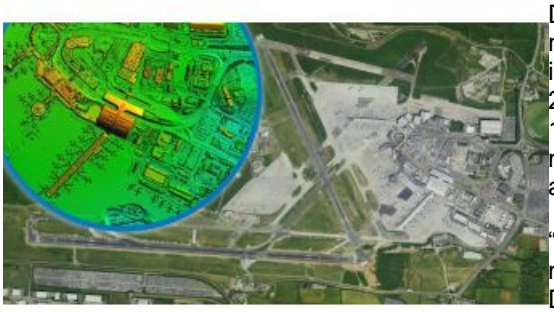
Bluesky Lidar Survey Helps Dublin Airport Reduce Risk of Flooding



Dublin Airport is using data collected by laser scanning aircraft to accurately measure land surface elevation to help reduce the risk of flooding at the international transport hub. Serving more than 31.5 million passengers in 2018, travelling to almost 200 destinations in 43 countries, Dublin Airport is the 11th busiest airport in Europe. The specially commissioned survey by aerial mapping company Bluesky involved the capture of Lidar data for the entire site and surrounding area as part of a Dublin Airport Drainage Masterplan (DMP).

"As a busy international airport our airspace is unsurprisingly quite restricted, making it potentially difficult for an aerial survey company to capture data," said Dublin Airport Airfield Project Manager Martin McKee. "However, with Bluesky's expertise and extensive experience of the airport and its existing relationship with the Irish Aviation Authority, who manage Air Traffic Control, the survey was completed without issue," he added.

Height measurements

Dublin Airport commissioned Bluesky to complete the Lidar survey following a competitive tender process. Using aircraft mounted lasers, Bluesky captured 50 centimetre point spaced height measurements across the complete campus and immediate vicinity. The captured height data was delivered in a variety of formats for use by the authority's Drainage Masterplan consultants in InfoWorks ICM hydraulic modelling software.

The Bluesky data will be used to inform modelling projects which will help in understanding the airport's drainage network, analysing flood risk relating to rainfall events and measuring capacity in local watercourses. The Bluesky Lidar data will also be used to model the flow of contaminants relating to aircraft de-icing - an operational requirement required by safety regulations during the winter season.

"Whilst we already possessed large amounts of topographical data ranging in age, type and coverage, we required accurate, up-to-date and consistent data across the entire site for the hydraulic modelling applications," continued McKee. "Lidar was the perfect choice to achieve this and by working with Bluesky we now have a benchmark dataset for all our Drainage Masterplan modelling as well as other applications."