

Project

Production of Xblocs® for Gorgon, Australia

More than 40,000 Xblocs® form the protection of the causeway for the material offloading facility (MOF) for the Gorgon LNG project, located at Barrow Island, just off the coast of Western Australia. They have been produced, stored and quarantined to strict Australian quality requirements at the BAM Indonesia precast yard in the Port of Cigading, West Java. BAM Indonesia has been BAM International's subsidiary in Indonesia since 1970.

The Xbloc® is a simple, robust and reliable single-layer armour unit. It was developed by DMC, BAM's marine engineering design consultant. Development started in 2001, with the intention of creating an innovative interlocking armour unit that would protect breakwaters and shores in extreme conditions and over long periods of time. Since 2004 the Xbloc® has been successfully applied on shore protections and breakwaters all over the world.



Location Port of Cigading, Cilegon, Banten, West Java, Indonesia

Client KJVG (Kellogg Joint Venture Gorgon)

Consultant BAM Infraconsult/DMC

Contractor BAM Indonesia

Contract period February 2010 – October 2011

Contract sum €22 million

*Production, storage, quarantine
and loading of more than 40,000 Xblocs®*

Numbers and volume

A total of 40,073 Xblocs® and 26 antifers were produced and stored in BAM Indonesia's precast concrete yard on West Java, from where they were shipped to their final destination by client's barge. Sizes of the Xblocs® ranged from 1.5m³ (33,285 units) to 6.0m³ (6,762 units); the size of the antifers was 14.5m³. Over a period of approximately 17 months a total volume of 91,000m³ of concrete was poured in 86 moulds of 1.5m³ and 35 moulds of 6.0m³, an average production of 330m³ per day.



Quality control system

All Xblocs® are uniquely marked and a data-base quality control system tracks each block from concrete mixing to final shipment. For ease of identification all blocks are colour coded to mark the completion and acceptance of the various quality control and quarantine phases.

BAM Indonesia's precast yard

The permanent precast yard on West Java caters for the production, storage and quarantining of precast concrete units, whether it be reinforced concrete units such as jetty elements or gravity blocks, or concrete armour units, including the Xbloc®. Precast concrete elements can be loaded from the nearby materials offloading facility. The permanent set-up of the yard guarantees a quick response after order, which minimises delivery time for our clients.

BAM International bv

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Stringent quality requirements

All Xblocs® were produced to meet the strict Australian quality and quarantine requirements and specifically to meet the even more stringent quarantine requirements for Barrow Island, a Class 'A' Nature Reserve. They were successfully treated with biodegradable chemicals to prevent any alien flora and fauna to be imported into Australian waters during sea shipment.

