

CONSTRUCTION MANAGER

NEC3/4 weather events and the 1-in-10-year average

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Steve Goodwin and Andy Inchmore describe how advances in weather reporting could reduce contractual risks.

Two years ago it might have been fair to say that many Met Office weather stations (where records are collected) could often have been 10 miles or more from a site. A [previous article](#) questioned what would happen when the weather at the weather station is different from the weather at your site.

The Met Office has, for quite some time, been seeking to make things easier for the construction industry. Now, in response to industry needs, it has launched “Location-Based Reports”, providing weather information from more than 3,600 locations across the UK that more accurately reflect onsite conditions.

These reports provide more features and advantages than the previous weather observation stations, including up to 16 weather parameters, with wind as standard, making them not only useful for NEC clause 60.1 (13) entitlements but for a variety of building contracts.

However, in recent times the UK has experienced extremes in weather and we often hear in the news about days being the hottest or wettest or coldest since records began, monthly rainfall exceeding records, and so on.

In fact, in July 2017, the Met Office issued findings which state that there is a one-in-three chance of a new monthly rainfall record in at least one region each winter (Oct-Mar). In the South East alone the Met Office states that there is a 7% risk of record monthly rainfall in any given winter and a 34% chance when all regions are taken into consideration.

The Met Office’s new supercomputer, in combination with virtual observations, has increased available relevant data from 35 to 3,500 years of winters. For those interested in this new novel research, it is known as the UNSEEN method.

As a result, the risk of a severe weather event impacting your site is growing increasingly real. For longer-term projects it seems it is no longer if it’s going to happen, but when it’s going to happen and for those involved that must be a worrying prospect indeed.

In our experience many contractors and subcontractors are simply not aware of the complex issues involved in making a successful compensation event claim nor able to deal with the difficulties in evidencing their proper entitlement.

The weather can impact upon a project at every stage, from designing a building to withstand changing climatic conditions to programming work and hiring expensive equipment. It can potentially have the biggest impact upon delivering a project on time and on budget.

The Met Office is now producing the tools and data that can assist with the production of compensation event assessments making it easier to establish and present the facts post event. Furthermore, those same tools and data can assist during the project planning and delivery stages to mitigate potential future events before they occur.

The Location-Based Reports are available in two formats giving the location-based monthly planning average or the location-based monthly downtime summary.

The monthly planning average, looking over a 30-year period, will provide a clear picture of what seasonal “norms” can be expected at your site during a project which will assist when planning your works.

The monthly downtime summary reports provided with long term averages and 1-in-10 year values make it possible to match your downtime against the recorded weather for the requested months and identify when conditions fall outside the normal parameters.

“So what that we can plan in advance based on seasonal ‘norms’?” you might ask. It doesn’t mean the “norm” will happen. We all know it’s going to be cold in winter, warmer in summer, we might get some snow at some point in February, it will be windy some days in April and it will definitely rain... a lot. Can contractors now plan a project so that weather disruption is minimised?

Intelligent planning tools are now available to help efficiently plan operations, manage health and safety risks and reduce costs during the project delivery phase. The Met Office’s VisualEyes software is a web-based weather alert system that enables you to choose the forecast and real-time weather elements you want to view.

In addition, you can select the timeframes you want out to 14 days in the future and set alert thresholds according to your particular risk profiles.

Could it come to fruition that clients, contractors and subcontractors might proactively submit early warnings based on forecasted weather events? Surely this can only be a positive step in the right direction? This kind of data must also benefit those pricing and assessing compensation events, especially the problematic and often contentious contractor’s risk element of the quotation(s).

The Met Office is currently trialling a case study with one of its large customers and would be happy to share its findings. Contact the Met Office directly at construction@metoffice.gov.uk.

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