





**B**luesky is the leading aerial survey company in Ireland, with unrivalled expertise in the creation of seamless aerial photography and already maintains national off-the-shelf coverage of Aerial Photography, Digital Terrain Models (DTM) and Digital Surface Models (DSM) of England, Wales and Scotland through an on-going 3-year update programme. The addition of the Republic of Ireland adds 70,000 sqkms to Bluesky's database.

- Imagery products: Aerial Photography & Colour Infrared
- 25cm resolution, with some areas at 12.5cm resolution
- Height products: DTM & DSM (5m & 25cm resolution)
- Updated every 3 years
- Spring/Summer 'leaf on' survey
- Growing archive of high density LiDAR data
- GIS ready in multiple data formats
- Web Services available



updated on a 3-year cycle

Aerial Photography  
(RGB)

Colour Infrared  
(CIR)

Digital Surface Model  
(DSM)

Digital Terrain Model  
(DTM)



Republic of Ireland



a picture paints a thousand words

Aerial Photography (RGB)

Maps have evolved; they are no longer lines and words, the white space is now full of detail. Aerial photography is playing an increasingly important role in the management of the natural environment and built infrastructure, and is now a part of everyday life with online mapping portals and use in the media.

Bluesky is a specialist in the acquisition of aerial surveys and the processing and creation of high-quality imagery products. By investing in the latest technology Bluesky ensures the quality, accuracy and consistency of its imagery is of the highest standard. Bluesky's maintained national aerial photography dataset is updated every 3 years and available off-the-shelf. Bespoke surveys are flown to order and to customer specifications.

Specification		
	National	Urban Areas
Resolution	25cm	12.5cm
Accuracy XY	± 1m rmse	± 50cm rmse
Optimum Viewing Scale	1:1,250	1:750
Formats	JPG, TIFF, ECW, SID, KMZ	





the benefits of nature

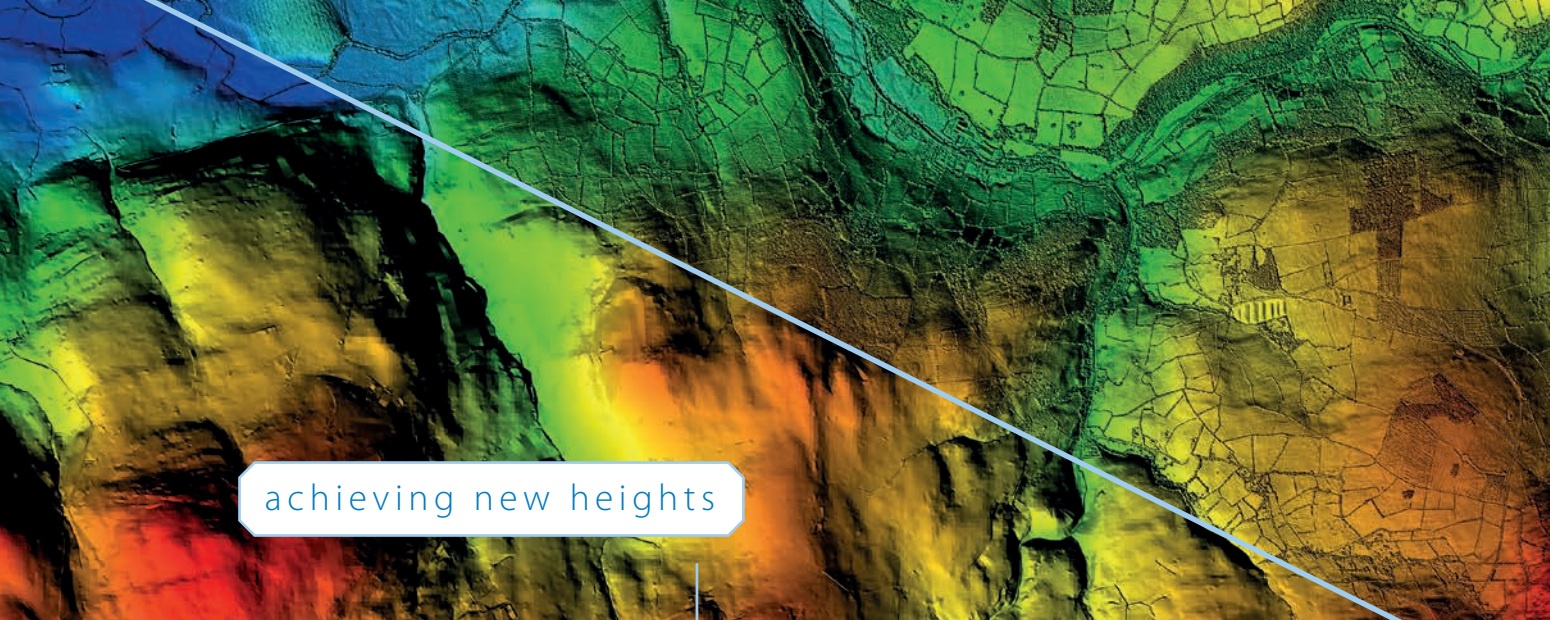
Colour Infrared (CIR)

