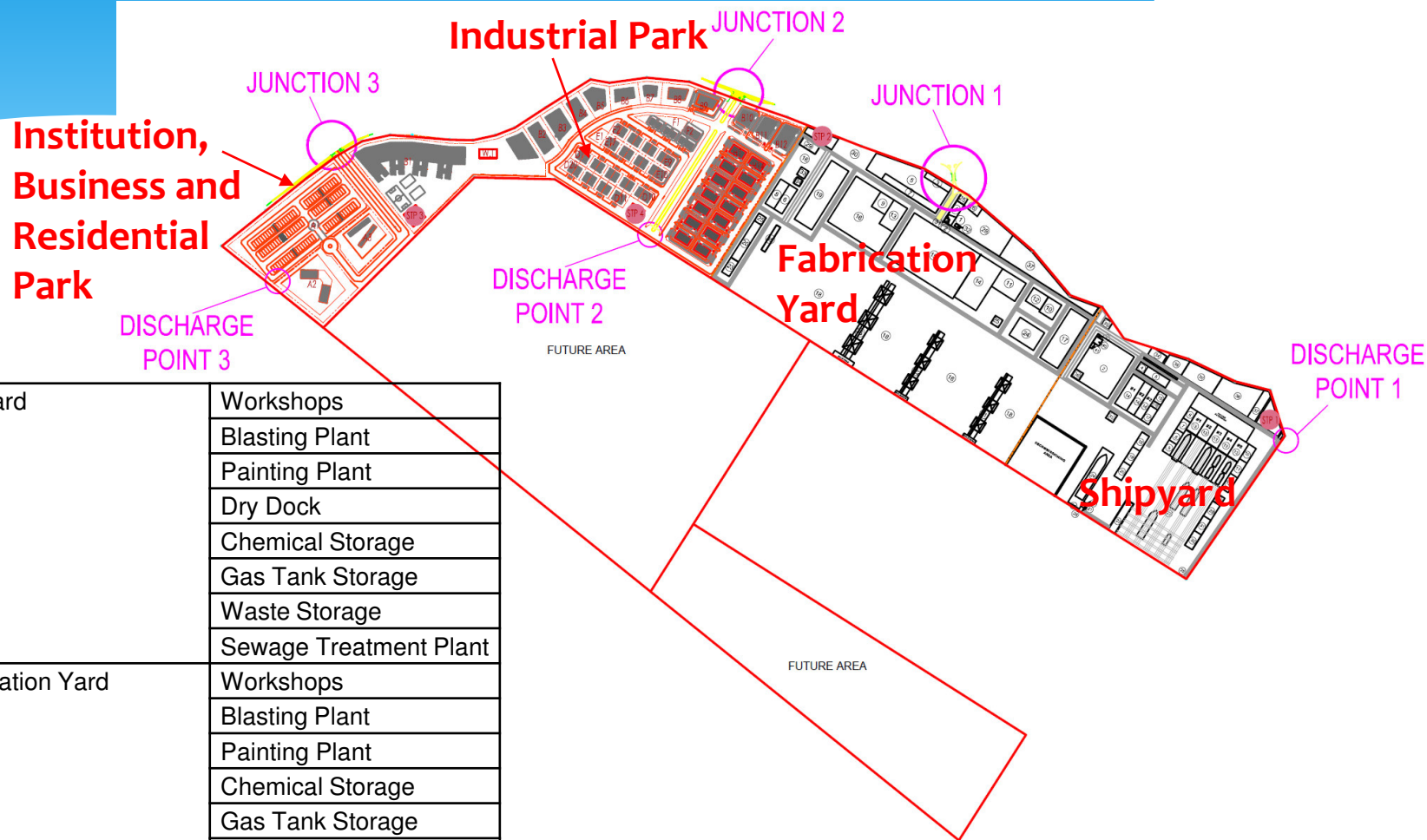
JENIS GUNATANAH	SEDIA ADA	CADANGAN
Kediaman		
Perniagaan dan Perkhidmatan		
Industri		
Institusi dan Kemudahan Masyarakat		
Tanah Lapang dan Rekreasi		
Infrastruktur dan Utiliti		
Pengangkutan dan Jalanraya		
Pertanian		
Hutan		
Badan Air		



