

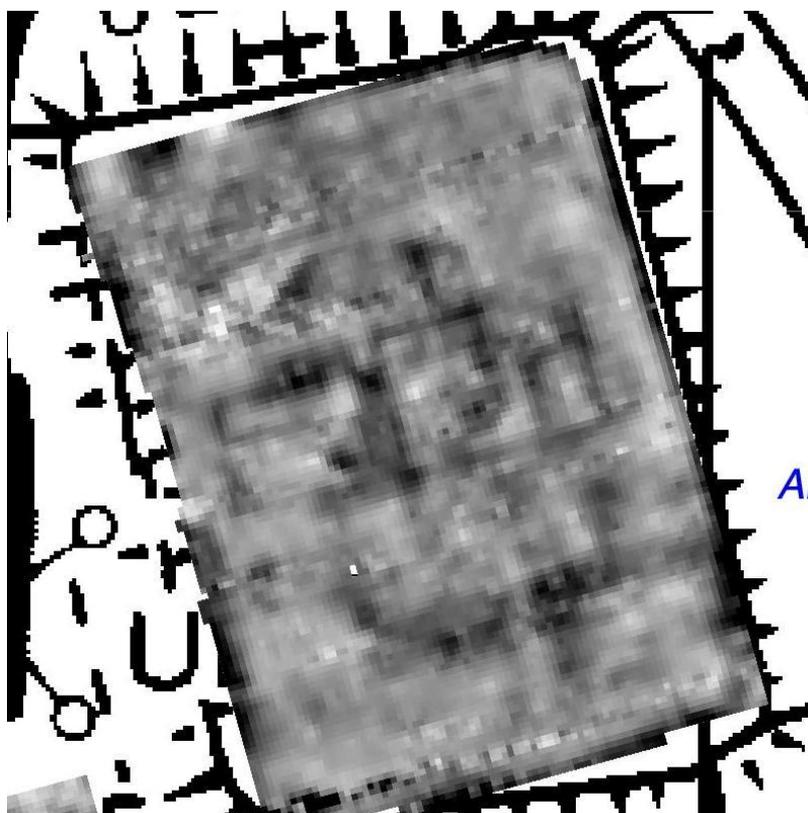
Geophysical Surveys of Low Borrowbridge Roman Fort and Environs

April/June 2014 and August 2015

LAS, with the help and guidance of Oxford Archaeology North, has undertaken a series of geophysical surveys of Low Borrowbridge Auxiliary Roman Fort and its environs in the Tebay Gorge. The results are currently being analysed in detail. Below are the preliminary findings.

1. The Fort Interior

With permission from Historic England to undertake these non-invasive surveys of the scheduled ancient monument, magnetometry and resistivity surveys were conducted inside the fort platform. The resistivity plot is shown below.



The plot shows very clearly the outlines of substantial buildings across the centre of the fort. As most forts comply with a standard plan/design it will be possible to identify these buildings with further analysis. The central square building will be the headquarters building (Principia) and those on either side the commander's house (Praetoria), granaries (Horrea) and possibly a hospital (Valetudinarium). Across the top and bottom of the fort it is expected we will identify barrack blocks (Centuriae) for the cohort of 480 men (six centuries of 80 men in each) and a probable cavalry unit (120 men and horses). In addition the layout of internal roads can be seen.

Further strong features emerged that will need careful interpretation. They could relate to the cavalry barracks and stables. Alternatively, the curving features above and below the central ranges could indicate an earlier fort on the site or post Roman activity. Indeed, the 1771 Jeffries Map of Westmorland shows a 'castle' marked at the site which may be a reference to structures inside the current fort outline. And the name Borrowdale is derived from *Borgheredala* first recorded 1154-89 meaning 'valley with a fort'. In the period after Roman withdrawal from Britain (late 4th/early 5th centuries) this area was probably part of the kingdom of Rheged and may have been used as a stronghold by its leaders such as Urien, Owain and Rhun.

2. Features South of the Fort

Perhaps the most intriguing discovery so far is the existence of a series of structures or enclosures in the fields to the west and east of the current Howgill Lane, south of the fort. The magnetometry results are shown below.

