



## About Tellus

Tellus is a ground and airborne geoscience mapping programme, collecting chemical and geophysical data that will inform the management of Ireland's environment and natural resources. Tellus is undertaken by the Geological Survey of Ireland and is funded by the Department of Communications, Energy and Natural Resources.

Tellus surveying has been completed in Northern Ireland & Cavan-Monaghan (2004-2008), the border region of Ireland (2011-2013) the north midlands of Ireland (2014-2015) and the east of Ireland (2015). Planning is underway to survey in the west of Ireland in spring of 2016. Tellus aims to complete surveying the entire island of Ireland on a phased basis, completing 50% by end 2017.

Download data and view interactive maps at

[www.tellus.ie](http://www.tellus.ie).

## Geophysical Surveys

The initial two surveys (Northern Ireland and Tellus Border) and the latest survey in the east of Ireland were flown by JAC/SGL using a de Havilland Twin Otter aircraft collecting magnetic, gamma-ray spectrometry and frequency domain electromagnetics data.

The north midlands survey was flown by CGG Airborne Ltd using two Cessna 208B Caravan aircraft collecting magnetic, gamma-ray spectrometry and time domain electromagnetics data. These help measure variations in the Earth's magnetic field, natural radiation and the conductivity of rocks and soils respectively.

The surveys were flown at a ground clearance of 60m/90m on a 345° heading in rural areas. Flight lines were spaced 200m apart. To date over 175,000 line km have been flown.

## Conductivity Data

The map displays apparent conductivity of rocks at a depth of 10m. The conductivity data has been derived by inverting frequency domain data and merging this at specified depths with conductivity depth images created from time-domain data. Data is available at 5m depth intervals allowing variations in different rock units to be mapped at depth.

Conductive rocks are generally associated with argillaceous and shale rich Carboniferous rocks while more resistive rocks correlate with massive pure limestones or metasedimentary rocks. Significant cultural noise is still evident with the signature from roads and power lines still present.