

An enclosure in Thornbridge, Barton, North Somerset (ST 3900 5788): a survey by the ALERT geophysics team

Introduction

This rectangular enclosure (visible as a low earthwork) was identified in 1966 as a small Roman camp (N.Somerset SMR: 4632), following an examination of RAF aerial photographs taken in 1950 (Hawkings, 1966). Hawkings also identified several banks that appeared to be associated with the feature. The enclosure lies inside a bend of the Lox Yeo River suggesting a location of strategic importance and thought to be related to other features that might indicate a Roman sea port situated here at a time when sea levels were considerably higher than at present (Hawkings, 1965). ALERT began a geophysical survey of the enclosure in March 2009 and has since been engaged in surveying other possibly related features in the vicinity.

Geology

The enclosure lies on a low promontory with a height above sea level of no more than 8m, and with the meandering course of the Lox-Yeo River to the north and west. The red marl of the valley is of the Mercia Mudstone group and is described as weakly calcareous with green bands, patches and spots (Green and Welch, 1965). The river has cut between the red marl of the southwest part of the promontory and a deposit of colluvium or Head that forms the northwest part. This colluvium must originally have been deposited on the *inside* of the bend of the river. An examination of aerial photographs and lidar images of the area indicate that a channel in the estuarine alluvium of the valley bottom has cut round the north and western edges of the colluvium deposit, suggesting that this was the original course of the river and that there was an alteration in its course for some reason [fig.1]. There had also probably been some change in the volume of water carried by the river at this time. The presumed original course of the river has the appearance of having had some embankments constructed in historical times as the river bed is quite straight between regular bends, suggestive of some water or flood management.



*Lidar image © Somerset County Council/Mendip Hills AONB Service/
English Heritage, flown by Unit for Landscape Modelling, Cambridge.*

Fig.1. The enclosure can be seen to the right of centre below the winding Lox-Yeo River which has eroded most of the northern bank. It is thought that ditches to the north indicate an earlier course of the river.

This subsequent change in the course of the river is confirmed by the present river now cutting through part of the northern bank of the enclosure: its course must have changed since the enclosure was constructed. It has been shown (McDonald, 2000) that sea levels in the Severn estuary have shown cycles of change for several thousand years, and tidal peaks have been identified at about 1000BC (6m above present), in the first century AD (4m above present) and about 1200AD (3m above present). The change in the course of the river is most likely to have occurred as a result of one of these episodes of tidal aggression.

The survey

A resistivity survey was conducted in Thornbridge on 11 March 2009 across one bank of the enclosure initially to ascertain the viability of the project. A TR/CIA Resistance meter was used. Ground conditions were ideal – short grass and dry, bright

but cold weather. The landowner was anxious that we did not spend too long on the project as the grass was beginning to grow, and as the first results were so good, the remainder of the feature was surveyed, and at the same time a Bartington 601 single pole gradiometer was used to cover as much of the site as quickly as possible. Good results were not expected from the Bartington as the Team had experienced problems caused by the same type of geology further along the valley earlier in the year. The data was processed using TR/CIA software, Photoshop and ArchaeoSurveyor.

The results

The magnetometer survey suggests a sub-rectangular enclosure about 55m in length constructed in the centre of the promontory. A large circular feature almost 30m in diameter can be seen centred on the western corner of the enclosure but it is not clear if the feature cuts the enclosure or is cut by it. It is possible that another, smaller, circular feature is sited in the centre of the enclosure, but the definition is too indistinct to be sure of this [fig 2]. An area of burning is visible to the lower right of centre. The results suggest much human activity in this area.

