

Using aerial photography to create 3D forest maps

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Supplied by Bluesky International and Getmapping under the Aerial Photography for Great Britain (APGB) contract with the Geospatial Commission, the high-resolution imagery is being used across the organisation.

Data covered by the APGB agreement, including high-resolution aerial photography (12.5cm and 25cm) for the whole of Great Britain, is available free at the point of use to government users across England and Wales. Additional data covered by the contract includes 5m digital terrain and 2m digital surface models, as well as 50cm colour infrared imagery.

Data benefits for woodland management

Eligible organisations can access the data via a secure web mapping service. Once registered, they can download data from the APGB online mapping portal or have the data delivered on storage media such as a hard drive or memory stick.

Hosted in the cloud and delivered via web services, the regularly updated photography is used to complement Ordnance Survey mapping to provide contextual detail for mapping and analysis tasks, as well as in the creation of 3D models.

Using the cloud means the APGB imagery can be viewed by all Forestry Commission staff via a web browser – Forester Web. Sitting alongside OS mapping, the photography is used for a wide range of purposes, such as providing real world context and detail for grant applications and felling permissions.

Tree health staff can access the imagery both at the desktop and in the field on portable “toughbooks” to map outbreaks of diseases and issue Statutory Plant Health Notices, while landscape architects can create 3D visualisations to assess and promote complex woodland management proposals. Forester Web’s aerial photography and data management tools are also used to verify and update spatial data relating to the management of the national forest estate.

National Forest Inventory

In addition, APGB data is used to update the National Forest Inventory (NFI), which provides information about the size, distribution, composition and condition of forests and woodlands in Great Britain. This information is essential in developing and monitoring policies and guidance to support sustainable forest management. As the focus on issues such as climate change, pollution, environmental degradation and resource depletion, the NFI helps to monitor and regulate valuable forest and woodland resources.

The Geospatial Commission was created in April 2018 in the centre of government, as an independent, expert committee with £80m of committed funding designed to unlock the economic opportunities offered by geospatial data and reinforce the UK’s expertise in the field on the global stage.

Through its Data Exploration Licence, anyone can freely access data held by five of the commission’s partner bodies – the British Geological Survey, the Coal Authority, HM Land Registry, Ordnance Survey and the UK Hydrographic Office – for research, development and innovation purposes.

Geospatial data infrastructure

The licence is one of four initial programmes being carried out by the commission and its partner bodies to improve the UK’s geospatial data infrastructure. It aims to develop consistent data standards, while improving the accessibility, interoperability and quality of datasets.

Other programmes include Data Discoverability, which sees partner bodies publish catalogues on gov.uk outlining the datasets they hold, and Linked Identifiers, which looks to increase the integration potential of different datasets across partner bodies and beyond.

In January, the Geospatial Commission and its partner bodies published a best practice guide for data publishers to help them improve Search Engine Optimisation and make it easier to find and classify geospatial data across all search engines.

The Forestry Commission is a government department responsible for protecting, expanding and promoting the sustainable management of woodlands.

It works alongside two agencies in England: Forestry England, which manages the public forest estate and Forest Research, the principal organisation for forestry- and tree-related research across Great Britain.

In Scotland, Forestry & Land Scotland and Scottish Forestry, also users of APGB data, mirror the functions of the Forestry Commission and Forestry England.

Source: <https://www.pbctoday.co.uk/news/bim-news/aerial-photography-forest/72036/>