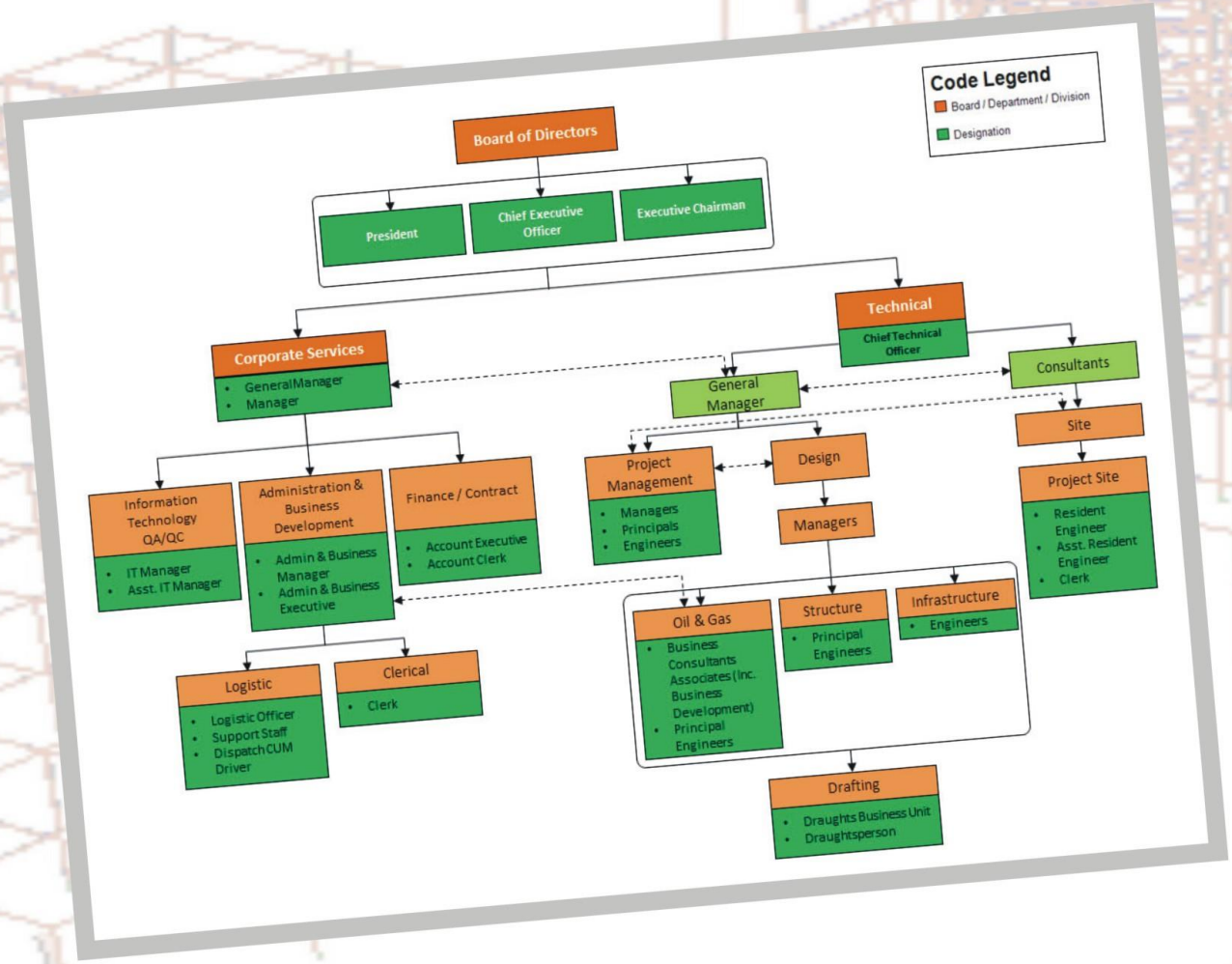
1.0 Organization Chart

ARSEA CONSULTING ENGINEERS SDN BHD



2.0

Our Services

- Feasibility and master plan studies
- Coastal hydrodynamic & morphological modelling and analysis
- Onshore/Offshore site investigation and geotechnical analysis
- Detailed structural engineering design and draughting
- Detailed road & highway design and draughting
- Structural defects diagnosis and prognosis
- Structural appraisal and material analysis
- Maintenance proposal and structural audit/management
- Tendering and management
- Construction and project management

3.0 Software

ARSEA CONSULTING ENGINEERS SDN BHD

STRUCTURAL ANALYSIS
- Prota Structure Design
- Staad Pro V8i
- REVIT 2013 (BIM - AutoCAD Building Design)
- Orion Reinforce Concrete Analysis & Design
- Tedds Ver. 12
- Esteem 5.2

GEOTECHNICAL, ROAD & HIGHWAY
- Geosoft
- Slope W
- MX Road V8i

INFRASTRUCTURE
- MES & MITS
  (Earthwork, Loopwin, Drainage,Pond & Sewerage)

COMPUTER ADDED DESIGN (CAD)
- AutoCAD 2012/2013
- AutoCAD LT 2012/2013/2014
- CADian 2011/2012
- FastCAT
- Draftsight

ADMINISTRATIVE
- Microsoft Office 2007
- Microsoft Visio 2007
- Microsoft Project 2007

4.0 Port & Maritime Engineering

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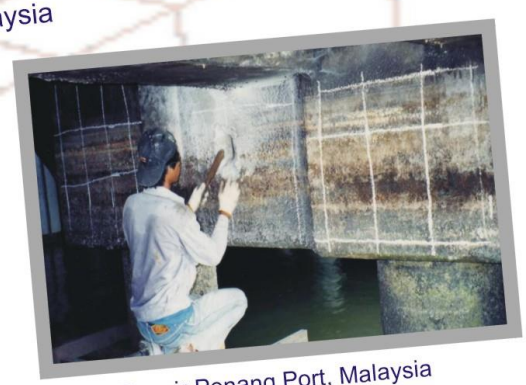
Endau Fishing Port, Malaysia

North Butterworth Container Terminal (Electrified RTG) Penang, Malaysia

Swettenham Cruise Terminal Penang, Malaysia

Navigation Aid, Malaysia



Wharf Repair Penang Port, Malaysia

5.0 Civil & Structural

ARSEA CONSULTING ENGINEERS SDN BHD

Water Sport Complex, PutraJaya, Malaysia

Maritime Centre Putrajaya, Malaysia

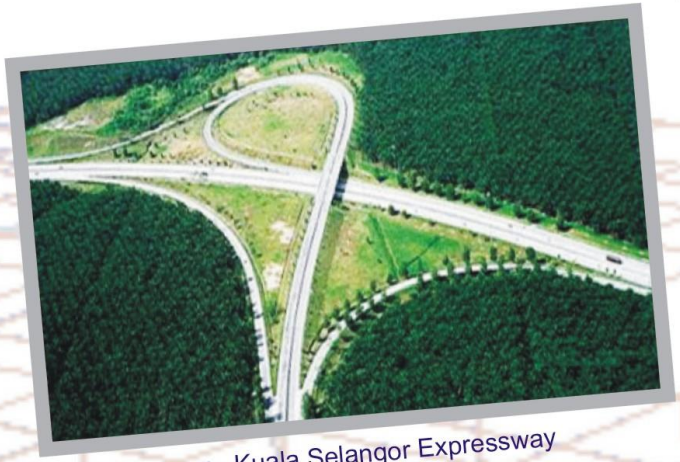
University Technology MARA Jasin, Malacca, Malaysia

