

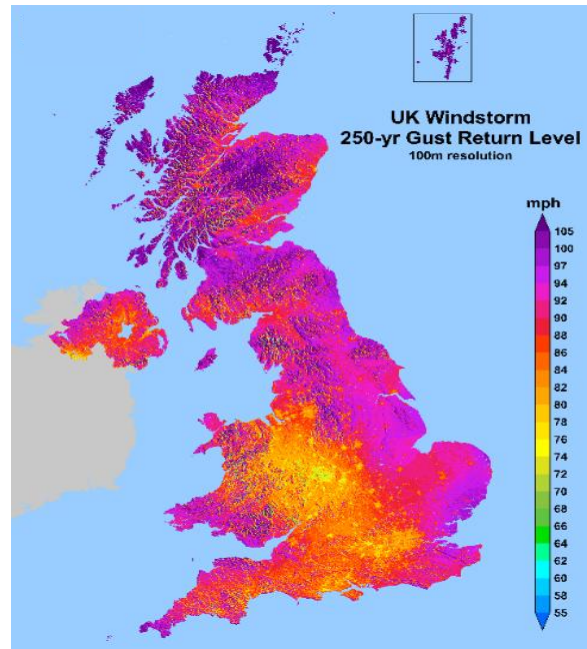
Insurance Pricing for UK Windstorm Risk

Windstorm-related losses in the UK now average hundreds of millions of pounds per winter, highlighting the importance of precise, property-specific risk assessment. Risk levels vary significantly across the country, requiring detailed data to inform accurate pricing. EuroTempest's high-resolution wind risk dataset addresses this need by providing gust speed data tailored to individual properties. Built on 45 years of peak gust observations from 282 UK weather stations, the dataset offers underwriters, risk analysts, and actuaries the most comprehensive tool for evaluating and pricing windstorm risk.

How the Dataset Works

The datasets were created through a research grant via University College London's Climate Extremes Group. Their method includes:

- **Extensive Data Integration:** A comprehensive analysis of decades of 3-second hourly peak gust observations, combined with terrain and land cover information.
- **Rigorous Data Cleaning:** Removal of bad data and standardisation across stations to ensure consistency.
- **Localised Accuracy:** Adjustments for terrain effects and surface roughness, with wind speeds mapped at a 100-meter grid scale. Uses Jackson-Hunt theory and CORINE data.
- **Extreme Value Analysis:** Uses peak-over-threshold modelling for rare gust events, improving accuracy.
- **Return Period Insights:** Gust speed data for return periods from 1 to 1,000 years, supporting long-term risk analysis.



The map shows the variance in anticipated wind speeds across the UK over a 250-year return period.

Benefits to the Insurance Industry

EuroTempest's API integration of this dataset into insurers' risk management tools enables users to:

- **Improve Pricing Accuracy:** Evaluate risks at the property level using UPRN-compatible data.
- **Manage Portfolios Effectively:** Identify high-risk areas for targeted underwriting and risk management.
- **Integrate Seamlessly:** Use GIS-compatible formats for easy adoption in pricing workflows.
- **Plan for Future Risks:** Access scalable data to account for evolving climate trends and extreme event scenarios.

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