Concerto

Extreme weather events

Lessons for UK estates and property teams

Introduction

The escalating impact of extreme weather events—be it wildfires in California, floods in the UK, or severe snow and ice conditions—has reshaped how buildings, estates, and facilities are managed worldwide.

In the UK, where extreme weather has traditionally been less disruptive, we are now seeing more frequent and severe events, raising the urgency for adaptation within Estate and Asset Strategies. By examining real-life examples, identifying key lessons, and providing practical solutions, this guide will help teams not only respond to emergencies but proactively adapt their asset and property management to future-proof buildings and estates.

Understanding

Extreme weather events are no longer isolated occurrences; they are increasingly becoming part of the new normal. For FM teams and estate managers, the challenge lies in anticipating the diverse impact of these weather conditions, whether on health and safety, asset integrity, building performance, or operational continuity.

In the UK our estates generally have not been built with these extreme weather conditions in mind. Some cold and drizzle – perfect our infrastructure holds up. Ten days of snow and freezing conditions – schools close; trains are delayed and buildings struggle to keep warm.

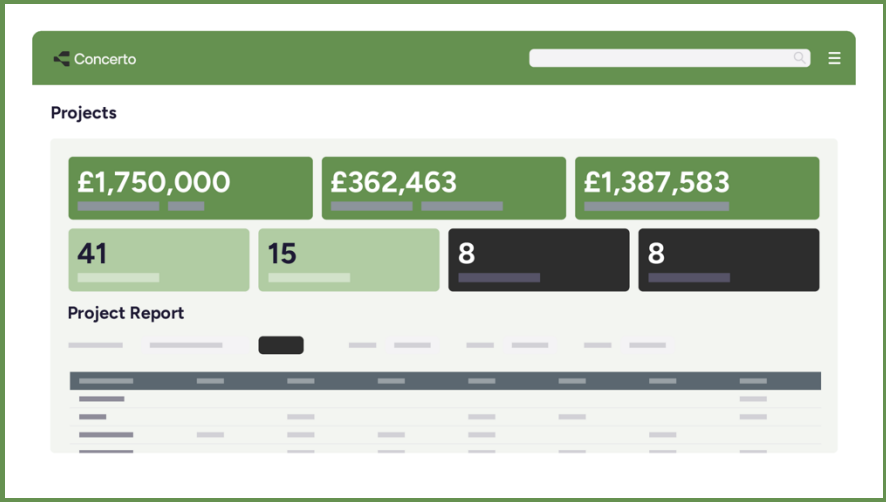
Wildfires: California

California’s wildfires, especially in regions like Los Angeles, have underscored the necessity of fire-resistant building designs, better landscape management, and swift evacuation procedures. Wildfires often spread quickly due to high temperatures, drought, and high winds. If a news story ever underlined the importance of fire strategy and compliance it is this.

“We need a culture shift, a different mentality. One that views handling risk as managing a continual process rather than chasing one completed outcome. Fire doesn’t sleep, neither should fire safety management.”

Graham Oliphant, Fire Director, Oakleaf, Bellrock Group
Oakleaf are the market leading provider of specialist estate surveys.

Lessons learned



Concerto is the fastest growing IWMS in the UK across both the private and public sector.

Fire resistant infrastructure: Buildings in fire-prone areas must feature materials that can withstand high heat and are less likely to catch fire. Glass windows, for example, should be fire-rated, and roofing materials should be non-combustible.

Fire safety systems: Modern fire detection systems should be installed to detect smoke or heat in advance. Automatic sprinklers should be tailored to address high-intensity fire events.

Landscaping: Landscapes around buildings should be maintained with fire-resistant plants and a defensible space between plants, trees, and the property to minimise fire spread.

Flooding: The UK experience

Flooding in the UK is a regular occurrence, exacerbated by rising sea levels, heavy rainfall, and inadequate drainage infrastructure in some areas. Severe storms, such as those during the "Beast from the East" or extreme flooding events like the 2007 UK floods, have shown how vulnerable properties can be to water damage.

"Beast from the East" or extreme flooding events like the 2007

Lessons learned

“Living in Nottingham I see first hand the effect of flooding on communities, and the importance of adapting estate strategies, as they are reoccurring events now.”

