Projects

Supporting a major infrastructure project with cable system design

Client: Keltbray

PROJECT AT A GLANCE

Project:	Location:	DNO:	Duration:
132kV Cable Route Concept & Detailed Design	**Thames Enterprise Park, UK**	**UK Power Networks (UKPN)**	**April 2024 – February 2025**

PROJECT BRIEF

An end-to-end 132kV cable system design delivered with flexibility, risk reduction, and stakeholder coordination to support a major energy infrastructure project.

Keltbray, on behalf of UKPN, required a complete design solution for a new 132kV cable system to support critical infrastructure at Thames Enterprise Park.

The scope involved a full feasibility study, system design, detailed engineering, and active engagement with stakeholders and third-party utility providers. The project covered approximately 3.17km of high-voltage cable route, requiring integration with evolving site constraints and coordination with the construction contractor.

OUR APPROACH

We delivered both concept and detailed design stages, beginning with feasibility and optioneering to determine the optimal route. Our team worked proactively with stakeholders, utilities, and landowners to de-risk the project early.

When the substation location changed mid-project, we rapidly adapted the design to maintain timeline and compliance. Continuous collaboration with the construction team ensured alignment throughout.

CHALLENGES

- Navigating multiple gas pipeline and third-party utility crossings.
- Designing cable routes along a busy A-road with significant traffic and safety constraints.
- Working within and around a designated Site of Special Scientific Interest (SSI).
- Coordinating closely with the Keltbray substation team and adapting to changes in substation location.

PROJECT OUTCOME / DELIVERABLES

- We delivered a fully compliant, 132kV cable system design on time and within budget.
- Our early engagement reduced project risks and improved utility coordination.
- Our flexible design solutions enabled efficient on-site installation by the contractor.

SERVICES USED

- Route feasibility and optioneering
- Detailed cable design (thermal and bonding)
- Stakeholder and landowner liaison
- Interface with DNO standards
- Project management and reporting