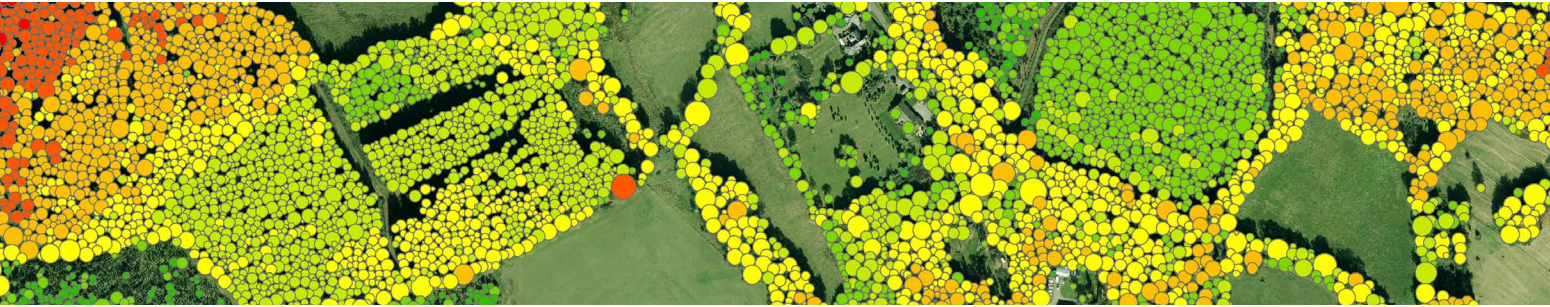# National Tree Map™

Bluesky has developed what is thought to be the UK's first ever detailed National Tree Map. Created using the most up to date aerial photography and colour infrared datasets combined with detailed height models, the map provides a comprehensive assessment of tree heights and canopy cover. Bluesky tree maps are already in use within a number of local authorities and utility companies and interest in the new product has now been shown by insurance companies and forestry organisations. The digital map layer, covering the whole of England and Wales is available now and plans are already in place for cover of Scotland.

Trees contribute an enormous amount to day to day life; they provide valuable habitats for wildlife, improve the air we breathe and help to conserve energy in nearby buildings, conversely they also pose a risk to properties and utility networks with root damage causing subsidence, pipeline fractures, and the risk of branches and falling tees effecting overhead cables. It is therefore essential that those charged with managing the trees that effect these essential resources have the tools they require. By creating a single, off the shelf product, for the whole of the country there will be, for the first time, information available to make informed decisions in a timely and cost effective manner.

The National Tree Map is being created using innovative algorithms and image processing techniques and is being put through a rigorous QA process to ensure the quality and accuracy of the four themed layers that form the deliverables.

The 3 layers of National Tree Map

1. Polygons representing tree crown
2. Height points (in metres)
3. Idealised circular shaped crowns

applications

- Tree management
- Canopy assessment
- Insurance risk assessment
- Utility asset management

benefits

- Most detailed tree map available
- Accurate
- Compatible with MasterMap™

features

- Polygons representing tree crown
- Height points (in metres)
- Idealised circular shaped crowns

National Tree Map™ - Specification

Layers	1. Crown Polygons (**Vector Polygon**) - Representing individual trees or closely grouped tree crowns 2. Idealised Crowns (**Vector Polygon**) – Crown polygons visualised as circles for ease of use Area measurement remains true to original crown feature 3. Height points (**Vector Point**) - Detailing the centre point and height of each crown
Classification Criteria	Trees and bushes over 3m in height
Coverage	England and Wales
Accuracy	>90% of canopy coverage (>95% within 50m of buildings)
Update Cycle	5 year rolling update program
Formats	ESRI Shape & MapInfo - Other formats: Geodatabase, DWG, KMZ
Compatibility	Compatible with most GIS and CAD software and Google Earth
Source data	Stereo aerial photography (RGB/CIR) and Digital elevation models (DTM/DSM)
Licencing	Flexible annual licencing
Applications	Insurance – subsidence risk Utilities – asset maintenance & planning; risk reduction; network resilience Local Government – asset management; canopy assessment and monitoring; TPO management Telecommunications – propagation modelling Highways & Transport – risk assessment; route management Forestry and Agriculture – asset management and maintenance; biomass Environment – habit analysis; biomass; carbon reduction

NTM™ Vector Screenshots

Aerial Photography

NTM™ Crown Polygons

NTM™ Idealised Crowns

NTM™ Height Points

Vector Data Attribute Table

Field Name	Type	Description
NTM_ID	String	Unique Id for each crown feature
Max	Float	Maximum height value of the crown (m)
Mean	Float	Average height value of the crown (m)
STD	Float	Standard Deviation of all height measurements
Perimeter	Double	Perimeter of the idealised crown (m)
Area	Double	Area of the crown (sq m)

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