Case study

An island’s beginning of a circular economy

Amec Foster Wheeler currently has three projects in Guam, a United States Territory located in the Marianas, including the construction of two aircraft hangars and the laying of new utility lines for Andersen Airforce Base’s North Ramp.

Throughout these projects our team has focused on the creation of a circular economy for the island’s limited resources. As part of this focus the local team have implemented reuse strategies/practices, utilised existing available materials and created value and use from ‘business as usual waste’.

To date the project teams identified and implemented four positive impact points.

1. Construction of the project management office from 11 reclaimed shipping containers.

2. Utilisation of approximately 60 acres of green waste which was cleared for installation for slope stabilisation, erosion control and erosion sock fill.

3. Value creation of the 600,000 cubic yards of soil and coral sub-grade materials which had originally planned to be removed for disposal. This material is now being crushed and utilised for quality fill material on other local projects.

4. Removal of 120,000 cubic yards of soil and coral material to be used for fill in Airforce runway low spots and a training location for airdrops. This project is currently ongoing in conjunction with the US Government.

The diversity of employees within the local office from around the world to local Chamorro hirers has allowed the team to collectively generate innovative solutions for creating the circular economy on the island. This positive social impact has led to new strategy and construction practices for a cleaner and more resilient environment for the people of Guam.
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Social benefits
By developing a diverse team of employees, our office has created a global network of communication, best practices, awareness and education of a circular economy to be spread amongst peers.

Business benefits
Business benefits to reusing:
- Large cost savings from green waste and soil material disposal
- Cost savings from container reuse and not purchasing imported material for structure
- Cost savings from the non-purchasing of fill material
- The creation of best practices

Environmental benefits
By reusing, not disposing, we have:
- Lowered emissions from reduced numbers of waste disposal transits and material imports
- Preserved jungle habitats which would have been used for disposal or excavation site for fill