As concerns for the environment grow, colour infrared photography (CIR) offers us a wealth of information on the health and state of the vegetation accross our landscapes.

Used in conjunction with other geo-spatial data it can assist in making informed decisions.

During the capture of the aerial photography, a colour infrared image, in the near-infrared spectrum band, is acquired simultaneously. This is then processed in a similar manner to the aerial photography. The data is stored in an uncompressed format to ensure the integrity of the colour information.

Specification		
	National	Urban Areas
Resolution	25cm	12.5cm
Accuracy XY	± 1m rmse	± 50cm rmse
Optimum Viewing Scale	1:1,250	1:750
Formats	JPG, TIFF, ECW, SID, KMZ	



achieving new heights

### Photogrammetric Height Data

**C**reated photogrammetrically from the stereo aerial photography. The DSM is perfect for visualisations, planning investigations and line of sight analysis. Applications for the DTM include line-of-sight, flood modelling and civil engineering.

**DSM** (Digital Surface Model) - detailed measurements of the height of the Earth's surface features such as vegetation and buildings.

**DTM** (Digital Terrain Model) - detailed measurements of the height of the ground excluding buildings and vegetation.

Specification		
	DSM	DTM
Resolution	25cm	5m
Accuracy XY	± Up to 1m rmse	± Up to 1m rmse
Accuracy Z	± Up to 1m rmse	± Up to 1m rmse
Formats	ASCII XYZ, ARC Grid, GeoTiff, 3DS/Max, Erdas Imagine	





at the speed of light

## LiDAR

Commissioning a bespoke LiDAR survey puts you in complete control, ensuring the data you receive perfectly depicts the surface of the Earth. Bluesky operates the highest specification LiDAR instrument in Ireland, and the first in the world to be fully integrated with both a digital survey camera and thermal infrared sensor. The means our LiDAR acquisition capability is second to none.

With a high pulse rate, adjustable field of view, the latest GPS, and a wide acquisition envelope, our LiDAR sensor provides the ultimate solution for your data requirements and is capable of acquiring terrain data at a resolution and accuracy unmatched by any rival sensor. Additionally, all of our aircraft, and our experienced flight operations team, are on standby 24/7 all year round, ensuring we are in prime position to meet any data capture window.

Whether your application is urban planning, forestry, archaeology, quarrying, flood mapping, wind farm planning or power lines Bluesky can provide you with the best data for the perfect project.

