

CONTAINER YARD, KLANG, MALAYSIA

Stable subgrade solution for container yard



Industry:	Site development
Application:	Subgrade stabilization
Location:	Klang, Malaysia
Product:	MIRAFI® HP380a

platform areas. However, the soft marine clay profile made the initial platform construction challenging and costly. To create a stable platform, 1 m (3.28 feet) of base course material was used.

Overview

Infrastructure developments in Southeast Asia often involve construction on soft soils, which present significant challenges. Pulau Indah in Malaysia, where Westport is located, has a subsoil consisting of very soft marine clay. The project required a stable load supporting platform for container handling and storage.

Challenge

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CASE STUDY

Stable subgrade solution for container yard

Solution

The platform at Westport Pulau Indah was reconstructed using the **MIRAFI HP380a** subgrade stabilization geotextile. This geotextile was placed between the soft subgrade and a reduced base course thickness of 500 mm (19.69 inches). The **MIRAFI HP380a** geotextile provided reinforcement, base course confinement, separation, and permeability, resulting in a stable load supporting platform. This solution offered cost savings for the client.

The subgrade was prepared by leveling and smoothing the surface. The **MIRAFI HP380a** geotextile was then placed flat and tightly without folds or wrinkles on the prepared subgrade. Adjacent rolls were joined by overlapping. The aggregate fill was placed in loose lifts of 200 to 300 mm (7.87 to 11.81 in) over the geotextile. The fill was dumped from the edge and spread outward. Finally, the aggregate fill was compacted according to project requirements.

Result

The use of geosynthetics, such as the **MIRAFI HP380a** geotextile, has been proven to enhance the performance of roads and load support structures. In the Westport Pulau Indah project, the adoption of the **MIRAFI HP380a** geotextile with a



reduced base course thickness of 500 mm (19.69 in) provided a stable load supporting platform for container handling and storage. This geotextile offered reinforcement, base course confinement, separation, and permeability, effectively improving subgrade stabilization. The solution proved to be cost-effective compared to the initial construction without geotextile, which was both expensive and unsatisfactory.



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