Police Marine Base, Lahat Datu, Sabah, Malaysia

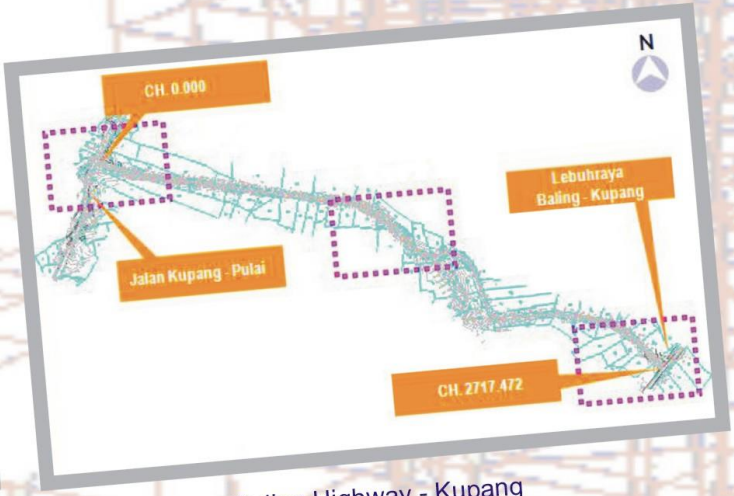
Institute of Automotive Pekan, Pahang, Malaysia

6.0 Road & Highway

ARSEA CONSULTING ENGINEERS SDN BHD

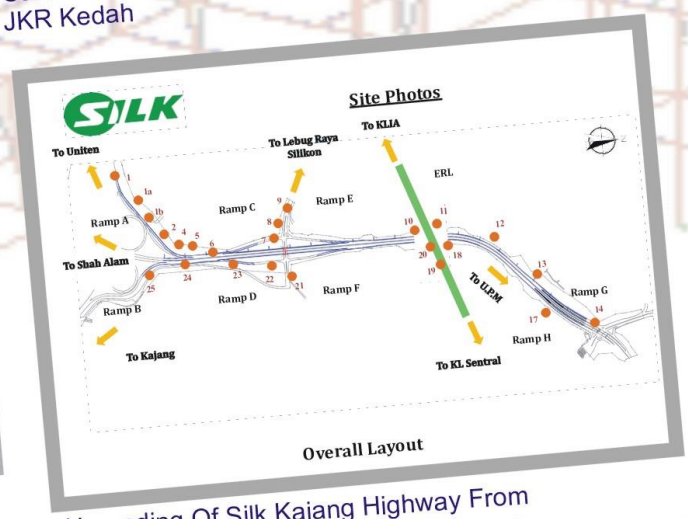


Kuala Lumpur - Kuala Selangor Expressway
(KLKSE/LATAR)



Caruk Bemban, Baling Highway - Kupang
JKR Kedah

Putra Heights Interchange and Toll Plaza at KM 13.2
South Central Link Expressway



Upgrading Of Silk Kajang Highway From
Uniten Interchange To Upm Interchange

7.0 Structural Appraisal & Repair

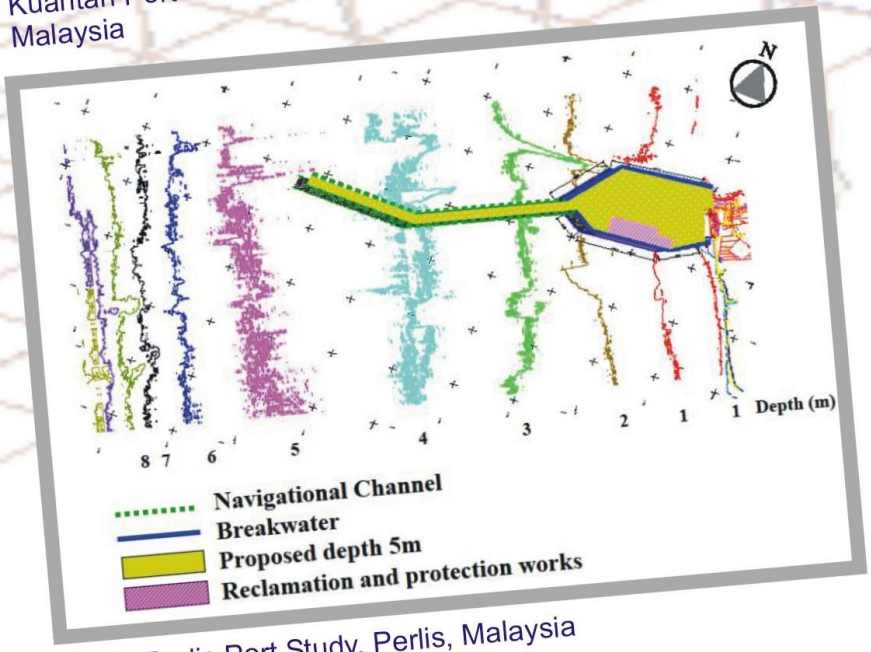
ARSEA CONSULTING ENGINEERS SDN BHD

8.0 Project Management, Engineering Auditing & Study

ARSEA CONSULTING ENGINEERS SDN BHD

Kuantan Port Extension/ Basin Dredging, Pahang, Malaysia

Royal Navy Submarine Base, Sepanggar, Sabah, Malaysia



Kuala Perlis Port Study, Perlis, Malaysia

ARSEA CONSULTING ENGINEERS SDN BHD

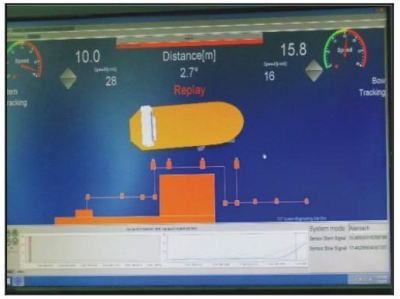
ACE/2018-03

PROPOSED TECHNICAL ASSESSMENT FOR JETTY 1 (BERTH 1 AND 2) SUBSTRUCTURE AND ITS APPROACH TRESTLE OF BINTULU PORT, BINTULU SARAWAK

Client: Lembaga Pelabuhan Bintulu
Project Value: RM1,100,000.00

Inspection and test systems for the followings:

- BERTHING AID SYSTEM
- MOORING HOOK C/W INTERGRAL
- CAPSTAN
- FENDER SYSTEM
- CCTV
- LOAD MONITORING SYSTEM
- STREET LIGHTING
- EARTHING SYSTEM
- CATWALK & LADDERS



ARSEA CONSULTING ENGINEERS SDN BHD

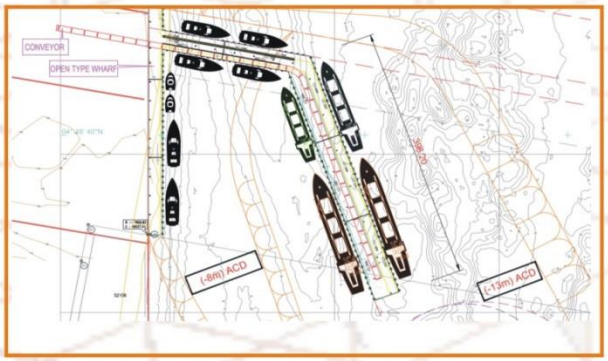
ACE/2018-01

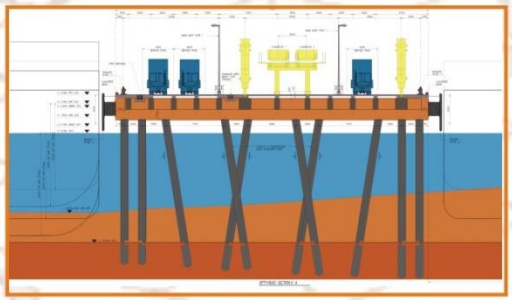
LUMUT PORT

TO ENGAGE A CONSULTANT FOR DEVELOPMENT OF LMT 2 AREA, CONSULTANCY SERVICE INCLUDES TO CONDUCT NECESSARY STUDY, PHYSICAL TESTING AND SURVEY, TO DEVELOP DETAIL REPORT AND PRESENTATION, DETAIL DESIGN AND DRAWINGS AND TO PREPARE BILL OF QUANTITY (BQ)

