

NJUG



## NJUG CASE STUDY

### CASE STUDY 28: West Weybridge Project Feasibility Study

The National Joint Utilities Group (NJUG) is the UK industry association representing utilities on street works issues. The thirty-eight companies<sup>1</sup> we represent work to deliver gas, electricity, water and telecommunications to both individual consumers and UK plc.

NJUG members need to continue to drive forward further improvements. We have therefore developed the NJUG Vision for Street Works, which revolves around six main principles:

1. Safety is the number one priority
2. Damage to underground assets is avoided
3. Utilities work together and in partnership with local authorities to minimise disruption
4. Utilities deliver consistent high quality
5. Utilities maximise the use of sustainable methods and materials
6. Street works in the UK are regarded as world class

This case study is an example of NJUG delivering on these principles and turning the Vision into a reality.

#### Overview:

Through the commitment and vision of the customer, utility, contractor and Highway Authority involved, a major construction project was undertaken with the all available information to minimise the impact to environment and traffic.

The project was to investigate the feasibility of providing a service supply from the West Weybridge 132kv Grid to a new 132kv/11kv Grid Station at the customer site.



nacap



#### Case Study

This feasibility study included the fulfilment of the following evaluations:

- Possible alternative routes
- Identifying and mapping of existing 3rd party infrastructure in the highway
- Proving and mapping of feasible construction route
- Traffic management requirements
- Environmental
- Reinstatement criteria through core sampling

---

<sup>1</sup> NJUG's current members are Energy Networks Association (representing electricity and gas), Water UK (representing all water and wastewater companies), National Grid, Openreach, and Virgin Media. Our associate members are Clancy Docwra, Skanska McNicholas, Balfour Beatty, Morrison, Morgan Est, NACAP, PJ Keary, First Intervention, Carillion, Enterprise, Laing O'Rourke and AMEC. Including members through trade associations, NJUG represents thirty-seven utility companies and twelve utility contractors.

The project was undertaken in two phases:

**Phase 1:** This phase investigated the traffic, environmental and engineering impact on a number of possible routes, utilising route video and detailed on site inspections, along with available information on structures, third party utility infrastructure and land ownership.

**Phase 2:** It was essential that the information ascertained in the phase 1 investigation was confirmed. There were a number of options open to the project team and it was decided to utilise all available technology, each of which can be highlighted below.

### ***Third Party Utility Infrastructure***

Utilising available 3<sup>rd</sup> party utility infrastructure records and traditional plant location technology it was possible to confirm and map their position.

### ***Proving of Feasible Construction Route***

Traditional methodology could have meant the excavations of trial holes every 200m, but it was decided to utilise the latest technology of ground penetrating radar, balanced with the mapped 3<sup>rd</sup> party utility infrastructure, to identify a feasible route.

### ***Traffic Management***

Once the construction route had been identified it was possible to ascertain the traffic management requirements needed to minimise disruption during the construction. This was undertaken utilising a video of the route, on site investigations, and detailed liaison with representatives from the Surrey County Council Highways team and Surrey Police

### ***Environmental***

Although it may have been feasible to place sections of the route in the verges or footway, it was decided that due to the high number of trees along the route and to comply with the NJUG's guidelines on the planning, installation and maintenance of utility apparatus in proximity to trees, the majority of the construction would need to be undertaken in the carriageway.

### ***Reinstatement Criteria***

To facilitate a full understanding of the potential impact on traffic, it was originally proposed that all streets be trial holed to ascertain the reinstatement criteria. This traditional methodology was going to result in scheduling, noticing and traffic management implications, so it was decided to utilise core sampling as an alternative.

Through the forward thinking of EDF Energy, the technical foresight of Nacap and the support and understanding of Surrey County Council, this planning feasibility survey enabled all parties to understand and manage the impact of the construction phase.

