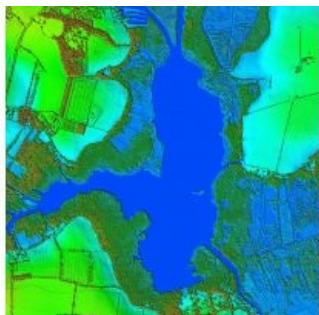


# Bluesky to Capture 185,000 Hectares of Lidar Data in Ireland



Working on behalf of the Geological Survey of Ireland (GSI) and state forestry company Coillte, Bluesky is capturing 185,000 hectares of high-resolution Lidar data in Ireland. Using aircraft-mounted lasers, the resulting 3D maps will be used to inform various protection schemes for clean drinking water and Ireland's adoption of the EU Water Framework Directive.

In addition, the Bluesky Lidar maps will be used to improve knowledge of the composition of Ireland's state owned forests. Data capture, using a fleet of dedicated survey planes, commenced in summer 2016 and is due for completion early 2017, and covers various locations across Ireland.

## Karst features

As part of their remit as Ireland's earth science agency, GSI collates and hosts a number of geological databases, including 'karst features'. Karst is a term used to describe distinctive landforms that develop in limestone, such as sink holes and caves. By mapping their location, GSI can enhance their understanding of groundwater flow, sources of drinking water, potential contaminant movement and the susceptibility of collapses occurring for example sinkholes.

Historically these features have been mapped either directly in the field, which is labour intensive and time consuming, or using historic maps and photographs, commented Koen Verbruggen, director, GSI. As a result, the karst database, which currently holds in excess of 7,000 features, is known to be incomplete. The Bluesky Lidar data will be essential in continuing the work to update and expand this valuable resource.

## Point cloud data

Coillte manages almost 450,000 hectares of Ireland's state owned forests, and is charged with protecting and enhancing this significant national resource whilst ensuring that it is used productively. To achieve this remit, Coillte requires reliable and up to date information pertaining to the resource. Coillte's multi-source forest inventory is designed to meet this objective by combining remotely sensed data with operational field returns and targeted field assessments.

Point cloud data, produced from Lidar projects such as the Bluesky one, enables to estimate key forest parameters to unprecedented detail, including stand canopy height, individual tree heights and mean volume per hectare, added Liam Malone, head of resource planning, Coillte Forest. This can be achieved more efficiently and cost effectively than by conventional, field based surveys.

By working in partnership, GSI and Coillte can take advantage of economies of scale, concluded Rachel Tidmarsh, managing director of Bluesky International. They can refine the data capture to their own requirements and