Client: Lumut Maritime Terminal Sdn Bhd

Project Value: RM 230,000,000.00





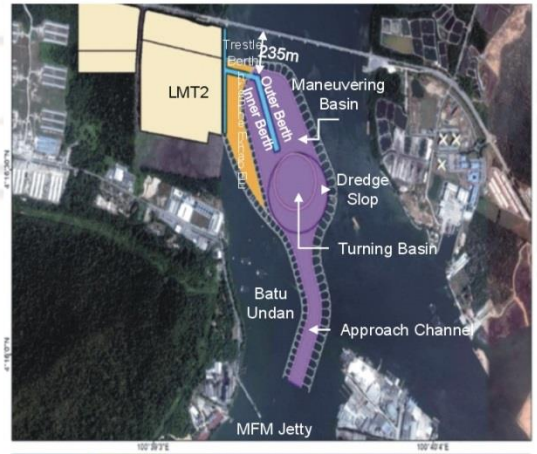
PHASE 2

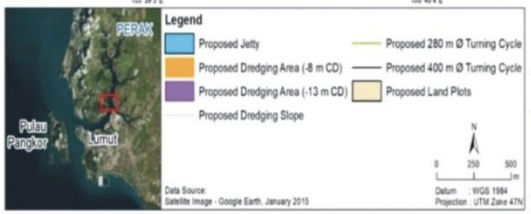
-Design of 350m wharf & trestle to facilitate up to Panamax size vessel. Land side of the wharf and trestle should be designed for berthing smaller size of vessel & barges.

- LMT2 consists of a 'L' shape pier with 396.2m length of berth connected by 228m length of trestle.
- A 378.2m embankment berth will be constructed along the retaining wall.
- Manoeuvring basin and the turning basin will be dredged to -13m and wharf front along the embankment will be dredged to -8m.
- Distance from the trestle to Raja Permaisuri Bainun bridge is 235m.

PHASE 1

- SAND FILLING WORKS ON 115 ACRES
- Dredging over proposed water and to introduce methodology to reduce siltation rate.





ARSEA CONSULTING ENGINEERS SDN BHD

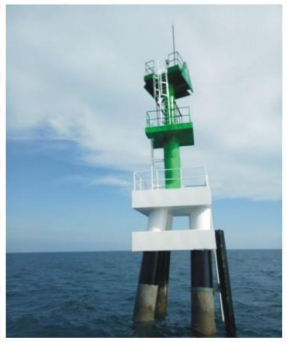
ACE/2017-07

KUANTAN PORT CONSORTIUM SDN BHD

PROPOSED AIDS TO NAVIGATION TO APPROACH CHANNEL COMPRISING OF PILING WORKS, RC STRUCTURE WORKS, LIGHT BEACONS, ELECTRICAL WORKS, LIGTBUOYS AND ALL ACCESSORIES FOR NEW DEEP WATER TERMINAL (NDWT) AT KUANTAN PORT, PAHANG

Client: KUANTAN PORT CONSORTIUM

Project Value: RM14,000,000.00



- 8 nos of Light Beacon structures with average of 2 weeks per structure.
- Each structure consist of average 4 nos of 700mm to 1000 mm diameter spun pile and of length 45m to 60m.
- The deepest structure is at – 20 m ACD and 7 nautical mile (12 km) from shore.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2017-06

LUMUT PORT

CONSULTANCY SERVICES TO PROVIDE CONCEPTUAL DESIGN, SPECIFICATION, ESTIMATE COST AND TENDER DOCUMENT OF WAREHOUSE NO. 4 AT LUMUT MARITIME TERMINAL SDN BHD, KG. ACHEH, SITIAWAN, PERAK

Client: Lumut Maritime Terminal Sdn Bhd

Project Value: RM11,000,000.00

- Foundation works - using pile system
- Building steel trusses frame 80m x 120m - based on designs of certain types of trusses
- Reinforcement concrete (r.c) flooring works - based on the loadings of bulk cargo for the warehouse
- External retaining wall & movable wall - external retaining wall & movable wall
- Metal clad roof and wall - metal clad roof and wall
- Mechanical & electrical works - mechanical & electrical works

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2017-01

MALAKOFF

CONSULTANCY SERVICE AS OWNER ENGINEER FOR THE ENGINEERING, PROCUREMENT, CONSTRUCTION AND COMMISSIONING (EPCC) OF NEW COAL UNLOADING JETTY AND ASSOCIATED BULK MATERIAL HANDLING SYSTEM AT 1X 1000MW COAL FIRED POWER PLANT AT TANJUNG BIN, JOHOR

Client: Malakoff Corporation Berhad

Project Value: 1.5 mil

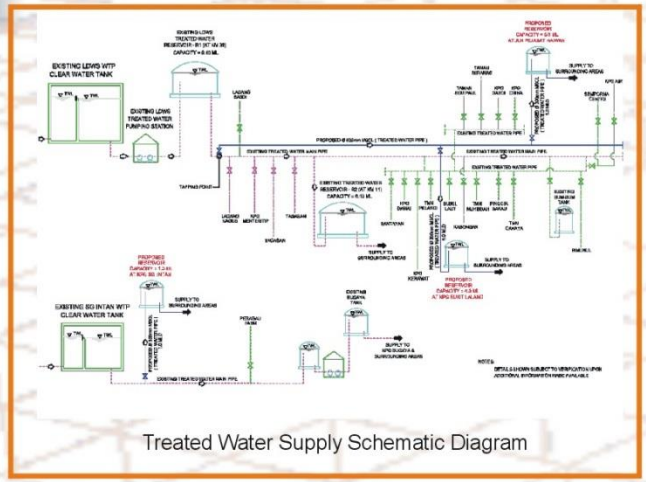
Owner's engineer (independent checker) for Civil & Structure and Mechanical & Electrical works for the construction of jetty and mooring dolphin structure, connecting walkway, ancillary works such as fenders, bollards, quick release hooks, rails, storm anchor, buffer stops, jack up plates, buildings for substation and rest area, services and utilities, drainage and dredging works.