	Specification	
	DSM	DTM
<b>Resolution</b>	25cm - 1m	25cm - 1m
<b>Accuracy XY</b>	± Up to 10cm rmse	± Up to 10cm rmse
<b>Accuracy Z</b>	± Up to 5cm rmse	± Up to 5cm rmse
<b>Formats</b>	ASCII XYZ, ARC Grid, GeoTiff, 3DS/Max, Erdas Imagine, LAS, LAZ	





from tiny acorns

## National Tree Map™ (NTM™)

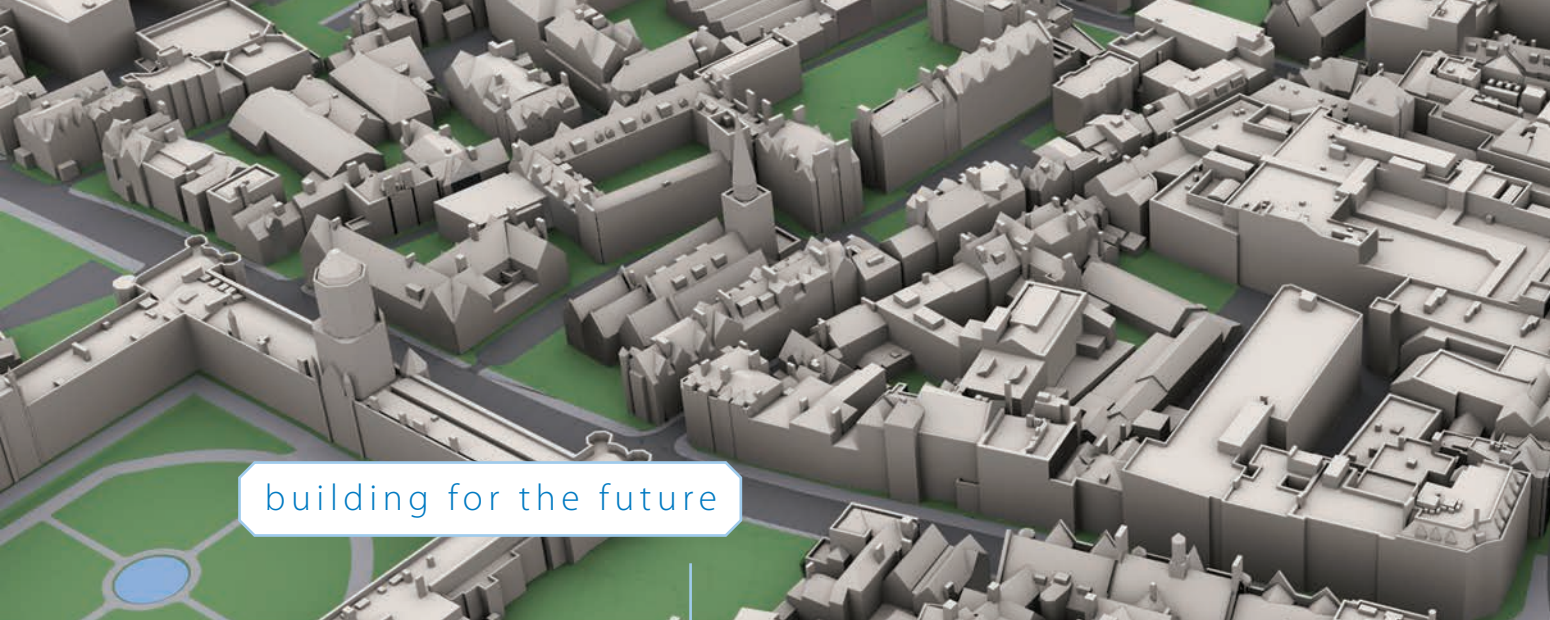
Trees play a vital role in day to day life - improving the air we breathe, providing valuable habitats for our wildlife and improving quality of life in urban areas. However, they also pose a risk to properties, networks and subterranean assets by causing subsidence or pipeline fractures through root damage, and endangering overhead lines through trees falling and loose branches. It is therefore essential that those involved in tree and vegetation management have access to accurate and comprehensive tree location data.

Bluesky's National Tree Map™ (NTM™) of Ireland will be the most detailed dataset of its kind ever produced. With coverage across the whole of the Republic of Ireland, NTM™ provides a unique, comprehensive database of location, height and canopy/crown extents for trees 3m and above in height.

