CASE HISTORY

ROBERTSON GEO SERVICES
Unlocking Your GeoData

Application:	**Geotechnical Investigation**
Technology:	**Large probe suite – deployment borehole dependent**
Location:	**Hinkley Point C Nuclear Power Plant, Somerset, England**

The first new nuclear power station to be built in the UK in over 20 years, Hinkley Point C in Somerset, UK will on completion provide low-carbon electricity for around six million homes.

Background:

The project was started in 2008 with early site enabling works commencing on what would be Europe's largest building site. Two EPR reactors with a total output capacity of 3,200MWe were to be built on the 94 Hectare site and the target date for electricity production is 2031.

Requirement:

Robertson Geo Services (RGS) was contracted by Kier BAM to perform wireline geophysical logging over more than twenty site visits covering more than sixty boreholes. The suite of probes requested was designed to provide key subsurface data for structural and hydrogeologic investigation.

Equipment:

4x4 vehicles were used for the project equipped with a portable set up for difficult to access boreholes. The main probes used were the High Resolution Optical Televiewer (Hi-OPTV)®, High Resolution Acoustic Televiewer (HRAT)® and Impeller Flowmeter. A full list of the probes used is shown below:

PROBE	OUTPUTS	DATA USAGE
High Resolution Acoustic Televiewer (HRAT)®	Unwrapped, oriented borehole wall image	• Fracture identification and characterisation • Bed boundary delineation • Void detection
High Resolution Optical Televiewer (Hi-OPTV)®		
3-Arm Caliper (Gamma)	Diameter, gamma	• Bed delineation/weak zone identification • Correlation between boreholes
Borehole Geometry	X-Y Diameter, gamma	• Void measurement • Correlation between boreholes
Focussed Electric (Guardlog)	Resistivity	• Hydrogeological characterisation
Impeller Flowmeter	Flow rates	• Inflow and outflow determination
Temperature Conductivity	Temperature, conductivity	• Location of aquifers

Operations:

All engineers working on the site were required to undergo extensive inductions and training and site visits were strictly controlled by the on-boarding team. The site was highly secure and zoned, allowing the engineers access only to their own work areas. Some boreholes were inaccessible to vehicles and a portable set up was needed.

Challenges and Solutions:

Working on the largest building site in Europe presented challenges for the engineers as there were hundreds of concurrent operations taking place simultaneously. Close liaison with the site personnel ensured that the logging work could be conducted safely.

End value to client:

The logging operations provided high quality structural and hydrogeologic data successfully. A fast data turnaround ensured that the on-site engineers had the requisite information to make rapid informed decisions.