Statement of Needs

- * Muhibbah owns shipyard and fabrication yard at Telok Gong, Port Klang, Selangor. Existing facilities have limited land areas for expansion.
- * Bigger Kuantan Maritime Hub (KMH) in Kuantan, Pahang. Proposed site is strategic, will contribute and support associated developments within ECER.
- * Proposed shipyard will benefit vessels calling Kuantan Port and the proposed deep-water port - for ship maintenance and repairs works and any other marine engineering requirement.
- * Proposed steel fabrication yard to cater for offshore and onshore projects.
- * Proposed dedicated navigation channel will ease the launching of marine vessels and transportation barges.
- * Ship building and steel fabrication works require highly skilled workers – a training institution is planned.
- * New job and business opportunities - expected to provide for > 13,000 PE (makeup of workers and their families) and during peak construction, about 2,800 workers are expected.

Project Layout (Phase 1)

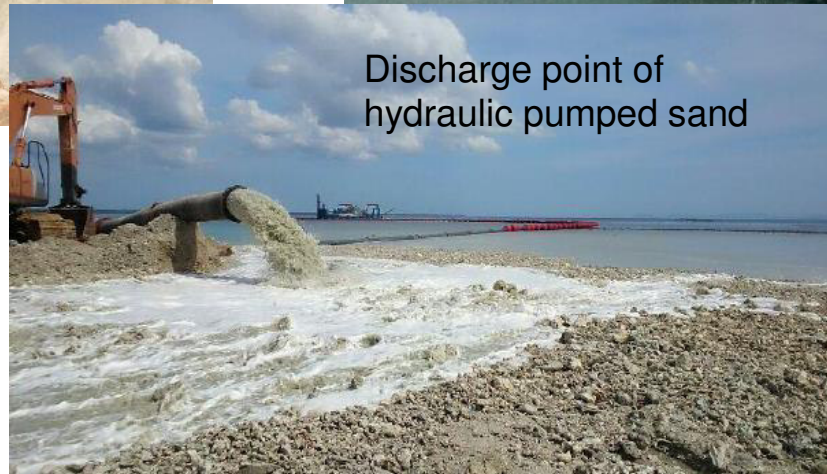
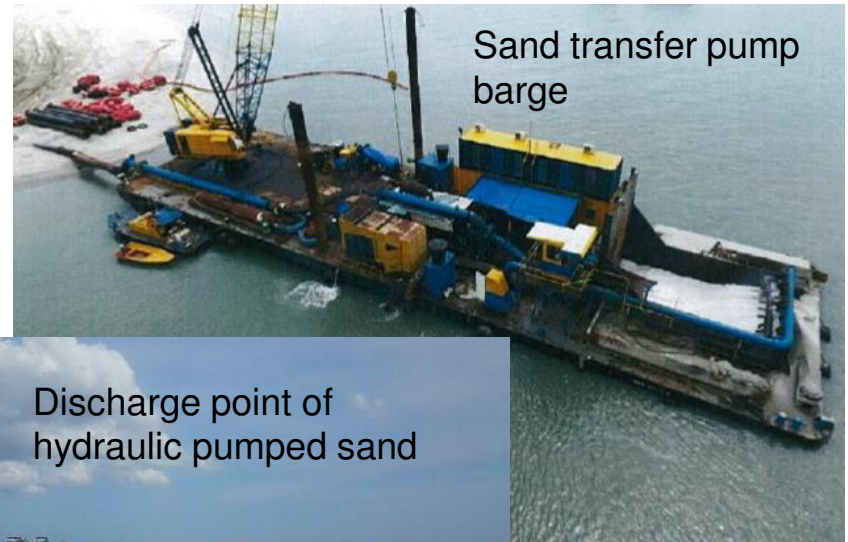