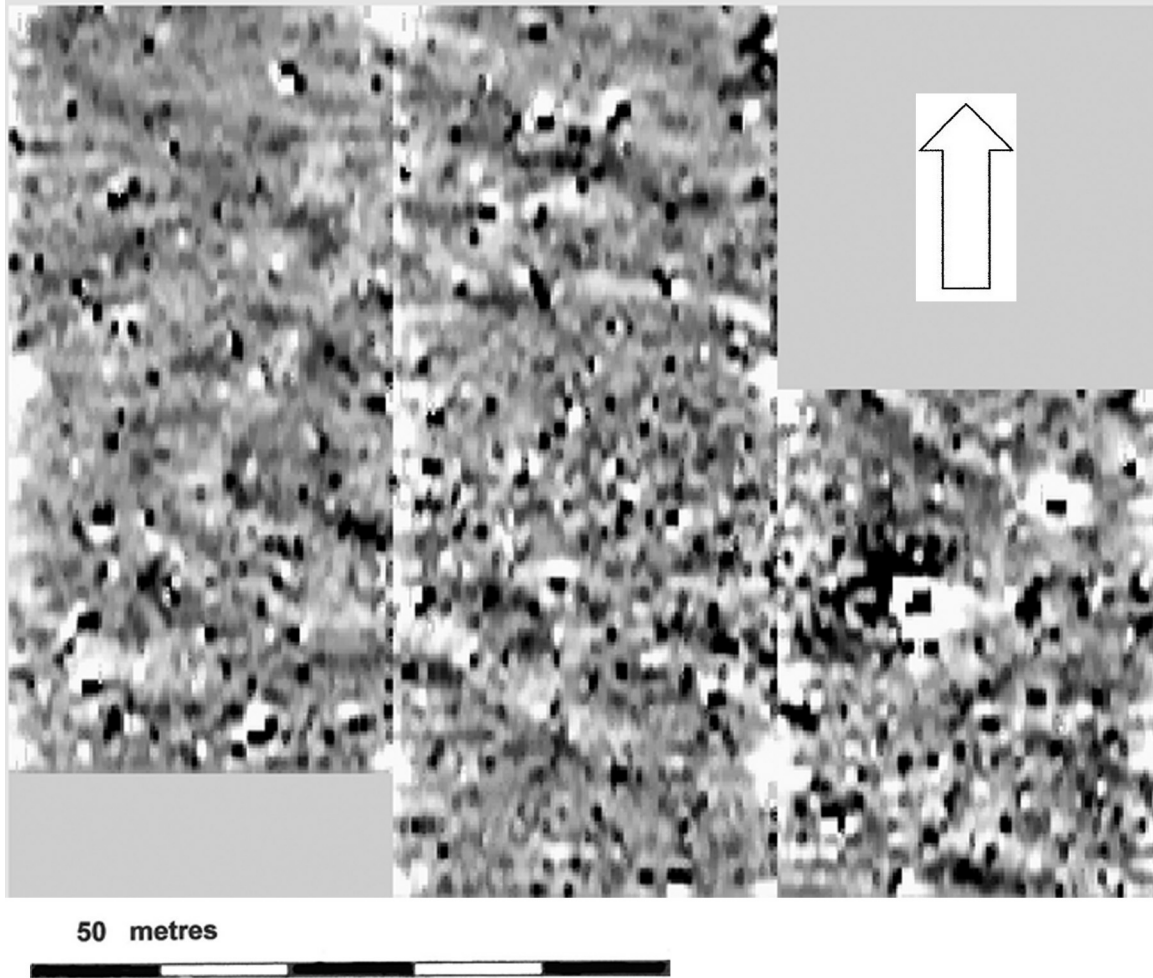


Fig. 2. *The magnetometer survey shows a sub rectangular enclosure with possibly house circles to the left and in the centre of the enclosure.*

The resistivity survey covered an area 100m by 80m, and shows the enclosure, which is just visible as an earthwork, aligned on an SE/NW axis 55m long and 45m wide. The banks appear to be disproportionately wide, averaging 8m, with a revetment of higher resistance material (stone?) both inside and out [fig.3]. There is no indication of a ditch, although the long south side and shorter east side appear to lie close to the enclosure ditch identified by magnetometer. Any ditch to the north would have been eroded away by the river. The entrance is in the centre of the short southeast side. North of this entrance and built against the outside of the enclosure bank is a small room 10m by 14m that may have been a gatehouse. The survey suggests the possibility of a small building to the north and east of the gatehouse, but only excavation would determine this.

