

## Let's get geophysical

By Amanda Kay

What does an LHI project in Herefordshire and one of Channel 4's most successful Time Team investigations have in common?

Answer: Leofric, the Saxon Earl of Mercia, King Henry VIII and 'geofizz'.

In 1043 Leofric and his wife, Lady Godiva, founded St Mary's, Coventry's first cathedral and priory. Legend has it that Leominster Priory in Herefordshire is named after the very same Leofric who founded a nunnery there.



### See also...

#### LHI Projects

- ▶ St Helen's Well
- ▶ St Olave Archaeological Project
- ▶ Operation Leofric

#### Websites

- ▶ Operation Leofric
- ▶ Channel Four - Time Team

Five centuries on, both St Mary's and Leominster Priory suffered at the hand of Henry VIII who ordered the destruction of the monasteries. Leominster Priory was partially demolished; St Mary's was completely destroyed.

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**“ This is a great new piece of kit, essentially, it doesn't do anything new, but it does allow us to do a survey in half the time. A 20-metre square can be done in just three minutes – and that sort of saving really adds up by the end of the day. ”**

John Gater on Geofizz methods

More recently, archaeologists at both sites have been using geophysical survey techniques – 'geofizz' – as the gateway to their investigations. Such surveys are an efficient means of detecting buried structures and remains and they help to identify areas ripe for excavation.

The geofizz survey at Operation Leofric – the codename of the Leominster Priory dig – produced some magnificent results. Funded through the Local Heritage Initiative, the survey used ground-probing radar techniques (GPR) to investigate the cloister area on the north side of the Priory church. GPR, a variation on conventional radar, sends radio signals into the soil and is good at detecting buried masonry and structures, such as crypts and tombs.



The technique works by pulling a radar scanner across the ground on a wheeled trolley. Readings are taken across a survey grid and the computer translates the measurements into three-dimensional 'maps' of features which cannot be easily seen from above ground. The plots can also be represented horizontally in what is called 'time-slicing'.

The geofizz results at Leominster Priory revealed the presence of a large round building – a rotunda – 56 feet in diameter and with walls 10 feet thick. This was such an exciting find it was being hailed as a discovery of national importance – similar to the dig at Coventry which attracted Channel's Time Team programme.



The Leominster rotunda was likely to date back to AD 660 when the monastic settlement was originally founded. It was probably the town's most important building and may have been a shrine for the bones and relics of saints. It points to Leominster's importance and prestige at this time. The next stage in the process is to carry out a full excavation so that even more of the history of the site can be revealed.

Like the investigations at Leominster Priory, a number of other LHI projects – St Olave Archaeological Project in Suffolk and St Helen's Well in Barnsley – are exploring sites with Christian or church connections and are employing geofizz survey techniques to begin the research process and piece together the fragments of an earlier age.