Shipyard	Workshops
	Blasting Plant
	Painting Plant
	Dry Dock
	Chemical Storage
	Gas Tank Storage
	Waste Storage
	Sewage Treatment Plant
Fabrication Yard	Workshops
	Blasting Plant
	Painting Plant
	Chemical Storage
	Gas Tank Storage
	Waste Storage
	Sewage Treatment Plant
Institution	Training Centre
	Quarters
Maritime Industrial Park	Industrial lots
Business and Residential Park	Shop lots

Project Activities – Construction Stage

Reclamation Work

- * Filling material – marine sand, to be sourced from existing sand concessionaires
- * Estimated total volume of sand – 22.5 million m³



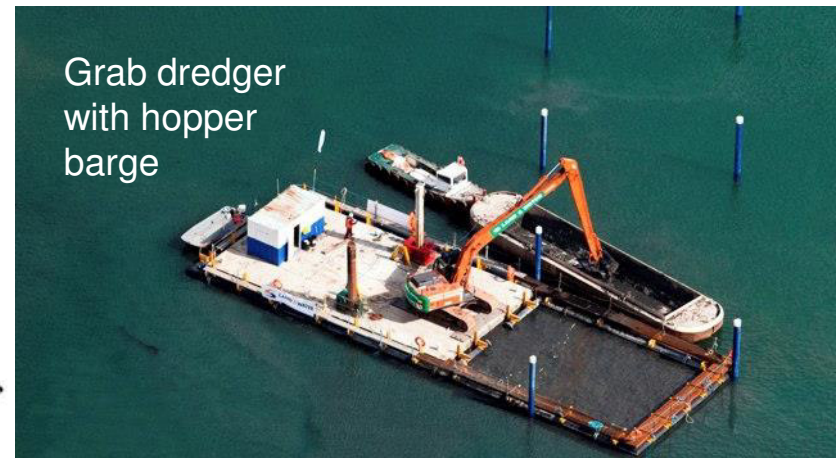
Project Activities – Construction Stage

Dredging Work

- * Capital dredging at navigation channel (about 3.5km) and harbour basin
- * About 17.7 million m³ to be dredged to achieve required depth of -12m CD



Trailer Suction
Hopper Dredgers



Grab dredger
with hopper
barge

Project Activities – Construction Stage

Topside Construction

- * Mobilisation of workers and machineries
- * Foundation work after reclamation and soil improvement
- * Civil and structure work
- * Mechanical and electrical works
- * Testing and commissioning
- * Demobilisation of workers and temporary facilities

Project Activities – Operational Stage

Shipyard and Fabrication Yard

- * Cutting and Welding Works
- * Blasting and Painting Works
- * Testing Works
- * Repair and Maintenance Work

Industrial Park / Institution, Business and Residential Park

- * Maintenance of utilities and infrastructures



Environmental Requirement

Environmental Requirement

Prescribed activity under the Environmental Quality (Prescribed Activities) (EIA) Order, 2015:

