

Complimentary Datasets for Wales

Getmapping has launched four complimentary datasets for the whole of Wales, all derived from its 2009-2010 aerial survey. The datasets include full-colour high-resolution aerial photography, colour infrared, and two height layers or elevation models. The elevation data includes a first surface, DSM, which includes everything above ground including trees, vegetation and the built environment and a bare earth, DTM, which records the rise and fall of the landscape.

The 2009-2010 survey was captured using a Vexcel UltracamX digital camera mounted in a Rockwell Aerocommander. The Vexcel camera also has a built-in 'near' or colour infrared (CIR) capability. Colour Infrared imagery (CIR) is generally used to show vegetation density, to distinguish between different crop varieties and to determine the health of flora. The imagery was flown at two heights to provide 25cm GSD (ground sampled distance) over rural areas and highly detailed 12.5cm GSD over Welsh cities in the South including Cardiff, Newport, and Swansea.

The two elevation models, first surface, DSM, and bare earth, DTM, derive directly from the stereo pairs captured in the aerial survey. The DSM resolution is based on a 2m posting whilst the DTM has a 5m posting. The datasets are complimented by the aerial photography because it provides the 'intelligence' to aid interpretation and risk assessment and opens the way for 3D visualisation. The data has a vertical RMSE of +/- 0.5m. If required Getmapping can create more detailed bespoke DTM/DSM data which can be extracted from the aerial imagery photogrammetrically up to a posting of 1m, particularly useful for detailed urban surveys. Using Getmapping's latest aerial photography makes this the most up-to-date height dataset of Wales currently available.

"When we first surveyed Wales in 2002 we only captured colour imagery at one resolution but the advance of technology in the intervening years has enabled us to capture so much more in this modern survey," said Tristram Cary, Managing Director of Getmapping. "The 25cm imagery for rural areas and 12.5cm imagery for cities provides much greater detail where it is needed. The colour infrared is useful for environmental and habitat studies and the two highly accurate elevation models have multiple uses stretching from flood plain analysis to wind farm development. This is the first time such a detailed survey has been available for a whole country and the datasets relate to and compliment each other because they were captured at precisely the same time.

<https://www.gim-international.com/content/article/complimentary-datasets-for-wales>
