



Near Infrared

The natural world revealed

Near Infrared (NIR) imagery is a derivative product of aerial imagery surveys, using the latest digital camera technology. The resultant image highlights ground features that emit radiation within the near infrared part of the spectrum. Ground features containing chlorophyll i.e. vegetation, will be presented in varying shades of red.

NIR imagery can be used for commercial and environmental applications in both rural and urban areas. By providing information on the extent of vegetation as well as the variety and health of plants and trees it can be used to support the analysis of all types of ground vegetation. For example, NIR imagery can be used for detailed forestry management and crop monitoring programmes. In urban areas, NIR imagery can be used to measure open space, analyse types of green space, and support habitat conservation programmes. It can also be used to evaluate the location of trees and canopy size, their relationship with surrounding buildings and the potential for subsidence.

NIR imagery is captured simultaneously with digital aerial imagery meaning that it is perfectly consistent

with the accompanying true colour aerial photography. Cities Revealed aerial imagery is captured through the summer when the vegetation is in full leaf, this is the ideal time to capture NIR data for more accurate interpretation and analysis.

NIR imagery provides the perfect complement to standard vertical aerial imagery, seeing beyond the visible spectrum. It is a natural addition to the Cities Revealed portfolio.

Case Study

Exmoor National Park Authority

Conservation

Exmoor National Park Authority covers an area of 689 square kilometres and is protected as one of the finest and most unique landscapes in Britain. The information derived from NIR imagery supports numerous projects related to a range of conservation programmes. It is also being used to enhance features that can be difficult to interpret from aerial imagery, for example the location of small, historic man made ditches and channels in peatland landscapes.



"Historic NIR imagery provides us with a very high quality baseline against which to measure vegetation change. It enables the GIS user to view and assess vegetation from the desktop saving a great deal of time and money". Matt Sully, Geographic Information Systems Officer, Exmoor National Park Authority

Features

- High resolution digital aerial images typically 5 cm – 12.5 cm resolution.
- Images are captured while vegetation is in full leaf.
- Consistent with true colour digital aerial imagery.
- Geographically enabled and available in major GIS formats.
- Integrates with all Cities Revealed data products to enrich analysis.

Benefits

The imagery is captured using the most advanced digital aerial imagery cameras providing accuracy and confidence in the results.

When purchased in combination with a true colour aerial survey clients benefit from significant cost savings.

Summer aerial surveys mean that the data are collected at the optimum time, reflecting the true health, extent and variation of the vegetation.

Offers a very detailed understanding and analysis of vegetation not visible with the naked eye.

Digital capture means that the NIR imagery can be delivered much more quickly when compared to traditional film capture.

NIR imagery forms part of the previously captured Cities Revealed Modern digital aerial surveys. Clients who select these areas benefit from a reduced processing and delivery timescale.

NIR imagery is captured simultaneously with full colour aerial imagery providing consistent data sets.

Applications

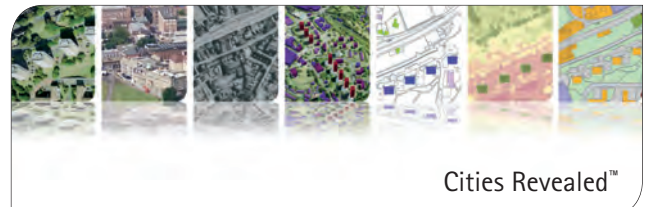
Near Infrared Imagery can be utilised in many applications, a few of which are listed below.

- Tree preservation
- Insurance risk assessment
- Crop management
- Archaeology
- Habitat conservation
- Green space analysis
- Open space audits
- Pollution analysis
- Environmental impact auditing
- Wetland and fenland management
- Climate change studies



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