

## Full methodology and notes on Zurich Resilience Solutions research for Green Football's Great Save.

- The physical climate hazard analysis carried out by Zurich Resilience Solutions incorporates Zurich-developed climate hazard data for each of the stadiums belonging to the 60 football clubs in the Barclays Women Super League, the Barclays Championship League, the National Women's League North and South and the Scottish Women's Premier League.
- The climate hazards modelled are flood (fluvial and pluvial), precipitation (extreme), wind, heatwave and drought.
- The analysis is based on the [SSP2-4.5 climate scenario](#) and the medium-term time horizon (averaged over 2045-2075). SSP2-4.5 was chosen because it is a middle-road scenario. SSP2-4.5 corresponds to a best estimate of 2.0°C warming by 2041-2060, and 2.7°C warming by 2081-2100.
- Details of each hazard metric are as follows:
  - Flood – fluvial and pluvial flooding and based on flood depth at 100-year return period.
  - Precipitation – 24-hour precipitation level at 100-year return period.
  - Wind – 3-second peak wind gust speed (mph) at 100-year return period.
  - Drought – drought duration (months) at a 100-year return period.
  - Heatwave – heatwave duration (days) at a 50-year return period.
- These extreme events are represented by return periods, where a 100-year return period represents an event that is expected to occur on average once in every 100 years. Put another way, an event of at least this magnitude has a 1% annual probability of occurrence.
- Stadiums' exposures to each hazard are categorised into hazard levels (Low, Medium, High, or Very High). The hazard level categorisation follows Zurich's methodology for classifying climate change hazard data into hazard levels.
- Stadiums were ranked based on their exposure to each individual hazard. Each hazard level was assigned a score, with a total multi-hazard score then summed for each stadium. The grounds were then ranked based on their total multi-hazard score, representing their exposure to all hazards combined.
- Stadiums that had a tied multi-hazard score were further sorted by the flood hazard values in the first instance and, if this was equal, by their wind hazard values.
- This represents Zurich Resilience Solutions' methodology for ranking the relative exposure of stadiums to climate hazards. Other ranking methodologies may result in a different ranking.
- Throughout the analysis, only the hazard exposure is used to determine the hazard risk levels. No analysis of local vulnerabilities or criticalities has been carried out. Nor does the analysis factor in any resilience measures that clubs already have in place to reduce their risk exposure to climate hazards.
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Hazard	Metric
Flood	Fluvial and pluvial flooding based on flood depth at 100-year return period - high or very high flood levels refer to flood depths > 0.55m

Precipitation	24-hour precipitation level at 100-year return period - high or very high precipitation levels refer to precipitation rates > 200mm/24hr
Wind	3-second peak wind gust speed (mph) at 100-year return period - high or very high wind levels refer to 3-second sustained wind speeds > 95mph
Drought	Drought duration (months) at a 100-year return period - high or very high drought levels refer to drought durations > 9 months
Heatwave	Heatwave duration (days) at a 50-year return period - high or very high heatwave levels refer to heatwave durations > 12 days