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PROJECT CASE STUDY

DURA-BASE® Provides Temporary Piling Rig Access in Saturated Grounds

Location
Ross River Solar Farm
Townsville QLD
Australia

25 YEARS DURA-BASE® ADVANCED-COMPOSITE MAT SYSTEM™ 1998-2023

BACKGROUND

The Ross River Solar Farm was Townsville's first large scale solar project, developed to provide a sustainable and renewable source of energy for the region. This project included the installation of 450,000 crystalline solar photovoltaic modules (solar panels) to be installed on ground-mounted frames that would track the movement of the sun. A key element of the project included using a fixed metal mounting structure that would be piled into the ground without the need for concrete.

The site for the project, a former mango plantation, was chosen because of the high solar irradiance in the region.

CHALLENGE

Construction faced major challenges when severe weather conditions hit the site (including 14 inches of rainfall), causing flash flooding to the area. Following the storm, as the topsoil began to dry, the underlying ground remained wet and unstable, making it difficult for the construction crews to access the site.

The safety of the crews to operate on unstable ground was a major concern, and the potential impact of major delays created serious financial risks to the project.

After an unsuccessful attempt to circumvent the issue by trimming the grass to allow the sun to dry the ground, the project team had to re-evaluate the project plan and adjust accordingly.

SOLUTION

To meet the client's objective of resuming construction of the project, DURA-BASE composite mats were deployed to provide a safe, effective, and stable work platform that allowed crews to access affected areas. Construction was done on the mats to install the ground-mounted frames that were piled into the ground. Equally distributing the pressure on the ground, the mats prevented the machinery from sinking into the soft earth and causing damage to the vehicles.

Furthermore, the mats could be leapfrogged over multiple areas of the site to be reused.

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RESULTS

Upon completion of this project, the client was provided with a safe and environmentally friendly ground stabilization solution. This enabled crews to operate safely and restore the timeline of the solar farm project to completion, delivering a major step towards green energy.

The DURA-BASE mats were reused over multiple sections of the project site and were easily removed after construction was complete, reducing unnecessary operating costs and requiring minimal remediation.

The utility-scale solar farm is set to provide clean energy for the local community for 40+ years.

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Project by JWA