

**RUNWAY LOAD SUPPORT PROJECT**

Balesin Island, Quezon, Philippines

**SOIL IMPROVEMENT / GEOTECHNICAL / CONFINEMENT / LOAD SUPPORT**

Products: MacCell™ (Perforated) 3D Cellular Confinement System

MacTex™ Non-woven Geotextile

**Problem**

Major development works are currently undertaking at Balesin Island, Quezon, Philippines for the development of the Balesin Island Club, a 454-ha island resort. One of the works prioritized was the construction of the 30m-wide x 1.5km-long runway for specific aircrafts.

Based on the conducted soil investigation, it appeared that the *in situ* soil is mostly silty sand. The runway was recommended to be laid on layers of a base course and a sub-base course, both of which will be shipped to the site. However, due to the isolated location of the island, the owner, Alphaland Corporation, has welcomed any engineered recommendation that may help them save some cost without the need of shipping materials for the base courses.

**Solution**

Considering the mentioned concerns of the Client and in coordination with the Consultant (TCGI Engineers), Maccaferri (Philippines), Inc. has recommended the use of MacCell™ 3D Cellular Confinement material.

A layer strong enough to carry the imposed loads by principle of soil confinement was established with the use of MacCell™. By confinement, classified *in situ* fill materials may be used without the need of importing sand and gravel. Further, it has been recommended that the fill materials must be compacted to a minimum density of 98% to satisfy requirements. To address possible migration of fill materials with the local soil, MacTex™ non-woven geotextile was laid prior to MacCell™ installation.

Project Owner

**Alphaland Corporation**

General Contractor

**Alphaland Corporation**

Consultant

**TCGI Engineers**

Maccaferri Products

50,000 sq.m.	<b>MacCell™ (Perforated)</b>
50,000 sq.m.	<b>MacTex Non-woven geotextile</b>

Construction Info

**Start of Construction : February 2011****Completion Date : April 2011**

During Construction

February 2011



During Construction

February 2011



# RUNWAY LOAD SUPPORT PROJECT

Balesin Island, Quezon, Philippines

# MACCAFERRI

A S I A



During Construction

February 2011



Project Completed

May 2011

## MACCAFERRI (PHILIPPINES), INC.

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**Engineering a Better Solution**