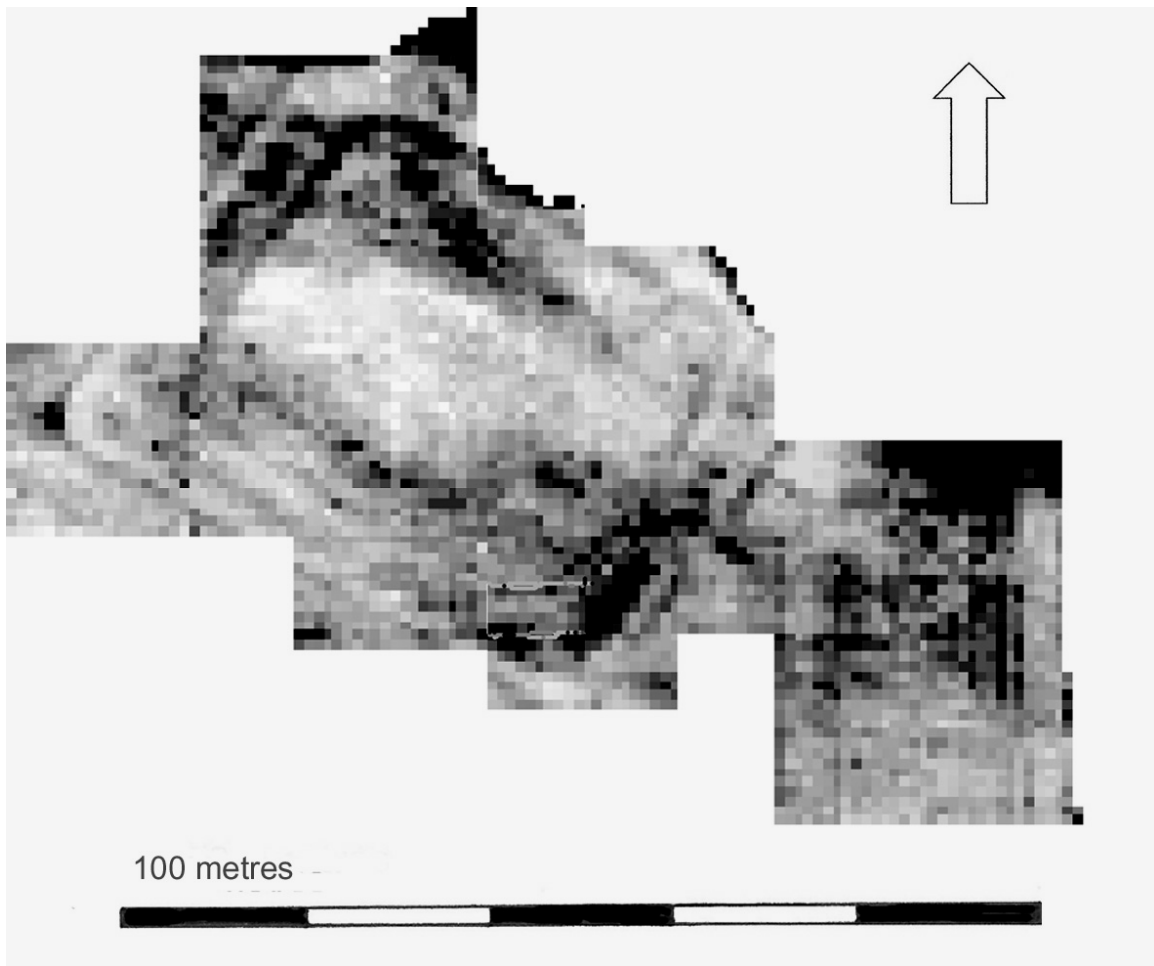


Fig. 3. *It can be seen that the river has eroded much of the north bank of the enclosure the banks of which are about 8m wide. The entrance is on the short southeast side. The linear feature to the right may be a stone-filled water channel.*

In the centre of the enclosure there is a suggestion of the remains of a square structure approximately 22m on each side. North of this and against the inner wall of the bank there seems to have been a range of rooms, the largest of these was constructed in the east corner, this may have been a separate building with at least two rooms. An area of high resistance between the square building and the gateway coincides with a peak in the magnetometer readings.

The resistivity survey identified a straight line of high resistance across the 'neck' of the promontory. This would seem to connect the river to a large shallow 100m square

depression a to be seen in the next field to the south, known as Wiltshire. The feature was so prominent that a resistivity ‘section’ was made that showed it to be an area of high resistance about 4m wide and almost 1m deep with small ditches about 50cm wide 2m to either side. [Fig. 4]. No trace of this feature is visible on the ground.

