

Environment Agency Uncovers England's Landscape with Lidar



The British Environment Agency has announced plans to map England's entire landscape by 2020, using the data to assess flood risk and inform conservation work. Using aircraft equipped with laser scanners, the Environment Agency will map all 130,000 square kilometres of the country, including rivers, fields and national parks – equivalent to 32 million football pitches.

As well as being used to understand flood risk, the data will also be made available for free to the public and industry to be used by archaeologists, environmental and urban planners, and even gamers to make accurate 3D models of the landscape.

Currently about 75 per cent of the country is mapped but with only sporadic coverage of upland areas. The new project, beginning over winter, will cover all of England's national parks, areas of outstanding natural beauty (AONBs) and sites of special scientific interest (SSSIs) such as the Peak District and the Yorkshire Dales.

Sir James Bevan, chief executive of the Environment Agency, said this ambitious project will enhance our understanding of England's unique natural features and landscape, helping to better understand flood risk, plan effective defences and fight waste crime. He is pleased they are able to gather, use and share such valuable data to contribute to environmental improvements and conservation. It's just one of the many ways the Environment Agency is using technology to help people and wildlife, he added.

Lidar-based maps

The Environment Agency has been using Lidar technology for 20 years to better understand flood risk. Maps are created by aircraft equipped with laser scanners, which measure the distance between the aeroplane and the ground. The data collected can then be used to plan flood defences across whole river catchments. It also helps environment officers spot sudden changes in the landscape that could indicate illegal waste dumping – in 2014 eight people in Cornwall were fined for [dumping 4,500m³ of waste](#), which was discovered using Lidar data.

Other organisations across the Defra group also use the data to help improve the environment – Natural England uses it to assess wildlife habitat and Forestry Commission use it to understand more about the country's tree cover.

Big data

In 2015, the Environment Agency made 11 terabytes of Lidar data – equivalent to 3 million MP3 songs – available for free to the public as open data. Since then, the data has been downloaded more than 500,000 times. The data has even [helped archaeologists uncover lost Roman roads](#) in the north of the country.

The new data will also be better quality than ever before, as the Environment Agency will map the whole country at 1m resolution by 2020. This means using the most up-to-date laser technology to reveal the features and details of the terrain more clearly.

For more information on how the Environment Agency collects and uses Lidar data, check out the Environment Agency's [blog](#).