ACE/2016-09

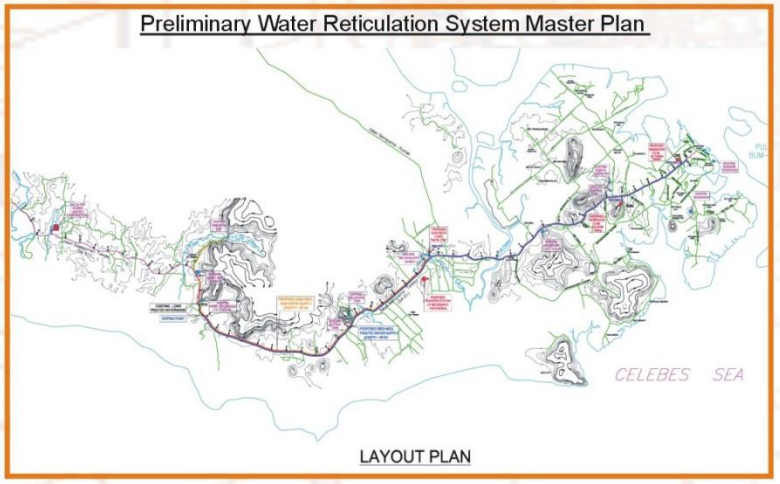
PROJEK BEKALAN AIR LUAR BANDAR (BALB) KAWASAN SEMPORNA, SABAH

Client: KEMENTERIAN PEMBANGUNAN LUAR BANDAR

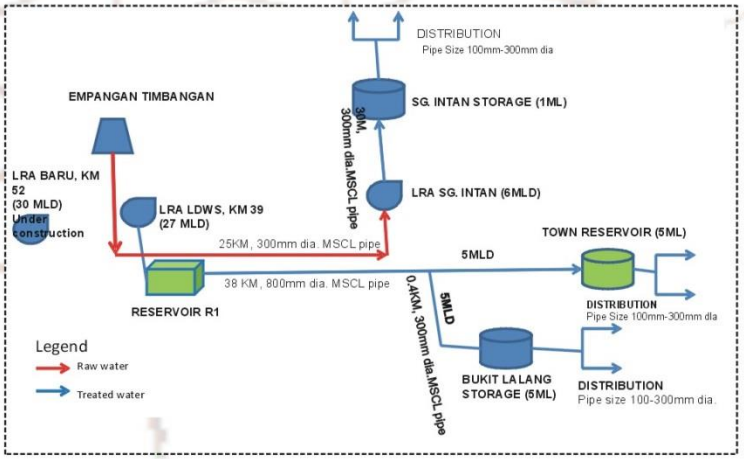
Project Value: RM180,000,000.00



Treated Water Supply Schematic Diagram



Preliminary Water Reticulation System Schematic



- Treated water through complete water supply system *(Estimated 7,500 houses)*.
- Main transmission pipeline to channel water from the Water Storage Tank Km38 R1 in Jalan Tawau-Semporna and pipelines to areas that have not had access to treated water supply in the Semporna District.
- Resolve the problem of raw water source for Water Treatment Plants at Sg. Intan and the supply of treated water to Bugaya Area, Tanjung Kapor, Kg. Sg. Intan, Jalan TLDM, Jalan Kemiri, Jalan Bubul Lama and Jalan Pesisir.

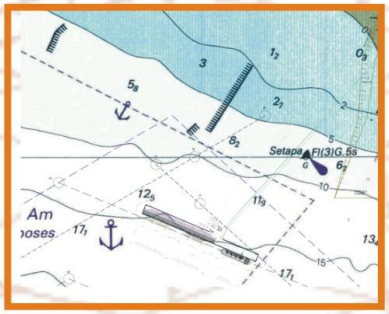
ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2015-04

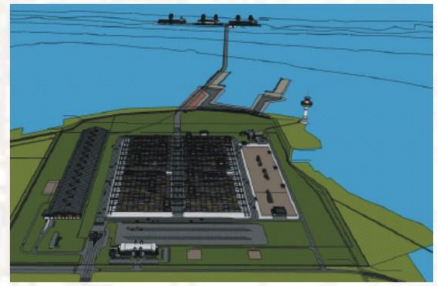
PROVISION Of FRONT END ENGINEERING DESIGN (FEED) CONTRACTOR FOR PACKAGE 12B : SOLID PRODUCTS JETTY

Client: Petronas Refinery and Petrochemical Corporation

Project Value: RM1.2 BIL



- Dredging works for vessel approaching channel, turning and mooring in the port area.
- The mooring and turning basin requirement
- Berthing jetty for container carrier (1,000-1,200 TEUs) and bulk carrier of 7,000-15,000 DWT vessels.
- Container yard for 2000,000 TEUs.
- Sulphur stockpile building
- Sulphur handling system
- Firefighting system
- Building onshore facilities include local control building, port administrative building.
- MTRA qualitative and quantitative for navigational study of the overall marine facilities.
- 2-D ship capabilities and availability analysis including evaluation of downtime.
- 3D ship maneuvering model of the port (Full mission ship simulation)
- FEED for EPCC ITB

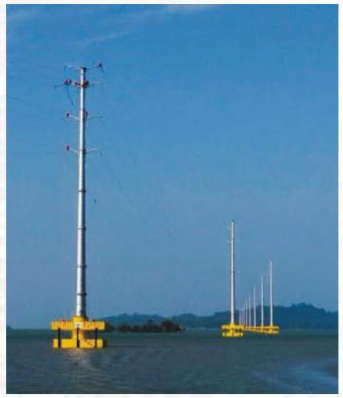


ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2014-11

275KV Double Circuit Transmission Line From Point B To Point C at Sg. Johor River Crossing

CLIENT : TENAGA NATIONAL BERHAD (TNB)
PROJECT VALUE : RM 22,119,880.00



ERECTION AND ASSEMBLY TOWER SECTION

- Each tower consists of 11 segments in each monopole
- Erection work is divided into 2 phases, known as phase 1 and phase 2.
- Phase 1 erect from segment 1 to 8 and using piling frame.
- Phase 2 erect from segment 9 to 11, using 200 tonnes with extended crane boom.

ARSEA CONSULTING ENGINEERS SDN BHD

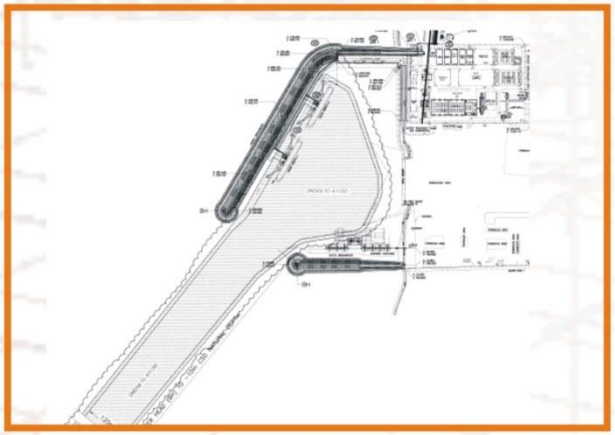
ACE/2014-05

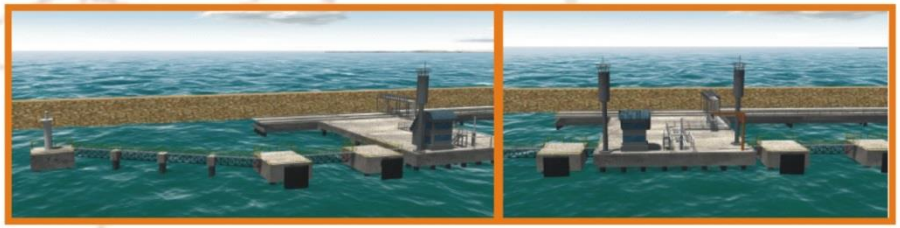
PROPOSED BASIC ENGINEERING DESIGN AND FRONT END ENGINEERING DESIGN (FEED) FOR JETTY AND RELATED CIVIL WORKS AT NEW PC(T) SB`S KIYANLY SUPPLY BASE (KSB), TURKMENISTAN.