First Schedule

Activity 6: Industry

- e) Shipyard: Dead weight tonnage of 5000 tonnes or more

Activity 15: Dredging

- a) Capital Dredging

Activity 17: Industrial Estate Development

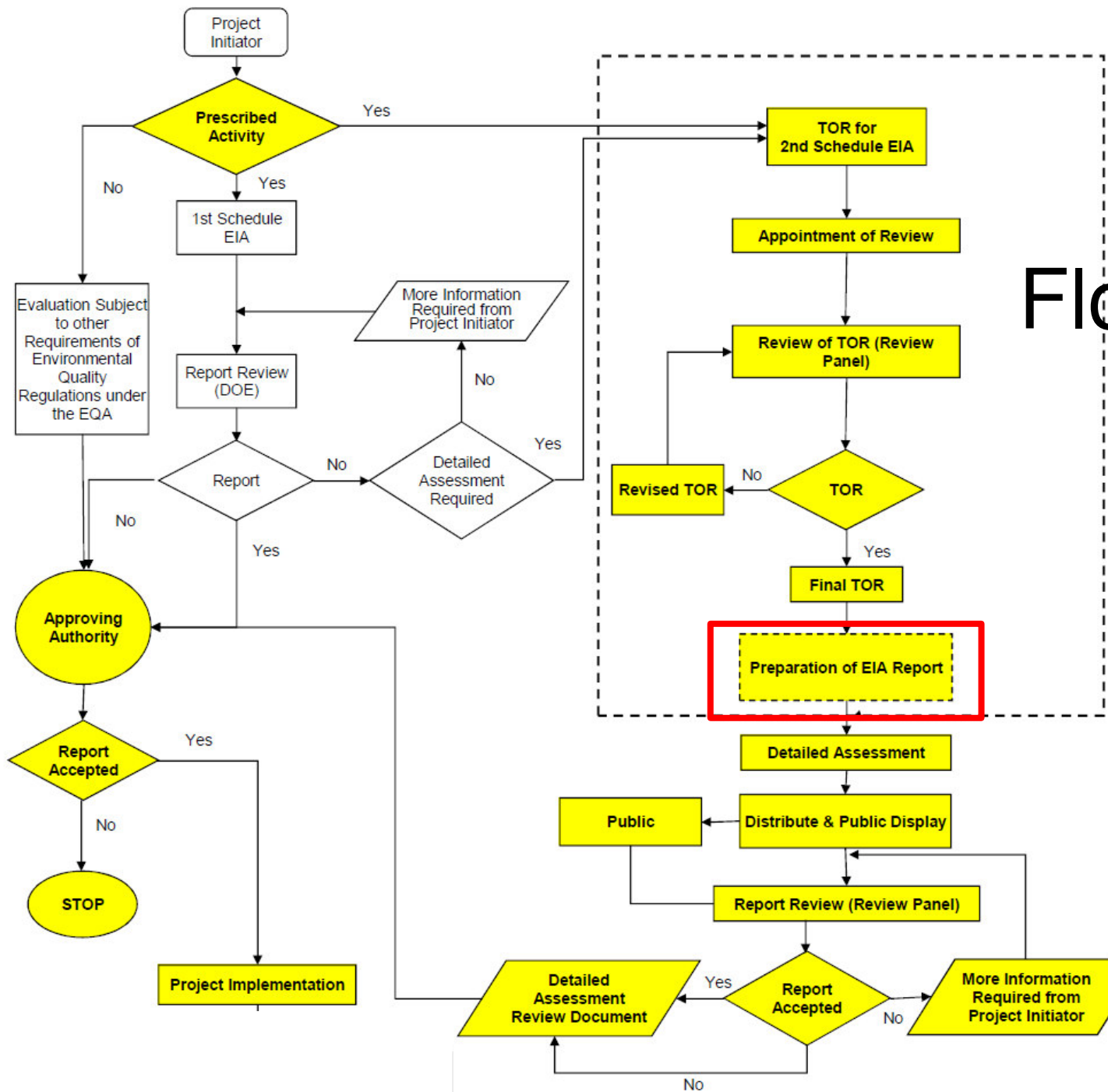
Development of industrial estate covering an area of 20 hectares or more

Second Schedule

Activity 7: Land Reclamation

- a) Coastal reclamation or land reclamation along river banks involving an area of 50 hectares or more

EIA Process Flow Chart





EIA Study



Potential Impacts to the Environment

Project Stage	Project Activities	Potential Impacts
Reclamation Dredging	➤ Sand sourcing ➤ Preparatory works ➤ Sand filling works ➤ Soil treatment and settlement ➤ Shoreline protection ➤ Dredging works ➤ Waste disposal	➤ Sediment plume / Water quality ➤ Marine ecology ➤ Change in hydraulics and hydrodynamics ➤ Fugitive dust ➤ Construction noise ➤ Marine traffic ➤ Waste management ➤ Disturbance of fishing area ➤ Employment and business opportunities



