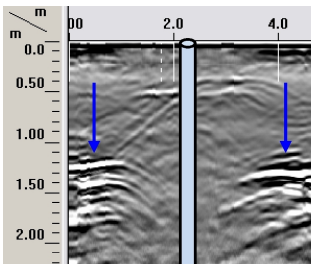




# Nuclear Power Plants for Electricity Production

Optimising safe drilling locations for geotechnical boreholes and piezometers by GPR and radiodetection measurements

Belleville, Dampierre, Saint-Laurent, Golfech, France  
Started in 2009, 12 months



In the context of geotechnical investigations and piezometer installations within the confines of several nuclear power plants, systematic GPR and radiodetection surveys were carried out in order to ensure the safety of the works.

These two complementary methods work to allow the many networks present below the ground level of these facilities to be precisely located, such as Bonna Sabla ducts, fire protection networks, camera and fibre optic networks, electric power grids, etc.

The measurements carried out on site, allowed the planned locations of the borehole surveys to be validated or moved, depending on the configuration of networks present at those planned locations.



This methodology allows a significant reduction in the human, operational, environmental and financial risks associated with network damage.



## Legends

1. Belleville Nuclear Power Plant - injection boreholes
2. GPR plot: borehole repositioned between two Bonna Sabla ducts
3. Network detection using RD8000 measurements

## Key figures

- Work carried out in approximately 10 nuclear power plants

- GPR method (RAS) & Radiodetection RD8000 (RAD)

- More than one hundred boreholes checked