James Heysmond, Solution Director, Concerto, Bellrock Group

Flood resistant design: Estates in flood-prone areas should implement elevated construction standards and waterproofing solutions for the building foundation, utilities, and lower floors. Flood barriers and water-resistant doors should be installed where possible.

Drainage systems: Adequate drainage systems must be put in place to handle high volumes of water. Sump pumps, catch basins, and permeable paving materials can help reduce the impact of flooding.

Business continuity planning: FM teams must ensure that business continuity plans (BCPs) are comprehensive and cover the potential need for evacuation and the relocation of staff and equipment to flood-free zones.

Snow and ice: The UK’s winter challenges

In the UK, winters can bring severe snow, ice, and sub-zero temperatures, often catching building owners and managers off-guard. Snow and ice damage not only affects buildings but can lead to safety hazards for occupants and visitors. Historical examples such as the 2018 "Beast from the East" snowstorm illustrate the urgent need for winterizing buildings.

The pressures in accident-and-emergency units are as bad as during the Covid pandemic, NHS bosses say. With flu cases continuing to rise and the cold weather, NHS England medical director Prof Sir Stephen Powis said, hospitals were under “exceptional pressure” and facing “mammoth demand”*.

Lessons learned

Building insulation and heating systems: To prevent frozen pipes and heating system failures, insulation must be enhanced, particularly in vulnerable areas such as attics and basements.

Snow and ice removal plans: Snow accumulation on roofs can lead to structural damage. FM teams must establish snow and ice removal protocols to ensure that pathways and access points remain clear and safe.

External infrastructure: Grading and salting external walkways, driveways, and car parks can help prevent slips and falls caused by ice accumulation.

Read more about Concerto and the support we provide the NHS on our website: www.concerto.co.uk

Key strategies for adapting to extreme weather.

The growing frequency and intensity of extreme weather events mean that adaptation is no longer optional; it is critical for the future of estate and facilities management.

Strengthening resilience of buildings and estates

Building resilience involves making structural, procedural, and operational changes to prevent or minimize the impact of extreme weather. Resilience is multifaceted, affecting everything from physical infrastructure to building systems.

Lessons learned

Structural reinforcements: Strengthening the structural integrity of buildings to withstand high winds (hurricanes and storms), snow loads, or flooding is key. Reinforced roofing, shatter-resistant windows, and strong foundations are necessary for weatherproofing.

Flood protection: For buildings in flood-prone areas, the installation of flood defences such as flood walls, sump pumps, and water-tight doors can reduce the risk of water damage.

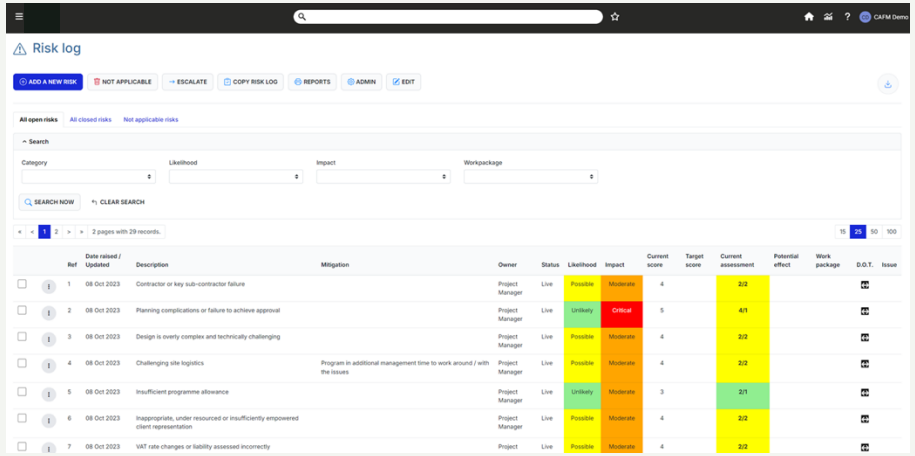
Fireproofing: In wildfire-prone areas, buildings should be equipped with fire-resistant materials, sprinkler systems, and defensible space around the property to minimize exposure to wildfires.

