

# Bluesky Aerial Laser Survey

## Answers National Trust Landscape Questions

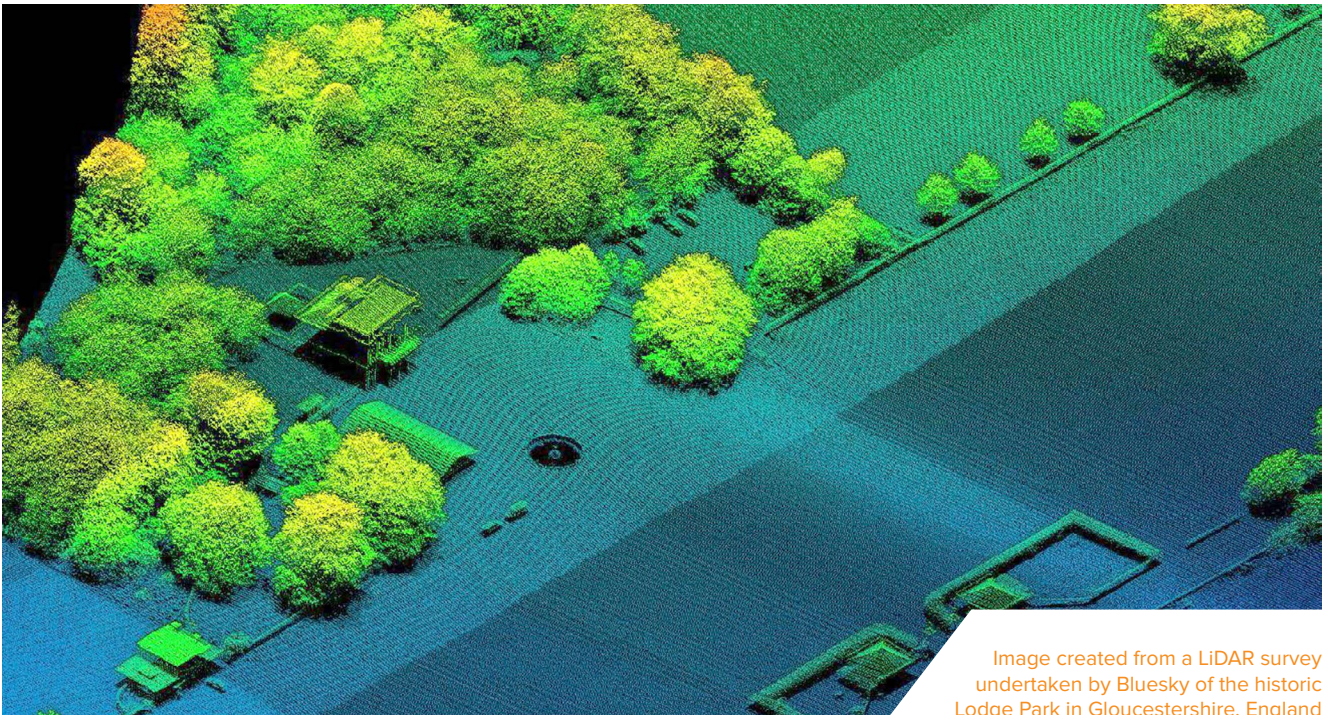


Image created from a LiDAR survey undertaken by Bluesky of the historic Lodge Park in Gloucestershire, England

**A**n aerial laser survey is helping the UK's National Trust create a 3D map of historically important details of a Grade I listed park in Gloucestershire, England. Bluesky conducted the LiDAR survey to help the National Trust gain a better understanding of the significance of the extensive park and gardens at Lodge Park in Sherborne. Specifically,

the Trust was keen to understand and highlight the significance of the work of English landscape designer, Charles Bridgeman, and the park's heritage and ecological values.

Charles Bridgeman was a renowned landscape designer and redesigned the parkland at Lodge Park in 1726. It is thought the Lodge Park plan is the only surviving copy of one of

Bridgeman's working drawings, making it immensely important and significant. Bridgeman's proposals for Lodge Park included planting of the Great Avenue, a grand serpentine canal, as well as several 'theatres' of trees. However, despite explicit instructions in Sir John Dutton's will of 1742, it would appear that many elements of Bridgeman's plan were not implemented.

BY ROBERT PEEL

“Historic map evidence has been somewhat inconclusive in determining what of Bridgeman’s landscape features were in fact implemented and still remain,” commented Wendy Stott, Consultancy Manager—Historic Environment, for the National Trust. “Post war aerial photographs similarly record tantalizing glimpses of surviving ‘lumps and bumps.’ However, the LiDAR survey by Bluesky has proved to be most telling of all.”

In support of a specially commissioned National Trust Conservation and Management Action Plan, the LiDAR survey of Lodge Park has revealed an unexpected level of detail. Remnants predating Bridgeman’s work have been confirmed, including a Neolithic Long Barrow and early parish and other field boundaries, as well as lost features within the park. The LiDAR survey has also been able to confirm where Bridgeman’s plans were modified, including a reduction in size of a central ‘bastion’ viewpoint to the west of the Lodge.

“These initial stages, including the LiDAR survey, have been principally about understanding and analyzing the remains of the designed landscape,” continued Wendy. “The next stage will involve balancing these discoveries and agreeing priorities for future management and restoration of this rare and highly significant parkland landscape.”

Lodge Park is one of two parks at Sherborne, Gloucestershire, and is a significant element in the National Trust’s Sherborne Estate. It is listed as Grade I on the Register of Parks and Gardens of Special Interest in England and forms part of the National Heritage



Trees planted in the Lodge Park Estate by renowned English landscape designer Charles Bridgeman in 1726



List. Lodge Park is famous for its mile-long Paddock Course, laid out by John ‘Crump’ Dutton in the 17th Century and the landscaping of soon to be Royal Gardener Charles Bridgeman.

In order to capture highly accurate LiDAR (Light Detection and Ranging) data a survey aircraft equipped with a system of lasers is used. Lasers are transmitted to the ground and the time taken for the beam to be bounced back to the aircraft-mounted receivers is recorded. Using the known position of the aircraft (derived from on-board satellite positioning equipment), the time taken for the return of the laser beam and the known value of the speed of light, the distance between the aircraft and ground is calculated. Readings can also be taken to determine the height of buildings, vegetation and other

surface structures such as above ground pipelines, highways, street furniture, power lines and railway tracks.

Bluesky is a UK-based specialist in aerial survey including aerial photography, LiDAR and thermal data using the very latest survey technology, including two UltraCam Eagles and an Orion M300 LiDAR system. An internationally recognized leader with projects extending around the globe, Bluesky is proud to work with prestigious organizations such as Google, the BBC and Government Agencies.

Bluesky has unrivalled expertise in the creation of seamless, digital aerial photography and maintains national “off the shelf” coverage of aerial photography, DTM and DSM through an on-going three-year update program. By purchasing a world first sensor for

the simultaneous capture of LiDAR, Thermal and Aerial Photography data, Bluesky is in the enviable position of being able to provide customers with unique and cost effective solutions.

Bluesky is also leading the way in developing innovative solutions for environmental applications, including the UK’s first National Tree Map (NTM), solar mapping and citywide ‘heat loss’ maps, and is currently developing noise and air quality mapping products. For more information: [www.bluesky-world.com](http://www.bluesky-world.com). ■

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