

ART. IV – *Recording of Hadrian's Wall at Willowford Farm*

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TWO archaeological recording briefs have recently been carried out on Hadrian's Wall at Willowford Farm (NY 625 665) prior to the erection of necessary farm installations across the Wall ditch and the consolidation of a newly exposed length of Wall.

Wall Ditch

In 1994 a slurry tank hole, 4 x 2.5 x 2.4 metres, was excavated across the Wall ditch. The angle of the excavation was positioned (Fig. 1) to give a cross-section through part of the ditch but not the full width so as to avoid damage to the original sides of the ditch. No trace of the ditch or the north or south sides are visible at the point where the excavation was located but these are plainly visible just east of this position. The initial excavation was by hand to a depth of 1.2 metres with the rest of the ditch fill being removed by mechanical excavator to a finished depth of 2.4 metres.

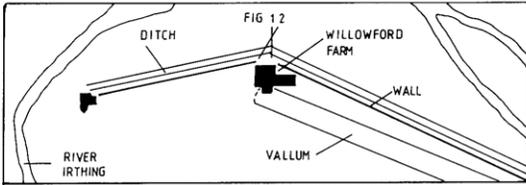
It was hoped that the excavation would provide some evidence as to the lower profile of the ditch as well as information on the composition of the ditch fill. Owing to the danger of collapse of the sides of the excavation and the proximity of the mechanical digger the lower areas of the trench could not be examined in the detail initially envisaged.

Archaeological features

A 200 mm deep rich organic topsoil (Fig. 1.1) overlay a spread of compacted material (Fig. 1.2) consisting of stone fragments and water rounded cobbles within an orange loamy sand. Information from Mr Donald Dalrymple of Willowford Farm showed this to be an area of material cleaned out from a stone cattle byre about 40 years ago and spread over part of the ditch to fill and level the area. Two pieces of 18th-19th century pottery were recovered from this area. Below this layer was a dark brown silty loam (Fig. 1.3) which was virtually stone free and extended over the area of the trench.

A layer of primary ditch fill (Fig. 1.4) and a layer of slumping from the side of the north face of the ditch (Fig. 1.6) overlay a mass of jumbled stonework consisting of Roman Wall facing blocks and river boulders from the Wall core (Fig. 1.5). This Wall material extended 3.2 metres northwards from the south end of the trench to meet the slumped north side/edge of the ditch and was also overlying the silting of the ditch bottom. The facing stones and core material were up to 1.1 metres in depth.

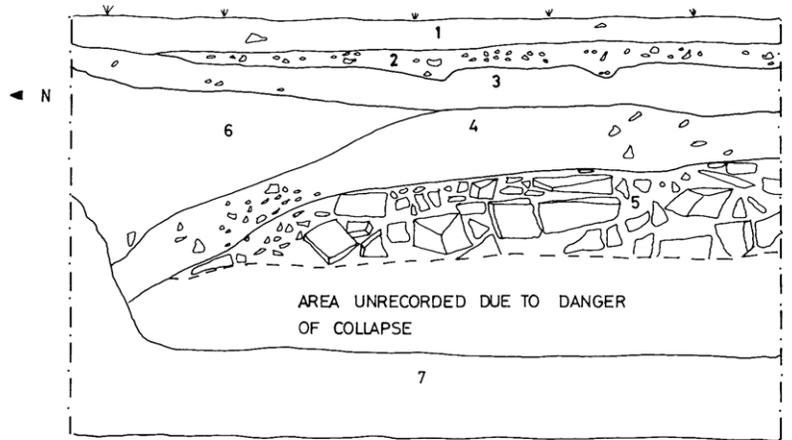
A number of large clumps of Roman mortar were recovered from within the mass



WILLOWFORD FARM CUMBRIA NY 625665

Fig 1 Key

- 1 Topsoil
- 2 Loamy sand
- 3 Silty loam
- 4 Ditch fill
- 5 Wall collapse
- 6 Ditch slumping
- 7 Ditch slumping and silting



EAST FACE OF TRENCH ACROSS WALL DITCH SHOWING FALLEN MASONRY AND FILL.

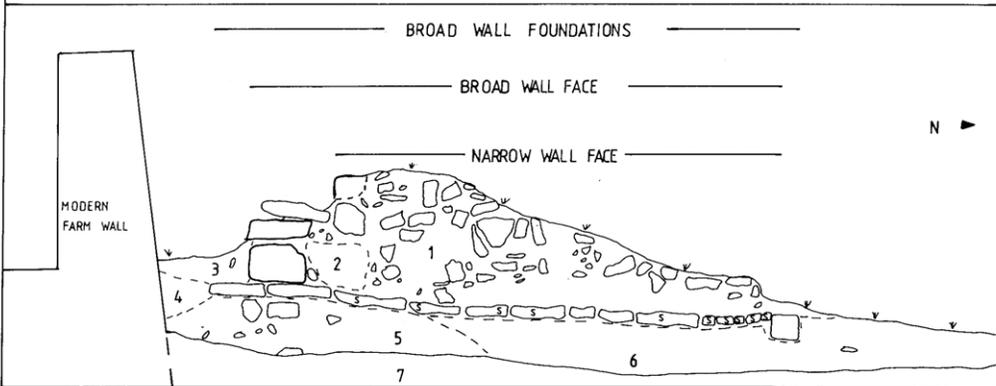
FIG 1

Fig 2 Key

- 1 Wall core
- 2 Sticky sand
- 3 Sandy loam
- 4 Orange sand-gravel
- 5-7 Sandy gravel mixes
- 5 Shale



SCALE 1:20



CROSS-SECTION OF ROMAN WALL

FIG 2

of jumbled facing stones and core material spread across the ditch. One fragment of this mortar was analysed and the report is attached at the end of this article. Beneath the collapsed Wall material is what appears to be silting or slumping of the ditch. This material is a loose, orange/light brown loamy sand containing many medium sized stones of 20-60 mm and appears to be homogenous with the alluvium material extracted when the ditch was constructed.