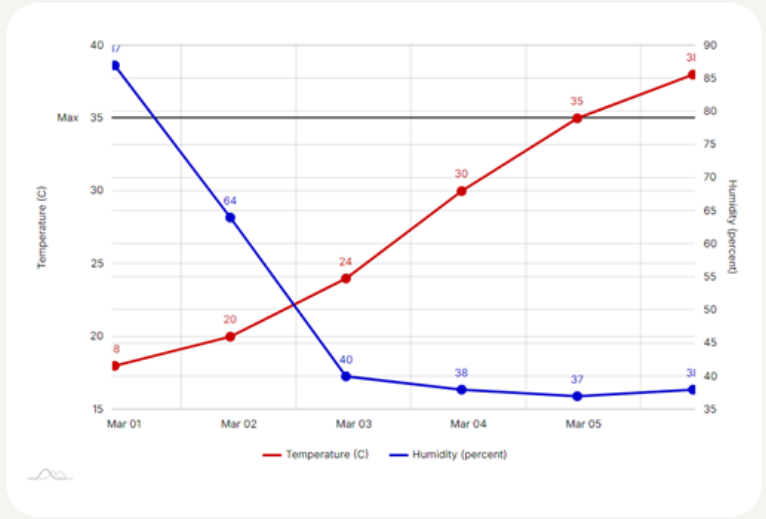
Strengthening resilience of buildings and estates

To guide future property management, Estate and FM teams must develop a risk assessment framework that reflects local climate conditions and anticipates future extremes based on predictive climate modelling.

Customising risk assessments: Risk assessments should be region-specific and consider historical weather patterns and future climate predictions. These assessments should evaluate vulnerabilities across structural, operational, and logistical domains.

Integrating technology: Leveraging climate data, predictive weather modelling, and Internet of Things (IoT) sensors can help monitor building performance and predict extreme weather impacts, enabling proactive interventions.

