Reliable and Quick Housing Camp for the Australian Government – Department of Immigration and Citizenship in Papua New Guinea

CLIENT SUCCESS STORY

Irrespective of the highly challenging environment that Red Sea Housing Services (RSHS) had to put up with, due to tight time frame, scanty resources, and tough environment, RSHS successfully delivered a high-quality, reliable modular housing solution to meet all specifications required from the project.
About the client

The Australian Government – Department of Immigration and Citizenship, commits itself to building Australia’s future through the well-managed movement of people. Its diverse portfolio includes managing migration, humanitarian and citizenship policy and programmes. They work to keep Australia secure through border management and facilitate travellers crossing the border.

The organisation strives to make fair and reasonable decisions for people entering or leaving the country, ensuring compliance with Australia’s immigration laws and integrity in decision-making. They deliver services through offices in every Australian state and territory and in 52 posts outside Australia.
Project Snapshot

**Project**
- Single Adult Male (SAM) SITE Processing Accommodation Facility– Manus Island

**Customer**
- Department of Immigration and Border Protection Commonwealth of Australia

**Industry**
- Government

**Location**
- Lombrum Naval Base, Manus Island, Papua New Guinea

**Completion Date**
- September 2013- December 2013

**Products Utilized**
- Sitemaster Seaway Series

**Project Units Implemented**
- Accommodation units, Lavatory / Ablution Unit, Power Generation Plant, Water Treatment Unit, Waste Water Treatment Unit

**Services Offered**
- Engineering & Design, Project Logistics, Site Installation, Power Generation, Water & Sewage Treatment
Key Challenges

- High-quality, quick, reliable modular housing solutions
- Constant change in the scope of work and indulgence from other stakeholders who influence the project outcomes
- Tight project commissioning and handover time frame
- Liaison with various Governments, Customs, Quarantine and tax departments, and PNG Navy.
- Lack of materials and resources on Manus Island to support the scope of work
- Maintaining and communicating with the local workforce
- Security of the site and separation of the detainees from works
- Tight site size restrictions 80m by 80m
- Building Certifications and Geotechnical in an active Seismic Zone
- Ground Water, tropical heat and rain every other day
- Quality control with hand mix and hand dig over most of the site
- Unexploded ordinance potential from WW2 in service locations
- Camp en suite all utilities and amenities needed to be up and running within the short stipulated time
- No established supply chain for building materials: there was no port facility or equipment including concrete batching, heavy lift or supply services

The Project

Building on its global reputation, Red Sea Housing successfully designed and constructed a 2 storey, 432 person secure accommodation housing camp for the Australian Government – Department of Immigration and Citizenship, complete with 3 Multipurpose rooms for education, Dining Hall and Servery, Barber Shop, Offices and store rooms, Reverse Osmosis Water Treatment Plant to provide 1100 lt per hour and associated tanks, pumps and distribution lines and associated service material and maintenance for 1 year, Sewerage Treatment Plant to support 500 people, Ablution Blocks, Security Hut, lavatory unit, Power Distribution System 2 by 450kw Generators and 10,000 lt Diesel Tanks, Laundry Units to support 500 people, Fire Control System, Footpaths, Low Voltage Generators to support accommodation units, temporary kitchen and infrastructure, All fit out, furniture's and soft packs for the facility, Stormwater harvesting and 35,000 lt tank plumbed to toilets, Civil works for site with ground water at a depth of 450mm, Approximately 3000 m of reticulation (electrical, water and waste).

RSHS established our workforce camp for 50 persons and all associated supporting infrastructure and utilise and train local content providers to our greatest extent.
The Need

RSHS was awarded a contract to supply and commission a 2 storey 432-person secure accommodation facility for processing of refugees. The initial contract was for $36M AUD and to be executed in 75 days from contract award. The Australian Government (the Commonwealth) subsequently awarded RSHS a further $17M AUD in variations to supply the entire base with desalinated water, waste water treatment, re-establish a sewerage network for supporting housing and liaise with the PNG Government on duties and taxes associated with the project. This contract required a rapid response and a flexible contract to support the Commonwealth's requirement.

Location map

Location of installation at Lombrum Naval Base located on Manus Island in Papua New Guinea
Key Learnings

RSHS captured numerous lessons in the execution of this project. We believe that the lessons learned have provided our team with invaluable knowledge on delivering similar or large scale projects in the most remote and challenging environments in the world.

Procurement
- Procured off-the-shelf items that facilitated the rapid deployment into field
- Stock availability and coordination of our multiple facilities around the world to deliver on time and on budget

Logistics
- Employment of stevedore to discharge vessels in remote jurisdictions
- Working in areas devoid of ground handling equipment at the airfield and non-existing port facilities
- Working with no lighting for night works and discharges
- Limited road transport available to support major logistics movement

Civil Works
- No availability of quarries, building materials including cements, sands and aggregates for construction.
- No concrete batch hand mix for all footings
- Shallow footing design and tie downs

Local Labour
- Unskilled labourers are honest workers with excellent capacity to learn
- Payments to locals require cash as no banking is generally available
- Limited labour or equipment available

Installation and Commissioning
- Turnkey solutions will need be culturally appropriate to the county and users.
- All service runs, materials and buildings required to be tough, fire resident and temper resident by detainees
- To support the maintenance and repairs, all key equipment, personnel must be security trained and situationally aware
- Heat sensors instead of smoke detectors due to mosquito fogging
- Industrial macerators to process alien products
- Strict First Aid due to tropical diseases and good inductions and safety processes are essential
Hand mix and dig under tropical wet conditions with local labour trained by RSHS
Chartered Shipping from Ghana and UAE with mid sea ship to landing barge transfer, customs and quarantine clearance.
Beach landing and offloading all equipment and products with 2 m draft tide dependant.
Staff accommodation and inductions in WW2 era Nissan Huts for the RSHS team
Highlights of the project

- PNG, Ghana and Dubai prefabricated accommodations units
- Chartered Ships, Antonov N124 Aircraft, Passenger Transport Planes, Landing Barges
- RSHS cranes, side loaders, elevated work platforms, bobcats and back hoes
- RSHS fly camp and supporting Infrastructure, power, water supply and ablutions and laundry
- Design and Construction of a 2 storey, 432 person secure accommodation
- RSHS trained and utilised 80% of the project workforce from local islanders.
- High-quality, quick, reliable modular housing solutions
- Demonstrates Red Sea Housing’s extensive experience and logistical capability to meet the requirements of our customers and provide comprehensive housing solutions even in some of the most remote areas of the world
- Housing camp can accommodate a 432-tenant capacity
- The turnkey project including infrastructure work and complementary facilities in less than 75 days
- Project was delivered within a very tight timeframe with a design and construction scope of works
- RSHS supported the Commonwealth with all changes in the scope of works, and identified cost synergies to mitigate any additional cost and future development opportunities