Client: Petronas Carigali (Turkmenistan) Sdn Bhd
Project Value: USD 250 Mil

To develop the masterplan, conceptual design and prepare FEED for:

- Dredging Works For Vessel Approaching Channel, Turning And Mooring In The Port Area
- The Mooring and Turning Basin Requirement
- Liquid Berth Jetty(s) for Berthing of 7,000-15,000 Dwt Vessels.
- Firefighting System for the Liquid Berth Jetty(s)
- Building Onshore Facilities Include Local Control Building, Substation, and E&I Main Cable Routing
- MTRA Qualitative and Quantitative for Navigational Study of the Overall Marine Facilities.
- 2-D Ship Capability and Availability Analysis Including Evaluation of Downtime
- 3D Ship Maneuvering Model of the Port
- FEED for EPCC ITB





ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2013-15

PROPOSED KOTA SERIEMAS CLUB HOUSE

CLIENT : SERIEMAS DEVELOPMENT SDN BHD
PROJECT VALUE : RM14,385,115.15

Structure

- Building
- Foundation / piling

Infrastructure

- Earthwork Roadwork
- Drainage (OSD, etc)
- Sewerage (STP, septic tank, etc)
- Water Supply (Elevated Water Tank, Suction Tank, pump house)

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2013-08

THE DETAILED DESIGN OF FLOOD MITIGATION PROJECT FOR SUNGAI GEMAS, NEGERI SEMBILAN

CLIENT : JABATAN PENGAIRAN DAN SALIRAN, NEGERI SEMBILAN

PROJECT VALUE : RM 25,553,701.10

Mukim Gemas in part of Segamat and Tampin District are concentrated in Gemas Town and surrounding area (the Town divided into two districts by Gemas River).

- A) The river is approximately 35 km length
- B) Catchment area covering 243.5 km2 involving both states of Negeri Sembilan and Johor
- C) Flow through housing area and industrial area,
- D) Sg. Gemas flows through Gemas Town from the south toward the northeast and joins the Sg. Muar in 8 km distance from the town.

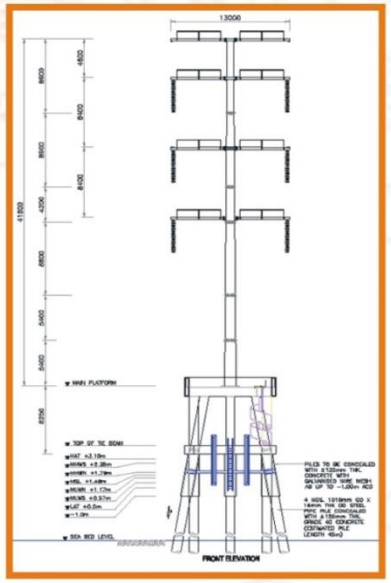





ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2013-06

PROPOSED 132KV TRANSMISSION LINE FROM SSU PANTAI SIRING TO SSU PULAU BESAR, MELAKA



Client: Tenaga Nasional Berhad
Project Value: RM 33 mil

132kV double circuit overhead line to be energized at 11kV from SSU Pantai Siring to SSU Pulau Besar Melaka with an estimated route length of 4.2km crossing the Malacca Straits. Scope of works includes design and construction of 12 nos of monopole tower foundations and 2 nos of substation gantry foundations based on 132kV overhead line loading including wave load, wind load, hydrostatic pressure, current and ship impact load complete with necessary facilities/accessories.

Maintenance platform, handrail and climbing facilities with security gate.

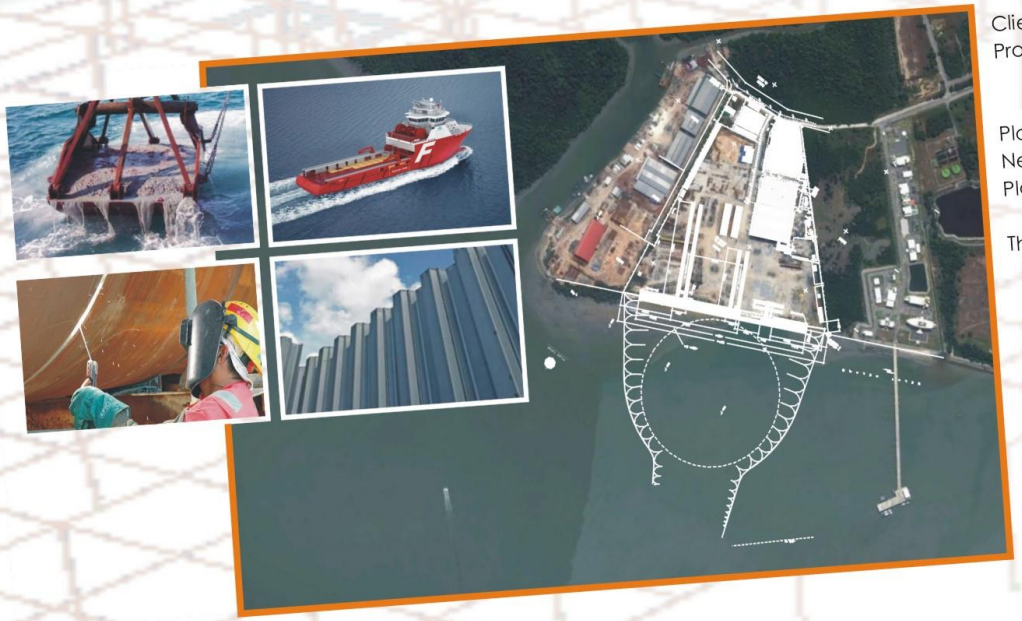
Fender system for berthing.

Navigation aids and protective coating approved by relevant authority.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2012-07

Construction Of New Bulkhead, Wharf, Shoreline Protection, Skid Track And Relieve Platform



Client: TH Heavy Engineering Berhad
Project Value: RM 45 mil

Planning, Detailed Design and Construction Management for the New Bulkhead, Wharf, Shoreline Protection, Skid Track and Relieve Platform.

The scope of works includes:

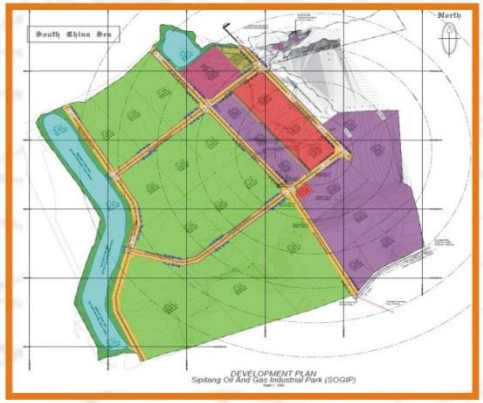
- Shoreline Protection 300m
- Wharf extension and new load-out bulkhead 8,000 MT
- Skid track 250m & 150m
- Skid beam 250m
- Construction of new fabrication table
- Planning for dredging task
- Design of fall retaining structure (approx: 18 meter) on soft soil conditions.
- To cater for dredging to -7.0m ACD.
- Simulation for loading of 8000 tank load-out.