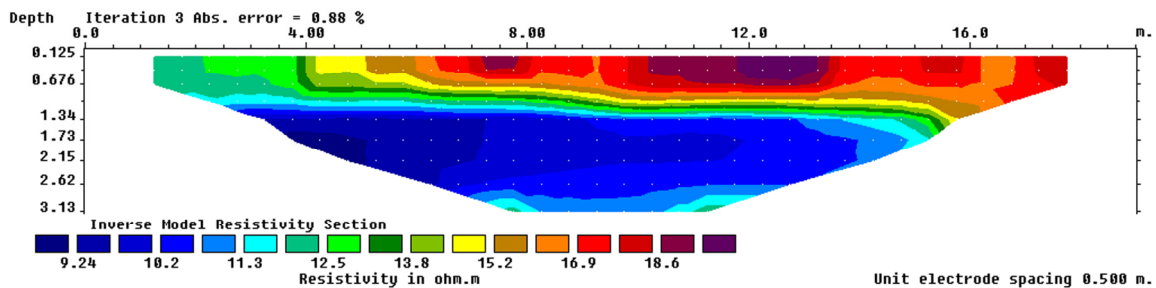


Fig. 4. A resistivity ‘section’ across the gully looking south. The channel at 12m is seen to be about 4m wide and about 1m deep with smaller ditches either side at 8m and 16m.

Discussion

The site would appear to have had early occupation from indications of what are probably Iron Age round houses, but there is no supporting evidence for this as no finds of any description were made in the course of the survey. Certainly the location would offer secure enough protection from all directions, except a narrow approach from the west, to make it a desirable site for settlement despite its low-lying situation. This would only follow if the water levels were rather higher than at present in order to flood the valley bottom. Falling water levels would have left the site rather exposed and this may have led to its eventual abandonment.

The later rectangular enclosure seems to have been constructed partly on the lines of the earlier enclosure, probably utilising some of the ditches. This feature with its rounded corners has the appearance of a very small Roman fort, but the walls seem disproportionately thick for the size, which occupy more than 50% of the total area, making the useable space within the walls about 1000 square m. It seems clear that much effort has been put into its construction with carefully built walls only to contain one 20m square structure and a range of rooms. If the purpose were defence then it would seem unlikely that the gatehouse would have been constructed *outside* the walls. The design of the enclosure bears some semblance to that of a temple enclosure near Charterhouse on Mendip [fig. 5], but on a far smaller scale, and with rounded rather than square corners, (Matthews, 2008).

