

Cottam and West Burton Power Stations, Nottinghamshire

Our Services

- Desk Study
- Engineering Site Supervision
- Intrusive Ground Investigation
- Utility scanning / mapping
- Temporary Design Work Assurance
- Interpretative Reporting



Overhead Line Upgrade Works

Electricity Alliance West were proposing refurbishment and upgrade works on the 7.5km 400kV overhead power line connecting Cottam and West Burton Power Stations in Nottinghamshire.

In order to assess the required extent of works, **CGL** were commissioned to determine the ground conditions and identify existing foundation types. The work was undertaken in several stages from November 2009 to September 2011. CGL produced a geotechnical desk study for the route in order to provide a preliminary geotechnical risk rating for each tower.

Following on, **CGL** were commissioned to undertake several phases of investigative work at specific towers in order to prove the nature of the ground conditions for new tower construction, to advise the existing foundation type and soil parameters for capacity verification and to confirm the conclusions derived from the initial Desk Study risk assessment appraisal.

Techniques employed during the ground investigations included deep trial pitting, dynamic probing/window sampling, in-situ density tests, and combined percussive and rotary drilling. Ground penetrating radar (GPR) was also undertaken by **CGL** during these works to enable the intrusive work to be designed around sub-surface hazards.

Our reports re-evaluated the design assumptions to reveal that tower foundations were in accordance with design parameters resulting in whole scale tower refurbishment being withdrawn.

In addition, temporary works designs for Mobile Elevating Work Platforms (MEWPs), crane pads and scaffolding positions were undertaken. To allow scaffolding to bridge an adjacent railway line **CGL** provided anchorage, uplift and bearing capacity designs to the satisfaction of all stakeholders.

Client: Electricity Alliance West
(on behalf of National Grid)