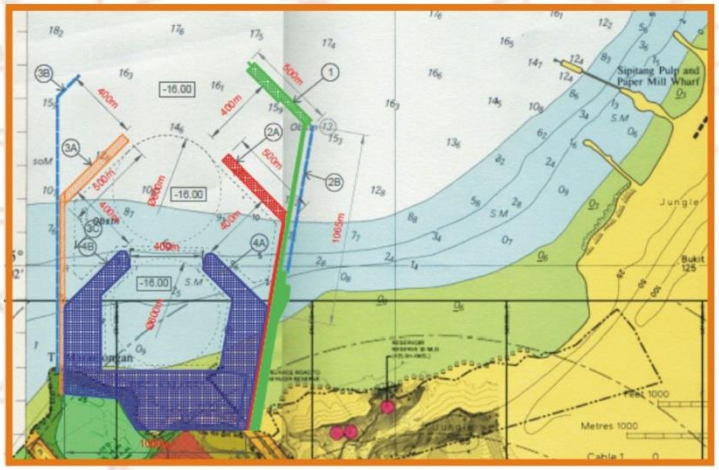
ACE/2012-03

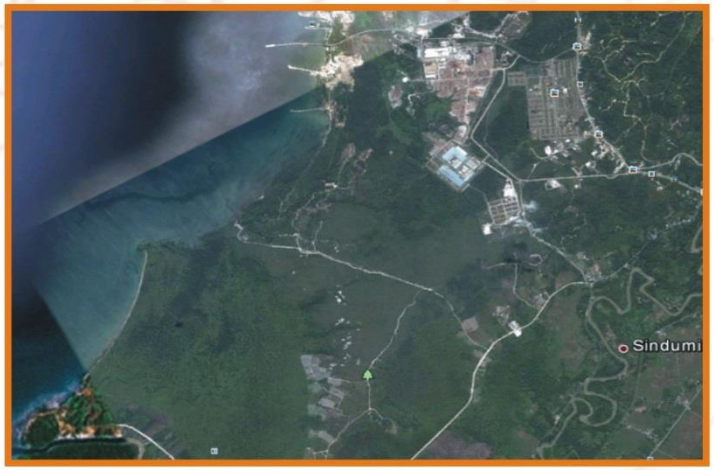
Proposed Development for 'SIPITANG OIL AND GAS INDUSTRIAL PARK' (SOGIP)

Client: Sipitang Oil & Gas Development Corporation (SOGDC)
Project Value: RM 300 mil (Phase 1)

- SOGDC desirous of having an integrated maritime facilities for SOGIP.
- To prepare the masterplan of an integrated maritime terminal catering for phasing development options.
- The integrated masterplan include requirement of terminal for PETRONAS Chemical Fertiliser Sabah Sdn Bhd.





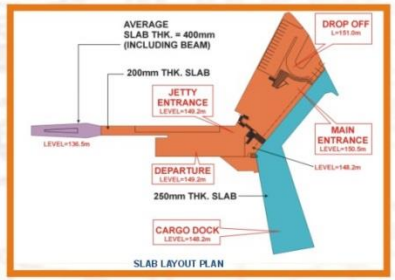


SOGIP Integrated Maritime Terminal SIPITANG, SABAH

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2010-13

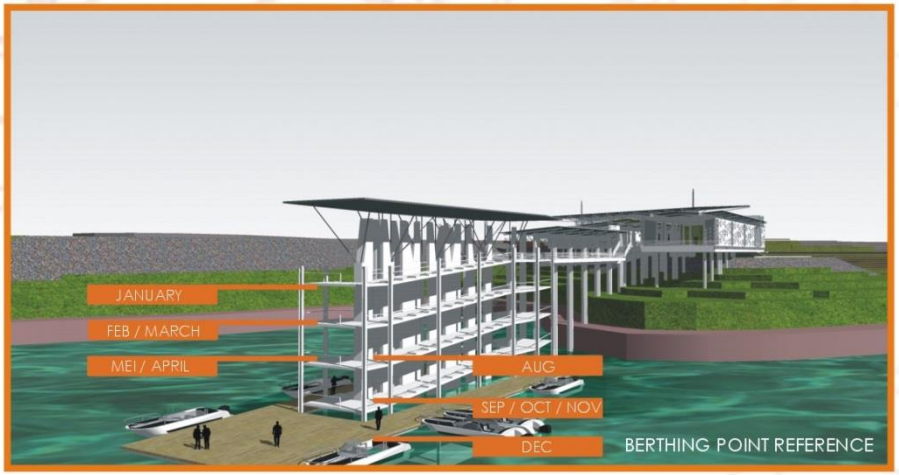
Proposed Development of Lake Kenyir (Gawi)
Kuala Terengganu, Terengganu, Terengganu Darul Iman



Client: Titijaya Senada Sdn Bhd
Project Value: RM 80 mil

Pengkalan Gawi Complex, Kenyir Terengganu comprise of the followings:

1. office block	floor area : 269.96sqm	
2. retail block	floor area : 295.79sqm	
3. departure block	floor area : 654.50sqm	circulation area : 3241.07sqm
4. trestle bridge		
5. passenger jetty		
6. cargo jetty	floor area : 1412.73sqm	
7. TNB Sub-station	floor area : 78.76sqm	



ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2010-08

Proposed Development of International University College Of Automotive (IUCAM) Student Village On Pt 13225, Pekan, Pahang.

Client: DRB-Hicom Properties Sdn Bhd

Project Value: RM 120 mil

Proposed development and construction of International College of Automotive Malaysia (ICAM) student village for 3000 student.

- Infrastructures:
  - -Earthwork(150,000 m3)
  - -Drainage(12000m3 dry pond)
  - -Sewerage(6100 PE)
  - -Road
  - -Water Reticulation(235,000 gallon water demand)
- Structures Main Component:
  - -Five(5) blocks of 12 storey student hostel
  - -Two(2) blocks of 12 storey staff apartment
  - -One(1) block 4 storey visiting lecturer;s apartment
  - -One(1) multi purpose hall
  - -Cafeteria cum commercial centre
- Ancillary Building
  - -One(1) sewerage treatment plant
  - -Two(2) chambers Sub-station
  - -One(1) main suction water tank

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2010-04

UITM Campus Semujuk, Jasin, Melaka

Client: YBK Usahasama Sdn Bhd

Project Value: RM 300 mil

University Campus (UiTM) with total development area 195 acres and built up infrastructure area 84 acres that includes an admin building, lecturer halls, hostels and other centralized facilities for 5000 students from Faculty of Science & Mathematics, Plantation & Agrotech and Applied Science.

- Civil & structural engineering consultancy include conventional and industrialized building system design.
- Water demand of 250, 000 gallons/day.
- Sewage Treatment Plant (STP) for 5000 P.E
- Road and drainage.

ARSEA CONSULTING ENGINEERS SDN BHD

P_ARIZ/2010-01

Proposed Development for CIQ Complex, Immigration and Passenger Jetty at Malacca River Mouth

Client: Kementerian Hal Ehwal Dalam Negeri Malaysia
Project Value: RM 60 mil

- Integrated CIQ Complex.
- River bank profiling protection.
- Berthing and landing wharfs for operation vessels and passenger ferries.
- 60m length x 9m width passenger wharf.
- 58m length x 6m width operation wharf.
- Other infrastructure & facilities.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2009-04

Kuantan Medical Centre Indera Mahkota, Kuantan, Pahang

Client: Kuantan Medical Centre Sdn Bhd
Project Value: RM 90 mil

5 storey private hospital for 150 beds including lecture theaters, halls, operating theaters on Lot 54559/Pn 7723, Jln Tun Abd Razak, Kuantan, Pahang

- RC square pile with sizes of 235 x 235 and 300 x 300 and penetration depth varies form 18m to 21m.
- Road crossing reinforced concrete culverts (600mm dia.)
- Average Daily Flow, 4 gallons per bed per person and 3 gallons per 100 square meter.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2007-11

HIGH TECH TRAINING CENTER PROJECT (ADTEC) Kemaman, Terengganu

FUNCTIONAL REQUIREMENT

Development Type: Educational Institution

Development area: 61.24 acres

4 main zones:

- Administration Zone
- Academic Zone
- Residential Zone
- Recreation Zone (Grand Stand & Sport Facilities)

INFRASTRUCTURE:

- R4 Road
- 2,610 PE for STP
- 42,200 gallons water tank
- Block drains (450mm, 600mm, 750mm, 900mm)
- Subsoil drain for football field

Client: Kementerian Sumber Manusia

Project Value: RM 120 mil

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2007-09

PROPOSED MOSQUE COMPLEX AT BANDAR PUNCAK ALAM, SELANGOR DARUL EHSAN.