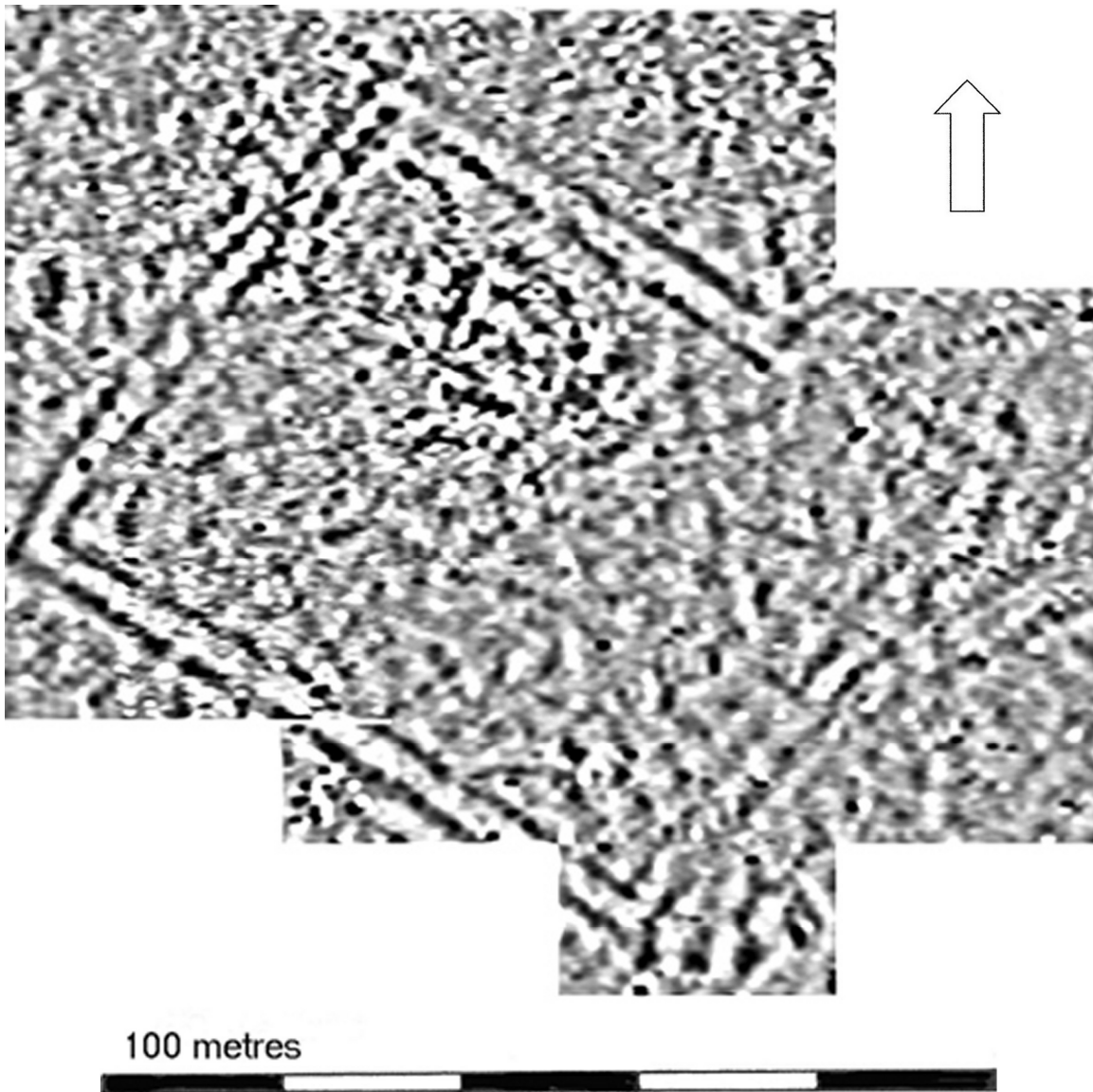


Fig. 5. *There are some similarities between this temple enclosure near Charterhouse and the feature in Thornbridge. Both have massively wide banks, with well-defined edges.*

The enclosure must have been constructed at a time before the low promontory was cut across by the present course of the river i.e. before the erosion of its northern bank. If the change in the water course occurred *after* the low lying areas were flooded following a rise in sea levels (the river could have found itself a new bed as the water levels fell again) then the most likely period for construction would have been when water levels were at a peak in the 2nd century. Hawkings believed that the original course of the river here was modified as additional defences, and this also suggests that the enclosure was of considerable strategic importance. Easy access to the river at this point would be essential for communication and trade if the hypothesis of a sea port here is correct.

The linear feature to the east of the site seems to be part of a water management scheme, to convey water from the river across the higher ground of the promontory to the square-shaped depression to the south. The size of the ditch would suggest it would be capable of carrying a considerable flow of water. The ditches either side may either be indications of robbed out walls or channels to help to confine the water in the case of excessive flow to prevent flooding. There is no dating evidence but it is possible that its construction is connected with a sea port, and the water could flow into the square basin to keep it as a type of floating harbour with access to the river to the southwest.

Falling water levels after the end of the 2nd century may have led the abandonment of this site.

Conclusion

In the absence of any dating evidence it is not possible to do anything other than speculate about these features. However, it is likely that the structures date from the end of the Iron Age to the 2nd century. There seems little doubt that there is a connection between the site and activity along the sides of the valley here, and further investigation, now in progress, may shed more light on the use made of the river for commercial activity in the Roman period.

ALERT wishes to record thanks to Mr Rogers for kindly giving us permission to work in his field.

References

- Green, G. W. and Welch, F. B. A., 1977. *Geology of the country around Wells and Cheddar*, Institute of Geological Services, Natural Environment Research Council, HMSO, 1977
- Hawkings, H. J. 1965. A Roman sea port in the Loxton Valley? *Search*, 4, 13-19
- Hawkings, H. J., 1966. A Roman sea port in the Loxton Valley – new evidence. *Search*, 5, 13-17,27.
- McDonald, A. K., 2000. Tidal aggression, *Independent Archaeology Newsletter*, 37, 1-4.
- Matthews, J. 2008. Charterhouse on Mendip. *Camertonia*, 46, 20-23.

John Matthews

[October 2009]