Due to the confined nature of the trench and the danger of collapse it was not possible to examine in detail the lower section of the excavation to establish the original depth of the Wall ditch.

Discussion

Although it was not possible to establish the depth of silting in the bottom of the ditch or to locate a profile, it was apparent that sections of Roman Wall material had ended up in the ditch at a time when silting had already begun to take place and possibly slumping of the ditch sides. It is uncertain whether the material became deposited here due to a collapse of the Wall itself or had been part of a deliberate infilling of the ditch from already collapsed material lying on the berm. The jumbled mass of Roman stonework tapered off towards the north side of the trench perhaps indicating that, if the Wall had collapsed rather than having been deliberately placed in the ditch to fill it in, the width of the berm was not as wide at this point as is normally assumed. It is at or close to this point that the alignment of the Wall makes a distinct change as it follows the slope down towards the bridge across the Irthing river. After the deposition of the Wall facing stones and core, the north and south sides of the ditch continued slumping and covered the material. It was also not possible to determine if the material on the north side of the trench was the edge of the original ditch or material which had slid down the slope into the bottom of the ditch.

No Roman pottery was recovered from the excavation. A concrete slurry tank has now been constructed within the excavated area.

Wall Consolidation

Upon completion of the new slurry tank, the sides of the old midden were demolished to expose a cross-section of the Wall (Fig. 2). At the same time the opportunity was taken to clear the accumulated soil from a seven metre length of the Wall and to consolidate the remains.

Although very little of the structure remained at this point due to stone robbing, enough was visible to record a cross-section of the foundations and core of the Wall as well as a number of the Broad Wall facing stones.

The section of Wall at Willowford incorporates both the Broad and Narrow elements of the monument. The core of the Wall (Fig. 2.1) is made up of mainly river-washed boulders and stones while the few surviving facing stones consist of carboniferous limestone blocks.

Although the seven metres of exposed Wall has been robbed of virtually all of the facing stones of both the Broad and Narrow Wall as well as some of the foundation

course of the Broad Wall, enough survived in the section to record a profile of the structure.

The width of the Broad Wall foundation is 3.32 metres and the Broad Wall face 3.0 metres, while the width of the Narrow Wall face is 2.34 metres.

Beneath the Wall there was no evidence of any surviving pre-Roman ground surface in the cross-section indicating that this had been cleared away prior to the construction of the Broad Wall foundation course. The surface beneath the foundations (Fig. 2.5-7) consists of a mix of orange/brown sand and gravel mix as well as river washed pebbles. The Wall foundations consist of a single course of shale (now disintegrating) and limestones 6-8 cm in depth across the width of the Wall. On the south face of the Broad Wall two courses of facing stones survived above the foundations. These had been covered by up to 20 cm of grey/brown sandy loam (Fig. 2.3) which may be the construction debris from the Broad Wall.

On the north side of the Wall no facing stones survived above the foundations.

The core of the Wall consisting of river washed boulders and limestones survived to a height of 74 cm above the foundations. It was not possible to distinguish between the remnants of the Broad Wall core and the Narrow Wall core. If there had ever been a Roman lime mortar binding the core it had disintegrated to a sandy soil mix leaving only a small fragment adhering to one piece of stone found within the core.

Two courses of the Narrow Wall foundation blocks survived on the south side but none of the facing stones.

The modern midden with its stone retaining walls had extended to 20 cm below the level of the Wall foundation course. A stone retaining wall for the farm sheep dip had been erected within 50 cm of and parallel to the south face of the Wall.

Conclusion

The present farmhouse of Willowford was erected *c.*1836. although prior to this a pele house had existed somewhere on the site.

Fortunately on our last visit, we meet at Birdoswald with Mr John Armstrong, a master mason, residing at Gilsland, and he assured us that when the old Peel house at Willowford was pulled down, thirty six years since [i.e. *c.*1836] and the present farmhouse built . . . (Jenkinson, 1875, 199).

There are however no visible remains of this earlier building.

It is possible that the lack of surviving Wall opposite the farmhouse can at least in part be related to the construction of a pele house or an early farmhouse. No evidence was obtained for the location of the change in angle of the Wall which must have occurred in the immediate vicinity.

Mortar Analysis

An analysis of a fragment of mortar from the Wall material within the ditch was found by Messrs Pattinson's, Public Analysts, Newcastle-upon-Tyne to contain:

Soluble Silica (as SiO ₂)	% 1.28
Calcium Oxide (as CaO)	% 17.8
Insoluble Matter	% 61.1
Loss on ignition	% 18.7

“Owing to the extreme age of this sample it is not possible to make accurate assumptions about the cement content, however, analysis would suggest a mortar having the following”

By weight %	Hydrated Lime	27.8
	Sand (aggregate)	72.2
		100.0
By volume ratio	Hydrated Lime	1
	Sand (aggregate)	0.9

Acknowledgements

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Reference

Jenkinson, H. I., *Jenkinson's Practical guide to Carlisle, Gililand, Roman Wall and neighbourhood* (London, 1875), 199.