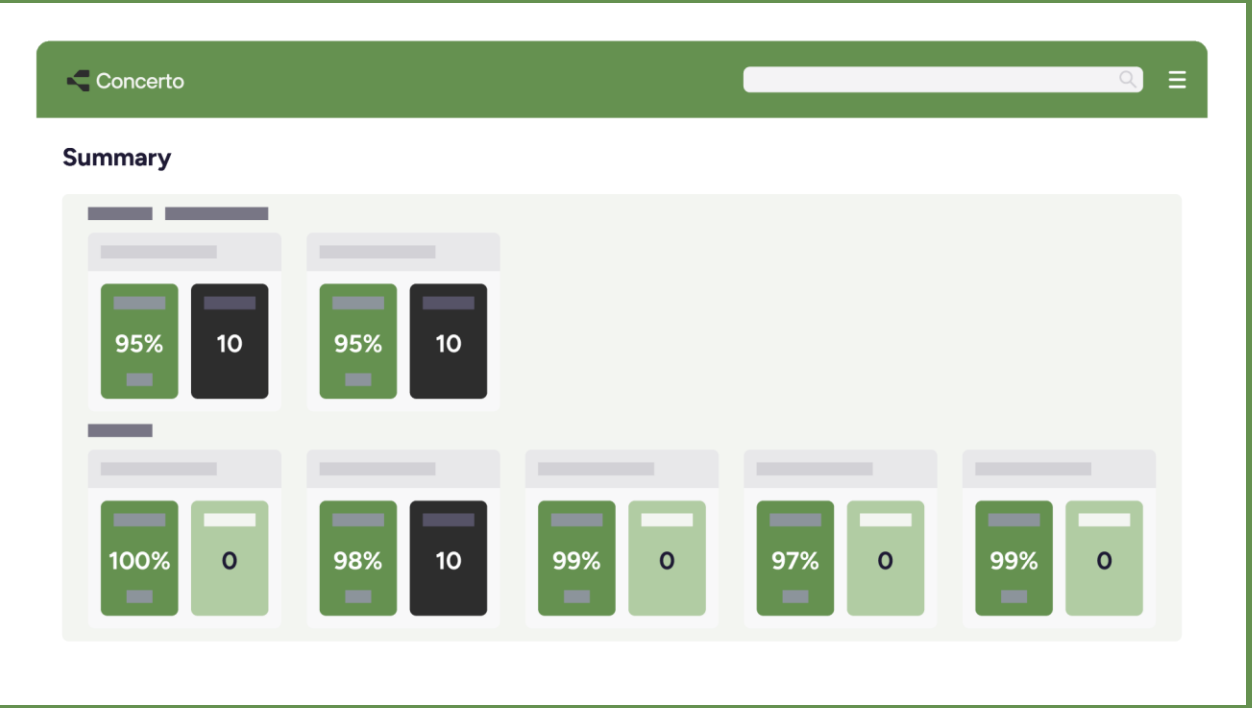




Concerto's module include an extensive Project Management Module and Risk Assessment Module; as well as an integration with InMetriks (another Bellrock Group solution) to allow proactive building and asset monitoring.

Implementing proactive maintenance and inspections

Regular maintenance is critical to ensuring that buildings are prepared for extreme weather events. Preventative actions reduce the chances of weather-induced failures.



HVAC and drainage systems

Ensuring that heating, ventilation, air conditioning (HVAC) systems, and drainage systems are properly maintained will prevent failure during extreme conditions.

For instance, ensuring that heating systems are functional during snowstorms or that air conditioning systems can handle heatwaves is crucial.

Building envelope inspections

Regular inspections of windows, roofing, doors, and exterior cladding help identify early signs of deterioration that could allow the elements to penetrate.

Testing backup power systems

With power outages common during extreme weather events, testing backup power generators and ensuring fuel supplies are available is essential to maintaining operations.

Improving safety protocols and emergency preparedness.

Protocols

Extreme weather events elevate the need for stringent safety protocols to protect staff, tenants, and visitors. Safety protocols must include clear evacuation routes, emergency response procedures, and occupant training.

Evacuation plans and training

Evacuation plans must account for various scenarios—fire, flood, snow, or heatwave—and should be regularly updated and tested. For instance, buildings in flood-prone areas should have designated evacuation routes that are unlikely to be affected by rising waters. Staff and occupants should be trained on how to respond to extreme weather and how to safely evacuate if necessary.

Incorporating technology: Emergency notifications should be streamlined via text, email, or mobile apps to provide real-time updates about weather conditions and instructions for evacuation if needed.

Enhanced fire and flood detection systems

Advanced fire and flood detection systems provide early warnings, reducing the risk of property damage or harm to occupants. Sensors placed in key areas, such as basement floors, roofs, and entry points, can send immediate alerts to your teams in case of a fire or water intrusion.

Alarm systems

Integrating alarm systems into your team's digital platforms can help teams act quickly in deploying resources to address fires or flooding before they escalate.

Psychological support and wellness services

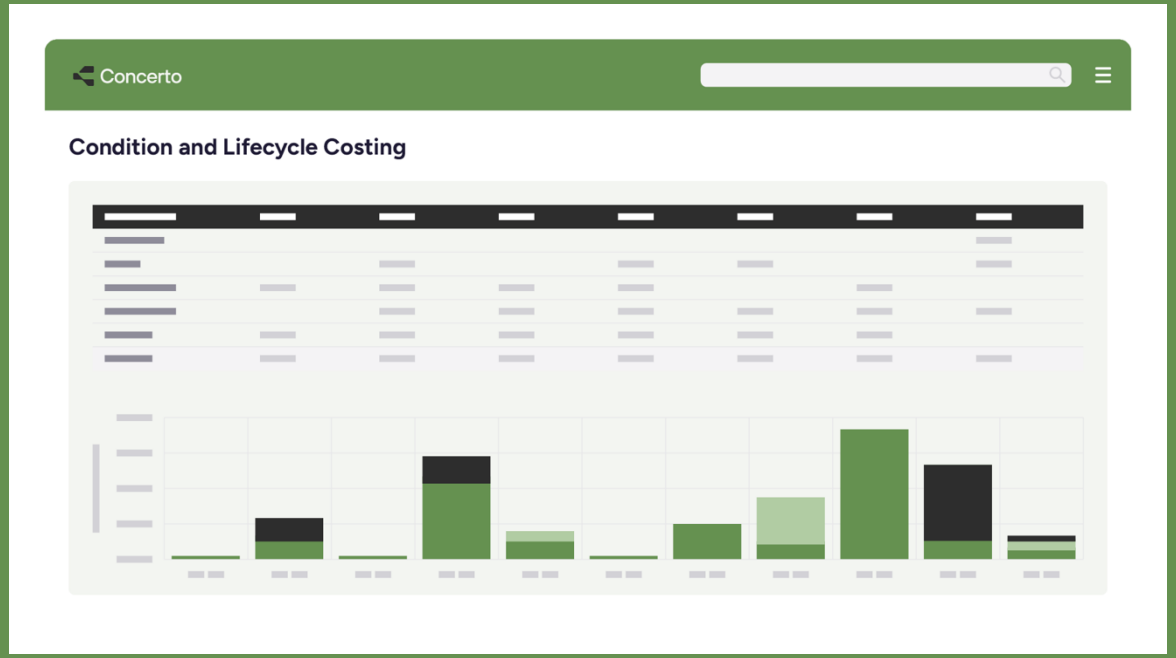
Extreme weather events not only pose physical risks but can also cause stress and anxiety. Offering psychological support to staff and tenants can help mitigate the emotional toll. Providing access to mental health resources, offering advice on stress management, and facilitating recovery services should be incorporated into broader crisis management plans.