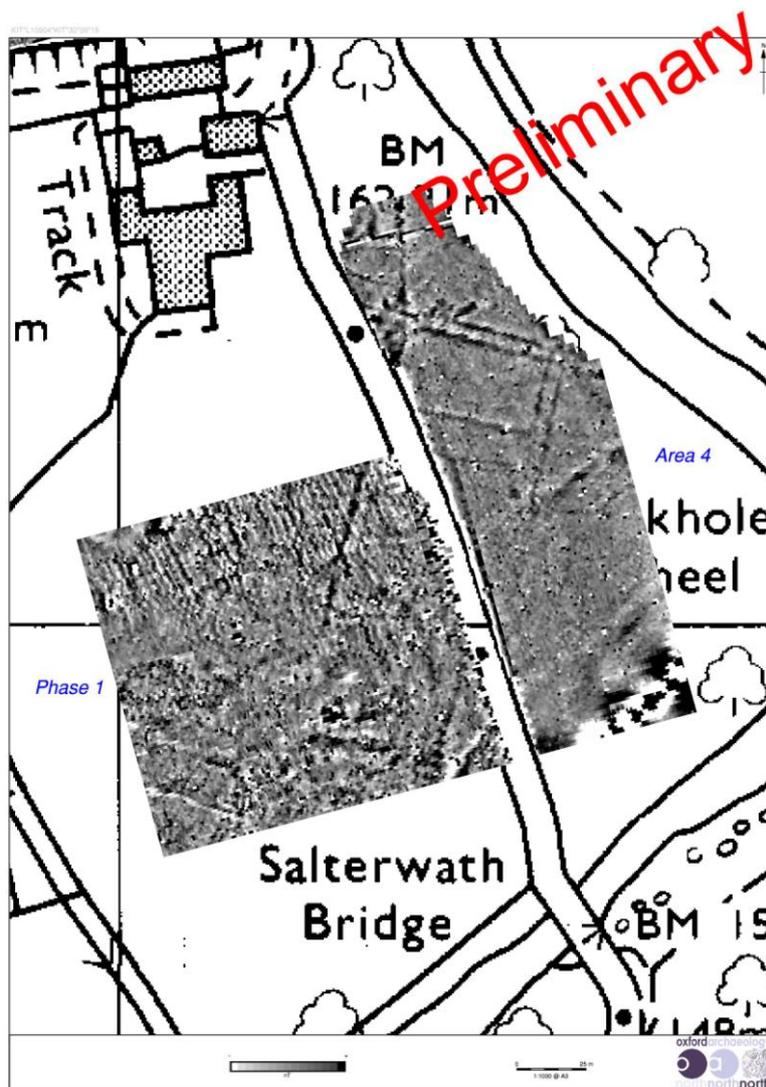


Figure 5: Grayscale plot of the processed magnetometer data, Area 4

The large oblong features underlie the road, suggesting that they are earlier and pre-date its construction. They appear to be mainly outlined by ditches (magnetometry is good at identifying

ditches while resistivity is good at finding stone – natural as well as walls) and there are several superimposed on each other.

We do not know when Howgill Road was constructed, though it had been assumed to be a continuation of the known Roman Road along Fairmile. It is not shown on the Jeffries Map of 1771 (but that has many inaccuracies including showing Fairmile heading up Carlingill!) but does appear in its current position on the Tithe Map of 1835. We also know that the bridge across the Lune (Salterwath Bridge) was in a state of decay in 1811 and rebuilt in 1824/7 when the landowner was paid £1.5s.6d. for 'damage to his land'. It could be that the Lune crossing was moved at this time and that the existing road was built then, with compensation being paid for its crossing of farm land. This is speculative at present and will need further investigation.

What were the enclosures used for? We know that Low Borrowbridge lies on an old droving road – the Galwaithegate that is mentioned as early as 1186/1201. The farm was, at one time, a droving inn along that road. The enclosures may have been for cattle and sheep on drove, the separate partitions being used to separate droves. Overnight the cattle and sheep were typically penned to protect them from rustlers and predators. Alternatively they may have marked field boundaries in use at some time before the road construction. The only way to find out will be through 'ground truthing' – ie excavation!

The orientation is intriguing. It does not respect the road or the geology (the resistivity plot shows what we think are natural breaks in slope created by different courses of the Lune over time). It does, however, appear to stop short of a line drawn from the middle of the south of the fort, along the current farm track, through the area covered by geophysics in 2014 and crossing the Lune to the west of the current Salterwath Bridge. Is this the line of the original Roman Road, and if so, was it still in use when the enclosures were in use?

There are many questions raised by the surveys and we anticipate many enjoyable hours, days, weeks (and probably years!) trying to answer some of them.

Graham Hooley, October 2015