CLIENT : PUNCAK ALAM HOUSING SDN.BHD.

PROJECT VALUE : RM16,480,130.00

- Mosque Complex – 5000 PERSONS
- Development Area - 9.9 acres
- Cut & Fill Quantities - 18 000 m3
- Surface water drainage - Designed for 5 years ARI and checked for 10 years ARI
- Average water demand - 68,000 gallon per day
- Capacity of Suction Tank - One third of the daily demand (22,667 gallon per day)
- Pipe Coefficient - Mild Steel (M.S.) pipe, 110,Ductile Iron (D.I.) pipe, 110 and HDPE pipe,100

MINIMUM COVER TO MAIN REINFORCEMENT

- Foundation shall be 50mm
- Ground beams/stump shall be 40mm
- Column shall be 30mm
- Beams, wall, slab shall be 25mm

ARSEA CONSULTING ENGINEERS SDN BHD

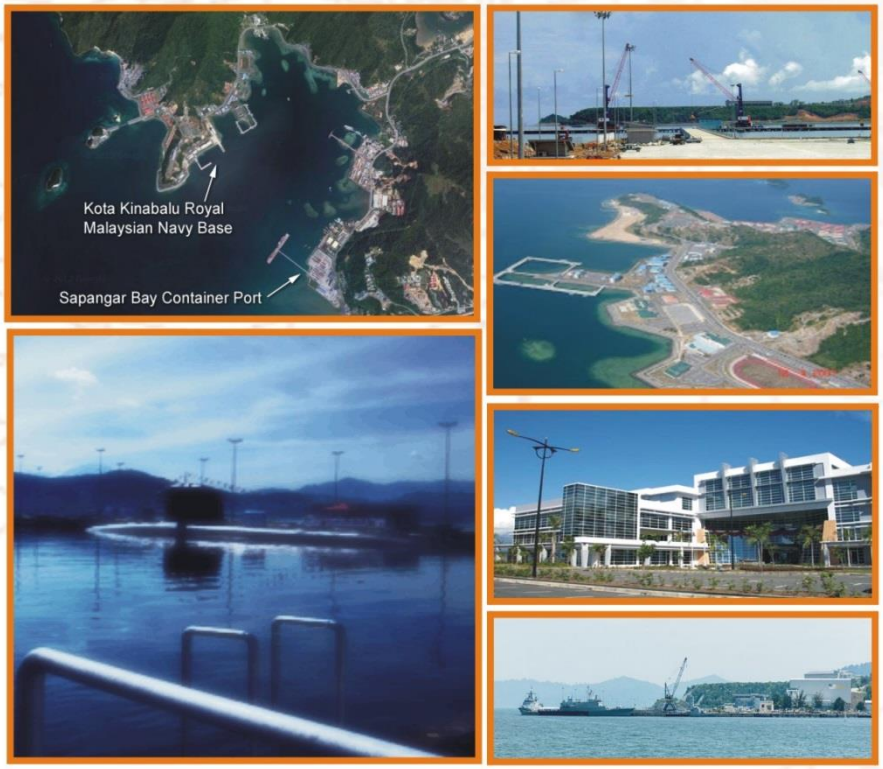
ACE/2006-02

The Design, Construction, Completion, Testing And Commissioning Of Submarine Base For Royal Malaysia At Sapangar Bay, Kota Kinabalu, Sabah

Client: Jabatan Kerja Raya Malaysia (Cawangan Pangkalan Udara dan Maritim)
Project Value: RM 350 mil

Design audit, value engineering and project management of submarine base for royal malaysia at sepangar bay, kota kinabalu, sabah.

- Approximately 80 acres development partly via reclamation.
- Retaining structures and submarine berth/shiplight.
- Administrative buildings and operation buildings.
- Workshops/hangers and depots.
- Accommodations and related infrastructures.
- Overall project planning to comply with Naval requirement and submarine operation and supporting services.
- Auditing the pontoon breakwater (120m by 20m) against any possible leakages with anticipation for future scheduled maintenance works.
- Special berthing design with camel fender system to cater for the sensitivities of the submarine sonar fin.



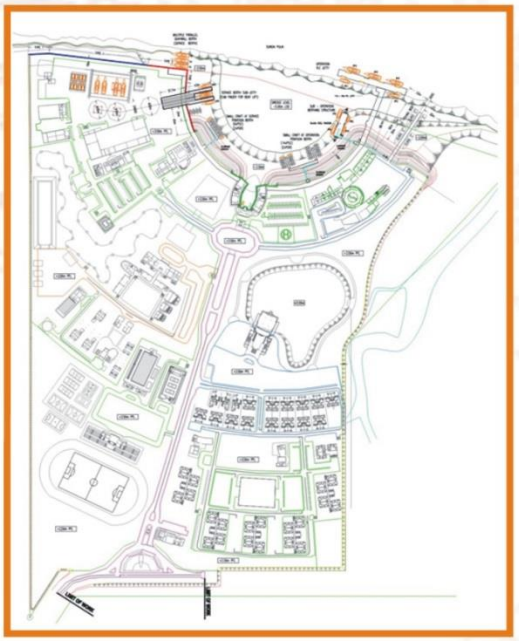
ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2006-01

Proposed Development for Marine Police Base at Tanjung Kupang, Johor
Package 1 - Reclamation, Basin Excavation, Maritime Works, Main Road Infra
Package 2 - Trimming of excess earth, Building and infrastructure works
Package 3 - Trimming of excess earth, Building and infrastructure works

Client: PBLT Sdn Bhd
Project Value: RM 450 mil

Planning Detailed Design and Project Management for Marine Police Base at Tanjung Kupang Johor.



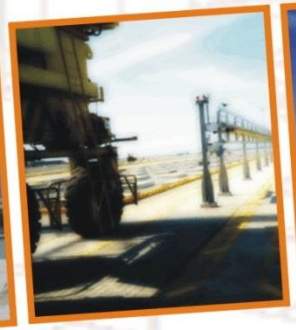
The project comprises of:

- 110 acres development project which training complex and staff quarters.
- Maritime berthing structures and its basin and related infrastructure works.
- 1.5mil m^3 of land reclamation works, construction of jetties, slipway, boat lift platform, procurement of pontoons.
- Staff quarters; high-rise (18-storey), medium-rise and low-rise building.
- Administration building, swimming pool complex and multipurpose hall.
- Boat hanger, storage, workshops and water tank tower.
- Pre-bore spun piled foundation, road, water supply, MASMA drainage with std and 5000 pe sewerage system.
- Typical Malaysia west coast geological characteristic with 16m compressible soil strata (spt less than 3).
- Reclamation management plan was incorporated the ongoing reclamation projects in the region to allow windows for suitable dredger availability.
- Special environment management plan due to site proximity to international maritime boundary and ramsar declaration on mangrove reserve.
- Installation of double layered silt curtain to mitigate river pollution during reclamation and dredging.
- Planning and management of phased development with include vertical drain and surcharge to expedite engineered settlement and consolidation.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2004-01

Detailed Engineering Design and Supervision of Construction of Expansion of North Butterworth Container Terminal



Client: Penang Port Sdn Bhd
Project Value: RM 220 mil

Planning, detailed design, project management and value engineering for expansion of North Butterworth Container Terminal.

