

CASE STUDY

SZ ROUTE FEED STUDY

PROJECT TYPE & VOLTAGE

OHL Pre Tender FEED study - upgrading; 132kV

SERVICES

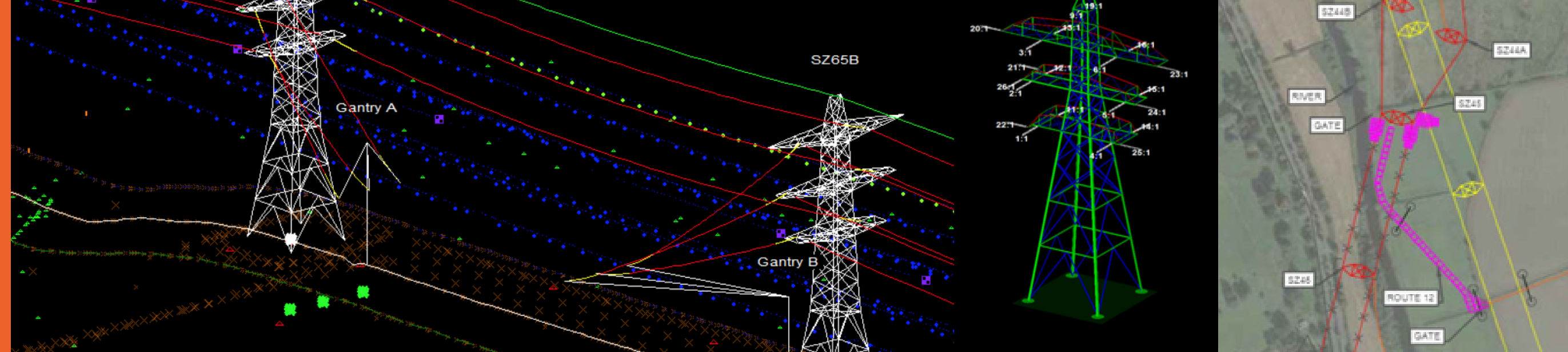
Line Route Design, Overhead Line Design, Drafting, Verifications and Peer Reviews

ASSET OWNER

Western Power Distribution (WPD)

WORKS SUBCONTRACTED

All works completed in house



CHALLENGE

Delivering a combined reconductoring FEED study and loop-in loop-out design for a 93-span 132kV route with a tight connection deadline and the need to eliminate provisional sums from the contractor tender.

Western Power Distribution needed to reconductor and modernise the 93-span SZ Route with Single Upas conductor and 96-fibre OPGW, while simultaneously progressing a planned loop-in loop-out connection at tower 57. With the loop-in loop-out connection date fixed for August 2021, WPD made the decision to tender both workstreams together to minimise outage requirements, and needed a FEED study comprehensive enough that contractors could price all foundation, strengthening, and clearance requirements with certainty, removing the need for provisional sums entirely.

SOLUTION

Groundline delivered a fully integrated turnkey package combining LiDAR survey, site walkover, TDR foundation testing, PLS-CADD and PLS-TOWER modelling, loop-in loop-out detailed design, and a comprehensive FEED modernisation report.

The scope covered PLS-CADD and PLS-TOWER modelling, structural analysis and strengthening design, foundation assessment and design, geotechnical analysis and boreholes, clearance reporting and mitigation, insulator and wire clearance drawings, profiles, scaffold and temporary works identification, and a walking hazard and access assessment measuring trackways and identifying vegetation clearance requirements. Groundline worked closely with WPD's substation design team to align the loop-in loop-out arrangement with the replacement Upas conductor and the provided substation design. Weeks of site walking fed directly into the FEED report, ensuring every known constraint and requirement was captured and costed before the tender was issued.

IMPACT

WPD went to market with a tender free of provisional sums — giving construction partners full visibility of requirements and enabling the most competitive pricing environment possible

By capturing all foundation upgrade, steel strengthening, semi-tension set, and clearance mitigation requirements within the FEED study, Groundline gave WPD's contractor market the information needed to price with confidence rather than contingency. The combined survey, design, and reporting package, delivered entirely in-house, removed cost uncertainty from the tender process and positioned both the reconductoring and the loop-in loop-out connection for efficient, well-informed contractor delivery.