Potential Impacts to the Environment

Project Stage	Project Activities	Potential Impacts
Topside Construction	➤ Transportation of construction material and equipment ➤ Foundation works ➤ Civil and structure works – buildings, road, drainage ➤ Mechanical and electrical works ➤ Testing and commissioning ➤ Architecture finishing ➤ Geotechnical works	➤ Water quality ➤ Fugitive dust ➤ Construction noise ➤ Land traffic ➤ Marine traffic ➤ Waste management ➤ Employment and business opportunities

Potential Impacts to the Environment

Project Stage	Project Activities	Potential Impacts
Operation and Maintenance	➤ Shipyard and fabrication yard operations ➤ Commercial and industrial activities ➤ Household activities at residential areas	➤ Water quality ➤ Emission air ➤ Industrial and traffic noise ➤ Land traffic ➤ Marine traffic ➤ Waste management ➤ Employment and business opportunities

Key Aspects Under EIA Study

- * Water Quality
- * Air Quality
- * Noise
- * Waste Management

Approaches on Mitigation Measures

- * Mitigating measures for adverse impacts identified to be significant, can be in the forms of:
 - * Preventive: e.g. planning with buffer zones; alternative development layout
 - * Control: e.g. provision of erosion and sediment controls, air pollution control system, sewage treatment plant (STP) etc.
 - * Compensatory: any proven loss caused by proposed project activities

Water Quality

- * Key source of water pollution: reclamation and dredging works, accidental spills, STP discharge
- * Compliance reference to established baseline data prior to project, marine water quality standards, ecological tolerance levels, effluent regulations.
- * Mitigating measures includes:



Performance and Compliance Monitoring



MUHIBBAH
ENGINEERING (M) BHD



CHEMSAIN

Air Quality

- * Air pollutants from point and non-point sources (fugitive dust) during construction and operation stages
- * Compliance reference to established baseline data prior to project, ambient air guideline, emission regulations.
- * Mitigating measures includes:
 - Dust suppression
 - Air pollution control system



Noise

- * Noise during construction stage - short-term use of machineries, pump, compressors, trucks and other equipment; noise from blasting works and steel works, and increase of land traffic.
- * Compliance reference to established baseline data prior to project, the Planning Guidelines for Environmental Noise Limit and Control issued by DOE
- * Mitigating Measures:
 - Enclosure at noisy equipment

