

# ENGINEERING STUDIES ON LAND RECLAMATION INCLUDING DESIGN OF SEAWALL

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## ABSTRACT

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In this project, the main objectives are to study the engineering processes, environmental impact of land reclamation, and also the design and construction of seawall for coastal protection.

Before doing the land reclamation and construction of the seawall, the engineers have to conduct the land and hydrographic surveying and soil investigation at the project site and borrow areas, and then we are able to determine the soil profile as well as the location of the groundwater table is known,

Land reclamation is visioned as a mega area “land creation and landscaping exercise”, the project is also seen as creating a buffer zone against coastal erosion and hence it being a possible an attack coastal protection option within the framework of the national coastal erosion plan.

The coastal protection is referring to the protection of the shoreline erosion. Various measures can be used for coastal protection: direct measures and indirect measure. Example of direct measures includes an artificial sand supply, a row of groynes, and a detached breakwater.

The main purpose of the guideline is to integrate and establish procedures to aid in evaluation for implementation of EIA studies involving coastal and land reclamation in Malaysia. Through the EIA guideline, we are able to ensure and maintain suitability of coastal resources.

For the seawall design, Rankine’s Earth Pressure Theory is generally used in designing the stability of the Geostone seawall. The design is based on the critical condition where the sea water level is in the lowest position.