The role of technology in future-proofing estates.

Emerging technologies are pivotal in equipping estate and facilities teams with the tools to adapt to extreme weather. Technologies such as smart sensors, artificial intelligence (AI), and big data can help teams monitor conditions, predict trends, and enhance decision-making.

Smart buildings: Smart systems can adjust heating, cooling, and lighting based on weather forecasts, thereby optimizing energy use and reducing strain on building systems during extreme conditions.

Data-driven decisions: Big data platforms can track weather patterns, operational performance, and building usage to help teams forecast risks and prioritize preventive maintenance.

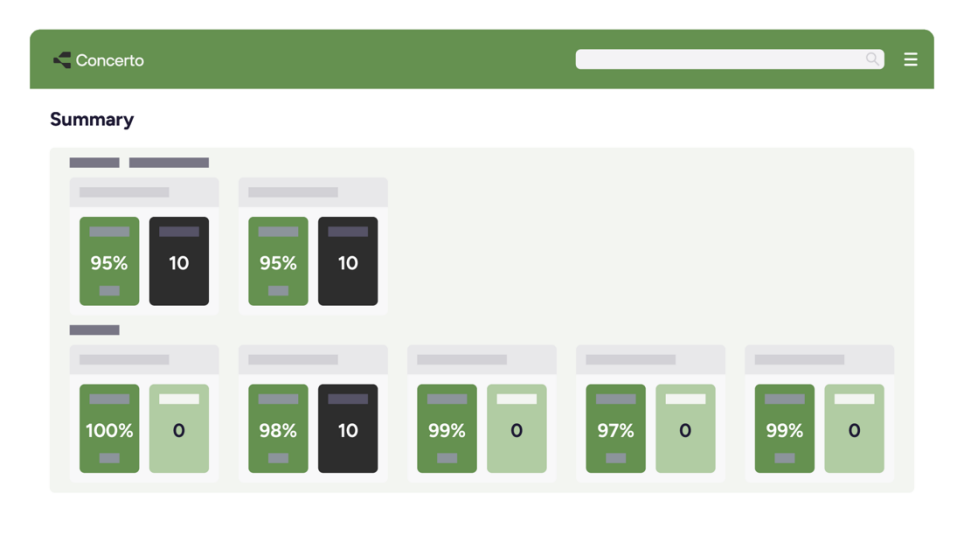


Book a demo of Concerto to see how it can support you and your team navigate today's estate challenges.

Book a demo

Conclusion

Adapting to the new normal.



The frequency and intensity of extreme weather events are only expected to rise in the coming decades. For UK private estates, commercial property managers, and government teams, the need for robust, adaptive estate strategies has never been more urgent.

Learning from global disasters like wildfires in California, UK flooding, and snow and ice events, we can craft better risk assessments, reinforce buildings, improve safety protocols, and harness technology to future-proof estates against unpredictable weather conditions. By investing in resilience now, we will ensure that our estates not only survive but thrive in the face of extreme weather.

Concerto

Contact us today to learn more.

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