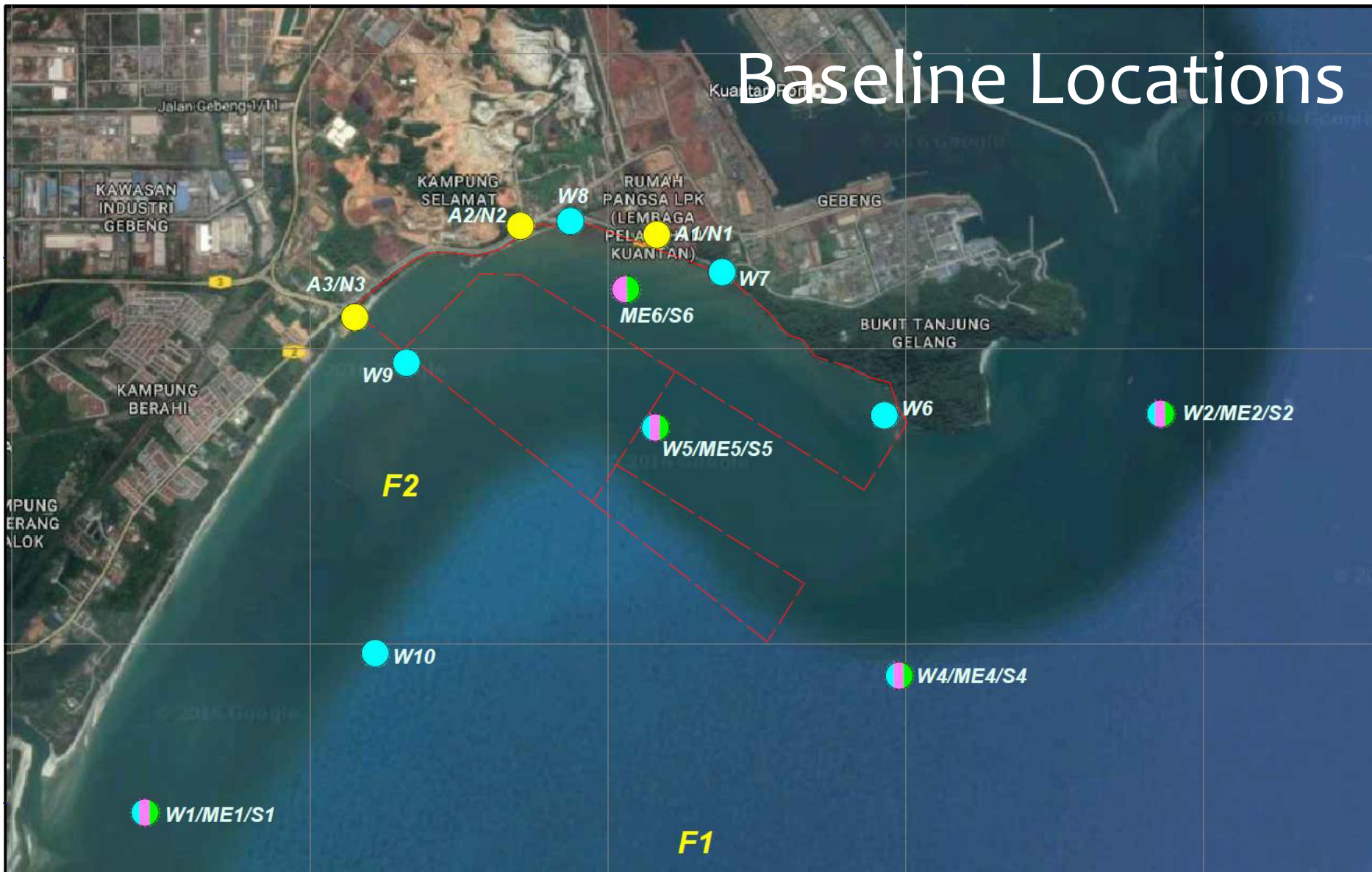


Waste Management

* Anticipated Waste

Stage	Category	Type of Waste	Possible Source
Construction	Scheduled Waste	Ballast water-oil mixture (SW309)	Working barge, dredger
		Diesel and Oil spills (SW307)	Working barge, dredger
		Equipment with mineral oil (SW409)	Working barge, dredger, workers
		Rags or filters contaminated with scheduled waste (SW410)	Workshops/stockpile on site
	Solid Waste	Metal Scrap/ Construction material	Workshops/stockpile on site
	Domestic Waste	Sewage	Temporary sanitary facility on site
Operation	Scheduled Waste	Ballast water-oil mixture (SW309)	Barges, docks
		Diesel and Oil spills (SW307)	Barges, docks, workshops
		Equipment with mineral oil (SW409)	Docks, workshops
		Rags or filters contaminated with scheduled waste (SW410)	Workshops
		Waste of inks and paints (SW417)	Painting room, workshops
	Solid Waste	Metal Scrap	Workshops
	Domestic Waste	Sewage	Sanitary facility on site, sewage treatment plant

Baseline Locations



LEGEND:



PROJECT SITE



AIR AND NOISE MONITORING
(A1/N1 - A3/N3)



MARINE WATER
(W1 - W10)



MARINE SEDIMENT
(S1 - S6)



MARINE ECOLOGY
(ME1 - ME5)

F

FISHERIES (F1 & F2)



W3/ME3/S3

Thank You