The project components are:

- 21 hectares vertical drained reclamation on 16m compressible soil strata (SPT less than 3)
- Relocation Of Existing Buildings & Infrastructure
- Container Yard for 5406 TGS and 120 reefer points
- New administration building & facilities
- Sand replacement the revetment key structure.
- Reclamation area designed for 5+1 container stacking yard.
- Vertical drain and surcharge to expedite engineered settlement and consolidation.
- Piled supporting girders for Electrified gantry cranes to cater any differential settlement

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2003-10

Redevelopment of Swettenham Pier, Penang

Client: Penang Port Sdn Bhd
Project Value: RM 65 mil

Planning, detailed design, project management & value engineering for Redevelopment of Swettenham Pier, Penang.

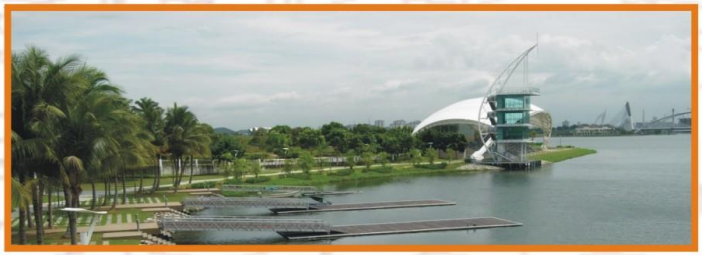
Component of project includes:

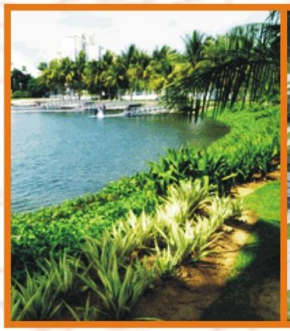
- Demolition of existing jetty.
- Construction Of New Main T-Pier Jetty, Trestle, dolphin & walkway bridge to cater berthing of 4 nos. of Cruise vessels max. size 113000GRT and 2 pontoons for 4 berth of 250T coastal ferries .
- Custom, immigration, Quarantine Terminal building with passenger boarding bridge.
- 400 m open type berthing wharf structure and dolphins on 16m compressible soil strata (SPT less than 3) at max. water depth of 19m for 110,000 GRT.
- Biggest vessel guided and tug assisted berth was for cruise vessel Queen Mary 2 (length 345m and 150,000 GRT).
- Terminal and CIQ bldg constructed on the open typed piled platform, designed as a continuous framed structure with the laterally loaded wharf.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2003-06

Proposed Development of Regatta Course and Promenade, Precinct 6, Putrajaya (Watersport Complex Project At Precinct 6, Putrajaya)

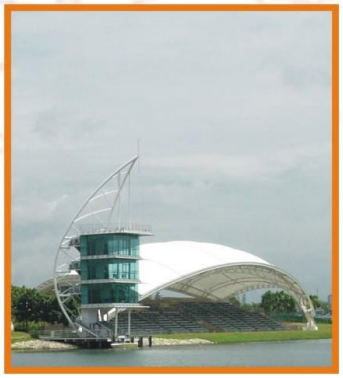




Planning, detailed design, project management and value engineering for Development of Regatta Course and Promenade, Precint 6 Putrajaya.

9.5 acres waterfront development project. The project consists of:

- Grand Stand with tensile membrane and steel structure roofing.
- Finish Tower structural steel building.
- Swimming pool complex with 1 level of basement.
- Regatta course lanes, pontoons and boat launching ramp.
- Revetment, R.C. wall, softscape and hardscape.
- Pre-bore spun piled foundation.
- Road, water supply, MASMA drainage with STD and 2600 PE sewerage system
- Water retaining structure cum basement car park.



Client: Perbadanan Putrajaya
Project Value: RM 70 mil

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2002-05

Proposed Development for Marine Police Base at Lahad Datu, Sabah

Client: Kementerian Dalam Negeri
Project Value: RM 81 mil

Planning, detailed design, project management & value engineering for. Development components comprises of:

- 15 acres sea- reclamation works (1.5m design wave height)
- 800m rock revetment and 684m pile foundation retaining wall
- Piled foundation T shape jetty for 4 berth catering PCB, PA and 2 nos PX boats
- Piled foundation single storey up to 4 stories R.C multi purpose building i.e quarters, administrative, sport complex and workshop
- Road and hardstanding, water reticulation, 66 500 gallon per day R.C elevated mushroom distribution water tank,
- Sewerage reticulation, 950 PE sewerage treatment plant
- MASMA Drainage System including Gross Pollutant Trap (GPT)

Challenges:

- Economise the landused plan by limiting the reclamation to 1m ACD.
- Geotechnical condition with initial hard strata at 3m and reaching rock bed at 12m below sea bed level.
- Slipway was designed with fingers to cater for boat lift operation

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2002-04

Proposed Development for Seri Malaysia Hotel On Lot Pt 12332, Malacca, Malaysia

Client: Kementerian Pelancongan
Project Value: RM 13 mil

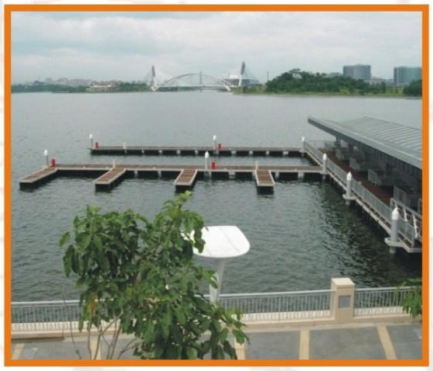
Planning, detailed design, project management & value engineering. The project scope includes:

- Hotel with 100 guest rooms, administration block, swimming pool, watch tower, lobby restaurant and staff café.
- Slope protection with rock filled gabion and R.C retaining wall.
- Road, water supply, MASMA drainage and 140 PE sewerage system.

ARSEA CONSULTING ENGINEERS SDN BHD

ACE/2002-02

Proposed Development Of heritage Centre & Maritime Centre At Putrajaya Administrative Centre, Presint 5, Putrajaya, Malaysia



Client: Perbadanan Putrajaya
Project Value: RM 120 mil

Planning, detailed design, project management & value engineering for 12.5 acres development of Heritage Park and Maritime Center.

The project consists of:

- Hotels, business complex, Malay Water Village & Viewing Tower.
- Waterfront Structure, Artificial Beach, Borneo Pavilion Emergency Rescue Centre, R.C. Ramp and Ferry Terminal, launching pontoon etc.
- Pre-bore spun piled foundation (both underwater and land), R.C. lake edge wall, sub-soil drainage system, R.C. building and ERC structural steel building.

ACE/1999-03

Proposed Expansion to the Mooring Basin of Kuantan, Port, Malaysia

Client: Kementerian Pengangkutan
Project Value: RM 153 mil

Design audit, project management and supervisory works for the dredging of the inner basin extension of Kuantan Port, Malaysia.

Work scope and challenges includes:

- Inland dredging for mooring basin expansion to cater for future berthing quay structure
- Navigation/turning basin of anticipated bigger vessels.
- Planning of construction management catering for the tight working condition and barging activities with its close proximity to the existing liquid bulk jetty
- Safety considerations for the daily port operation.
- Additional infrastructure include a new hazardous liquid berth.