Have any questions?
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Project Report

CONSULTANT/ENGINEER:

Tellus Design Limited

CLIENT

National Grid

CONTRACTOR

Balfour Beatty

Issue

The Hinkley Connection Project required a reliable anchoring system to support temporary stay cables for new overhead line pylons in Somerset, UK. The project faced challenges due to varying ground conditions, necessitating a robust and adaptable anchoring solution.

Testing

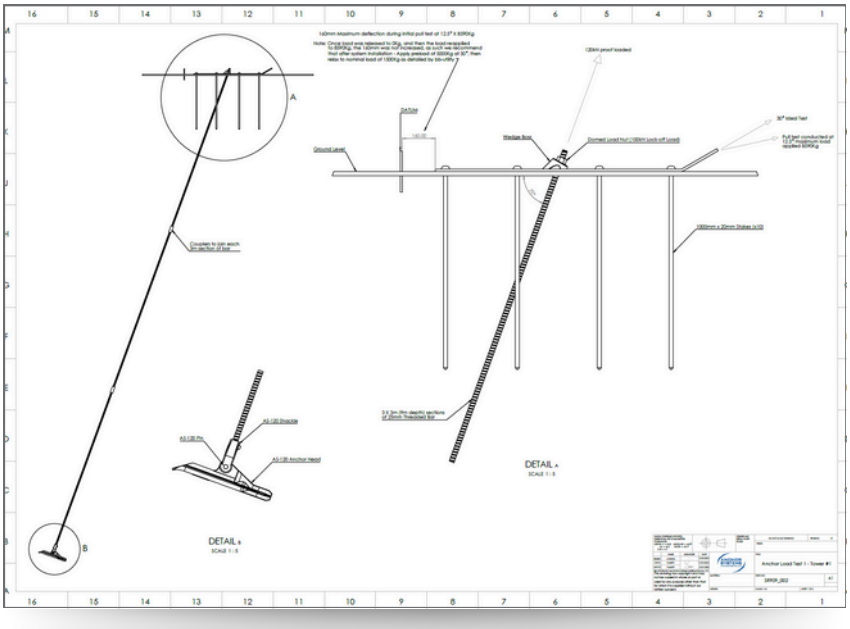
A comprehensive geotechnical investigation was conducted to assess soil conditions and determine the optimal anchoring solution. Boreholes, in-situ testing, and laboratory analysis confirmed the presence of Tidal Flat Deposits, Peat, and Mercia Mudstone at different depths across the site. The tests indicated that:

- Soft silts, clays, and organic Peat layers presented lower resistance to anchoring forces.
- More stable bedrock formations, where present, provided adequate shear strength but required deeper anchor penetration.
- Load testing confirmed a maximum cable stay force of 69kN, incorporating a partial load factor of 1.50.

Solution

Anchor Systems (International) Limited (ASIL) provided the Vulcan® driven ground anchor system, chosen for its adaptability across varying soil conditions. The installation involved driving anchors at angles between 70° and 90° and adjusting depths between 6m and 29m based on ground conditions. Modifications were made to anchor loads and soil parameters to optimise performance.

Balfour Beatty, the project's principal contractor, implemented the anchoring solution following site-specific requirements and geotechnical data, ensuring stability throughout the temporary installation phase.



Result

The Vulcan® ground anchors successfully provided the required stability, meeting all performance and safety criteria. Despite the variable soil composition, the tailored installation approach ensured effective load resistance and smooth execution of the temporary support phase without structural issues. Anchor Systems (International) Limited delivered a durable, adaptable solution for this critical infrastructure project.

Hinkley Connection