

Worst-case clearance screening — Powerlink corridor demonstration

National Drones · SmartData · July 2026

What you're looking at

From a single LiDAR pass over a 1.6 km section of your transmission corridor (west of Ipswich), our clearance-envelope engine reconstructed each conductor's mechanical state and computed where every span can sit at **worst case — 100 °C conductor temperature plus design wind** — without requesting any asset data: no conductor register, no stringing records, no load history.

The images show your line (pale blue: as surveyed; green: the full worst-case envelope) over satellite terrain. The attached report carries the span-by-span evidence and the complete methodology.

Headline results

- **14 spans measured** (391–557 m), individual phases separated automatically from the classified point cloud — including the stacked double-circuit geometry.
- **Zero clearance breaches**, even at worst case: every span stays clear of vegetation and ground with margin.
- **Up to 7.9 m of invisible margin quantified**: on your longest spans, the worst case consumes metres of the apparent survey-day clearance — margin no conventional LiDAR report can see, because it reports only where the wire was on a cool, unloaded morning.
- Every number carries calibrated uncertainty (median and 95%-confidence worst case), and each span reports which unknown drives its band — for this corridor, line current. **Your load profile alone would tighten every band.**

What this is — and isn't

This is a screening assessment under stated assumptions (capture-day weather reconstruction; 900 Pa design wind pressure, substitutable with your regional AS/NZS value; 3 m screening threshold, substitutable with your clearance schedule). It is not a certified engineering assessment, and it does not replace detailed design tools — it tells you, corridor-wide and fast, which spans deserve them.

Going further

An interactive 3D version of this demonstration is available, along with the same analysis at full-corridor scale. With your conductor schedule and load profile, the uncertainty bands collapse toward engineering-grade numbers — we'd welcome the conversation.