

## CASE STUDY

# FEASIBILITY STUDY FOR THE DEVELOPMENT OF AGGE DEEP SEAPORT



**Catamaran Nigeria Limited** is a consultancy company providing specialized services for infrastructure development, operations and maintenance. They provide unparalleled efficiency and refreshing insights that impact positively on key areas in the provision of adequate infrastructure to drive economic growth. They have strategic working relationships with leading local and international Consultancy and Technical Advisory firms and transportation specialists. Together, they offer Strategic Infrastructure Development Consultancy services to clients requiring expert advice in development of infrastructure to promote economic activities globally.

### CHALLENGES

The Bayelsa State Government in a bid to develop a deep seaport required a pre-tender stage site investigation to be conducted at a proposed location along the Niger Delta Coastal area. Arup a multinational professional services firm headquartered in London was contracted by Catamaran to design the deep seaport. The location of the firm (London) served as a constraint to determine the best design for the proposed deep seaport.

### SOLUTIONS

Burnsley conducted a bathymetric survey using modern technologies to identify the sea and riverbed profile in the vicinity of the proposed port areas. In a bid to reassure the quality of the data, Burnsley conducted additional measurements to map underwater local features including rock outcrops/ river walls/ obstructions/ pipes/ outfalls etc. The following technologies were utilised on this project:

- C-Nav 3050 GNSS Dual Frequency Receiver System
- C- Navigator Computer Displaying Unit – Multi Serial Ports
- C-Nav Event Activation with Cable
- Hemisphere Vector Heading Device (Satellite Based GYRO)
- Hemisphere Smart Antenna with 15meters Cable
- Teledyne – Odom Echotrac CVM Dual Frequency Sounder with 22/33KHZ.
- Transducer and 10meters cable
- HYPACK Software. 2011 version
- SXPAD HANDHELD GIS GPS
- Tide Gauge and Gyro Compass
- Leica Builder Total Station with Survey Basic Set
- GARMIN - Hand Held GPS
- Valeport Current Meter with accessories
- Cone Penetration Test machine

### BENEFITS

Burnsley's Bathymetric detailed survey report and its accuracy enabled Arup to understand the terrain and therefore the design that would best suit the area. The Bathymetric survey accurately measured the depth of the water body in the vicinity of the proposed port areas and also mapped out all its underwater features.

### ABOUT BURNSLEY

Burnsley is an international technology consultant for West Africa's giant economy – Nigeria. Burnsley provides expert specialized services for the digitalisation of processes. This is not limited to products, services, and manufacturing processes, but also includes the digitalisation of entire business processes.



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