

NEWS

Crime scene forensics help recreate hillfort siege



TRIMONTIUM TRUST
| The digital reconstruction is based on forensic ballistics, archaeological mapping and geophysics

David Knox
BBC Scotland News

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A team of archaeologists has created the most precise reconstruction yet of a Roman siege on a British hillfort by using crime scene forensics.

The eventual victory at Burnswark Hill in 140AD is considered to be one of Rome's greatest military triumphs north of Hadrian's Wall.

As well as archaeological mapping from four excavations and several geophysics surveys, the reconstruction experts also used forensic ballistics to determine the sequence of events.

Prof Stuart Campbell from the Trimontium Trust said that using all the evidence and information available he thought the finished walkthrough was "fantastic".



| Prof Stuart Campbell lends his expertise to both The Trimontium Trust and Manchester University

Although attempts had previously been made to invade and colonise northern Britain, emperor Hadrian had settled for dividing the islands with a wall.

His successor in 138AD, Antoninus Pius came to power without any military victories to his name and decided to make his mark in what is now Scotland.

Just two years later a 5,000-strong army marched north towards the indigenous stronghold of Burnswark Hill where they created siege camps on either side.

About 3,000 locals were either living - or had taken refuge - within the hillfort's palisade defences.

Dr John Reid of the Trimontium Trust said: "Antoninus Pius sends his Legate - or senior general in Britain - to take Caledonia for him and for Rome.

"The first thing they hit when coming from Hadrian's Wall is Burnswark Hill."



TRIMONTIUM TRUST
| More than 8,000 individual characters feature in the 3D digital reconstruction

The results of an archaeological survey of the site a decade ago were added to previous data and finds from studies which took place in the 1890s, 1920s and 1960s.

By using drones, the Trimontium Trust was able create an accurate 3D terrain model of the Roman camps and the hillfort.

Forensic ballistics pinpointed the angles of attack and mapping allowed precision detailing on the recreation down to a 2cm (0.8in) pebble within the site.

For over a year the archaeologists worked with digital artist Robert Gapper of Virtual Histories to build the 3D walkthrough.

Prof Campbell added: "One of the advantages of Burnswark is that there is so much still on the ground to start with.

"Because it is such a unique site, we've been able to drop people, buildings and weapons - in their appropriate styles - into where they would have been to create this overview."



| Dr John Reid at Burnswark Hill, near Lockerbie

Featuring more than 8,000 individual characters, the 3D digital reconstruction relives the moments before the Roman army stormed the hillfort.

Visitors to the Trimontium Museum in Melrose can now use headsets for a virtual walkthrough of the unfolding drama.

Dr Reid added: "We know missiles were shot in showers and did some serious damage - they were travelling at speeds of up to 70 metres per second.

"Then there were arrows from Syrian archers, and ballista balls - the size of grapefruits - being shot from the three platforms, and finally the sling bullets, which were anti-personnel weapons to take arms, legs and heads off.

"Then from the main camp there would have been a rapid outpouring of infantry heading straight up to the summit to breakthrough the defences.

"They quickly broke through and - from evidence - herded the last of the resistance to the west end of the hill."

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