Client: Dai Nippon Construction

Project Brief:
This was a design and construct project involving site investigation and analysis to design, fabricate and construct an ocean outfall pipeline as a part of a new sewerage treatment network in Port Moresby. Being an environmentally and culturally sensitive site PMG had to work with the local communities and within strict requirements to relocate the coral reef, working within the alignment to install the pipeline below seabed in time for commissioning and opening by the Japanese Prime Minister at the 2018 APEC summit.

Description of Works by PMG:
- Detailed design including geotechnical investigations and sea state studies.
- Relocation of over 240 live coral structures.
- Underwater GPS excavation of shallow reef trench (8,000m³) utilising amphibious excavator.
- Import and fusion welding of DN900 Pipeline 900 metres long, procurement of 157 precast concrete sinker blocks and high grade Monel 400 Stainless Steel Components.
- Controlled pipeline sinking of 240m long Diffuser section to 26m depth within design alignment and under water installation of remaining pipeline to 0.03% continuous fall.
- Layered back fill and scour protection and seabed reinstatement including rock spalls and rock armour.
- Rock base and concrete encasement to land connection/transition and air release system within the tidal zone.
CHALLENGES FACED:

Working in Papua New Guinea presented its own unique challenges. Resources and services were not always readily available, so project planning worked around contingency and coming up with a design that would suit the equipment available to the project. The site is very exposed and the project timeline for completion had to be maintained and achieved before the seasonal trade winds started from the South-East. This was all to insure the pipeline would be operational for its scheduled commissioning dates and finally the opening of the new Sewerage Treatment Plant.

Project duration: July 2017 – August 2018
Contract Value: $11M
REFEREE:
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