Created from our high resolution national aerial photography, accurate terrain and surface data, and colour infrared imagery, using innovative processing techniques, the tree map is already being used across a variety of sectors including insurance, utilities, forestry, government, planning, and environmental management.

Specifications	
Layers	<ul style="list-style-type: none"><li>1. Canopy Polygons (Vector Polygon) – Representing individual trees or closely-grouped tree crowns</li><li>2. Idealised Crowns (Vector Polygon) – Crown polygons visualised as circles for ease of use Area measurement remains true to original canopy feature</li><li>3. Height points (Vector Point) – Detailing the centre point and height of each canopy feature</li></ul>
Classification Criteria	Trees and bushes over 3m in height
Accuracy	>90% of canopy coverage (>95% within 50m of buildings)
Update	3-year rolling update program
Formats	ESRI Shape & MapInfo - Other formats: Geodatabase, DWG, KMZ





building for the future

### 3D Urban Modelling

The easiest way to manage and plan the built environment is to do it in 3D. Such models are now a commonly used product in all aspects of city planning, modelling and visualisation. Used widely by architects, engineers and environmentalists, Bluesky 3D models are created by skilled technicians using high-resolution aerial photography and LiDAR, to a very high degree of accuracy and detail. As Bluesky has suitable raw data for the whole country, we are able to offer the most cost-effective service. 3D models are now more accessible and usable than ever before.

All Bluesky models are compatible with CAD, GIS and other 3D software and are available in a range of levels of detail, from basic to highly detailed.

Specification	
Detail	LOD1 to LOD3
Accuracy XY	± 30cm rmse
Coverage	On demand
Model type	Solid, Mesh, Face, Spline
Formats	DWG, DXF, 3DS, MAX



## Bluesky Ireland Mapshop

The Bluesky Mapshop provides customers with instant access to an ever increasing range of geographic data. The Mapshop has been developed to make it as easy as possible to locate your area of interest by town name or coordinate searches. Customers also have the option to draw a polygon or upload KMZ or ESRI Shapefiles to identify the areas they require. It is easy to set up an account and select different products which are displayed in a large viewing window. Users can then navigate around their area of choice using the zooming, scrolling and panning tools and download their area of interest.

Data is continually added to the Ireland Mapshop.

[ireland.blueskymapshop.com](http://ireland.blueskymapshop.com)

Products	
Aerial Photography - 25cm	JPG, TIFF, ECW
Aerial Photography (hi-res) - 12.5cm	JPG, TIFF, ECW
Colour Infrared - 25cm	TIFF
DTM - from 2m	ASCII XYZ, ARC Grid, DXF Point
DSM - from 25cm	ASCII XYZ, ARC Grid, DXF Point





stream GIS data

## Web Map Service (WMS)


**B**luesky's Web Map Service (WMS), enables geographic information to be seamlessly streamed over the internet directly into a customers own software. It can be used as a cost-effective and efficient way of giving an organisation-wide access to high quality geographic data. Using a WMS service means organisations no longer need to hold and manage large datasets in-house.

### Benefits of WMS


- All staff have instant access to the most up-to-date data, in familiar software
- There is no longer a requirement for customers to store and maintain in-house copies of the data, saving time and effort
- Each user views the same version of the data to ensure continuity within the organisation
- Bluesky's WMS can stream data directly into client desktop applications or web applications
- Bluesky's WMS can be connected to any OGC-compliant software package, or any WMS-compatible API. It can also be used directly within a web browser
- Compatible software includes, ESRI ArcGIS, QGIS, CadCorp, MapInfo Professional and several others
- Bluesky's WMS offers a 99.9% or greater service uptime and typical map load speeds range from less than 1 second, these may vary depending on an organisation's connection

Please get in touch to ask for a demonstration of the Bluesky WMS.

 [www.bluesky-world.ie](http://www.bluesky-world.ie)

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