

VIII

THE MILECASTLES OF HADRIAN'S WALL— AN ALTERNATIVE IDENTIFICATION

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THIS PAPER is the result of a study begun when the author attended a series of lectures by Dr. Brian Dobson on the archaeology of Hadrian's Wall. It attempts to demonstrate that legions working on Hadrian's Wall used different setting-out lines when constructing the milecastles and this can help identify the legionary builders. The method depends upon two premisses; firstly, the correct assessment of the original scheme for Hadrian's Wall and secondly, the accurate determination of milecastle plans and dimensions. This information is then used to make a direct comparison between milecastles built to the original scheme and those built or modified at a later date.

It is an accepted view that the original scheme for Hadrian's Wall was a stone wall, ten Roman feet thick between Newcastle upon Tyne and the River Irthing and a turf rampart, twenty Roman feet wide at the base from the Irthing to Bowness on Solway. On both stone and turf walls, the milecastle perimeter walls were the same thickness as their respective curtains. The milecastles of the original scheme were usually proportionate in shape, with their length ten Roman feet longer than the width. Increases in size were accomplished by adding ten Roman feet to both the length and width thus maintaining the ratio of the original milecastle. Table 1 demonstrates this using milecastles built to the original scheme.

TABLE 1 (all measurements in Roman feet)

milecastle	material	internal sizes (feet)	external sizes (feet)
79TW	Turf	40 × 50	80 × 90
27	Stone	50 × 60	70 × 80
48	Stone	60 × 70	80 × 90

In general, it may be said that ten Roman feet was standard for the stone wall and twenty Roman feet was standard for the turf wall. Between every milecastle, on both the Stone and Turf Walls, were two stone turrets each measuring twenty Roman feet internally. The recurring dimensions of ten and twenty Roman feet, plus the regular spacing of the structures, suggests that the original scheme for Hadrian's Wall was remarkably standardised in design.

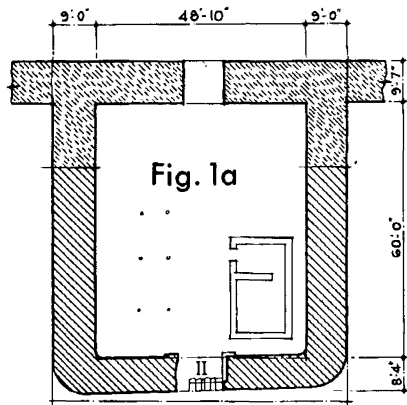
It has been suggested that under the original scheme each legion working on Hadrian's Wall was allocated a specific length of curtain and number of structures to build, and that the legions can be distinguished by differences in their building practice.¹ This is summarised as shown in table 2.

TABLE 2

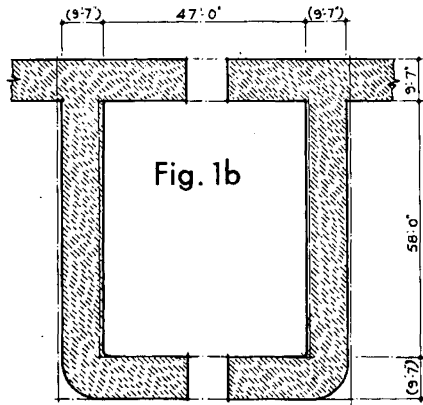
Legion II	short axis 2 pairs of responds—type I	Standard A footings 1 course below off-set
Legion XX (?)	long axis 1 pair of responds—type II or IV	Standard A (as above)
Legion VI (?)	long axis 2 pairs of responds—type III	Standard B footings 3 courses below off-set

Shortly after building to the original scheme began, when the Turf Wall was perhaps complete and the Stone Wall was only partially built, the scheme was radically altered. The Turf Wall was replaced in stone, initially to eight Roman feet but later to an intermediate gauge of nine Roman feet and the Stone Wall was reduced in thickness to eight Roman feet or less. In the eastern sector, from Newcastle to the North Tyne, the broad foundation was laid in full in preparation for a stone wall ten Roman feet thick. This foundation was interrupted at the north gateway of each milecastle to allow roadways to pass through the Wall. These breaks in foundation would be convenient places to begin construction because the Roman builders could then erect the north walls and gateways of the milecastles while the remainder of the foundation was being laid. It is worth noting that under the original scheme, the milecastles provided the only means of working north of the Wall once the curtain was built or being built. It has been suggested,² that the foundations of the Wall and milecastle were usually laid simultaneously but this is misleading for many of the milecastles have perimeter walls which are narrow and rest on a suitably narrow foundation. There are a number of reasons why the absence of broad foundations beneath the perimeter walls is important. Firstly, it suggests that some milecastles were not complete when the original scheme was changed and secondly, it allows us to separate the structural elements in two distinct phases; before and after the reduction in gauge. Most important however, is the dating of Hadrian's Wall based on this change in plan.

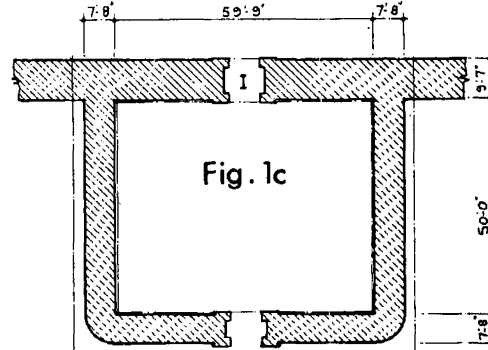
The most recent dating of Hadrian's Wall,³ depends upon total broad gauge building between Newcastle and about MC. 22 (fig. 2b), including of course, the curtain and the milecastle perimeter walls. Within this distance, however, MCs. 9, 13, 17, 18, 19, 20 and 22,⁴ all have narrow perimeter walls, suggesting that they belong to the amended scheme rather than the original. A suggestion has also been made,⁵ that the stretch of wall from about MC.7 to MC. 22, divides neatly into three legionary blocks and that each block contains enough broad gauge building for one complete seasons work. If this is true, then the evidence of the narrow wall milecastles in all three blocks indicates that the work was behind schedule, perhaps drastically so. All milecastles in this eastern sector of Hadrian's Wall, with the possible exception of MC.



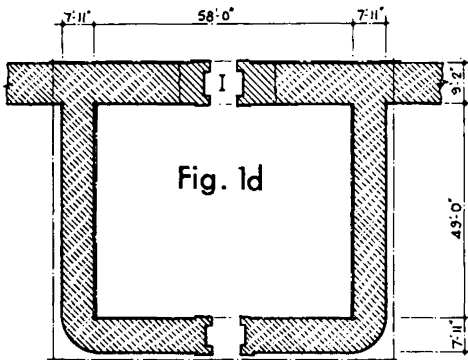
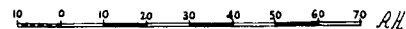
CHAPEL HOUSE M/c.9



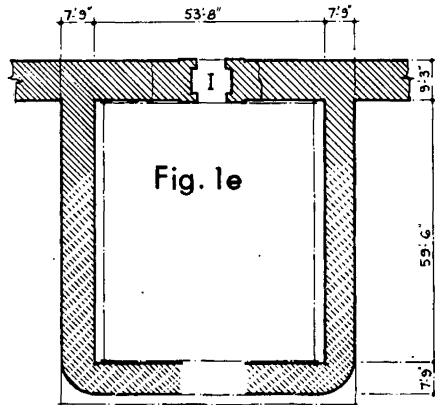
WALBOTTLE DENE M/c.10



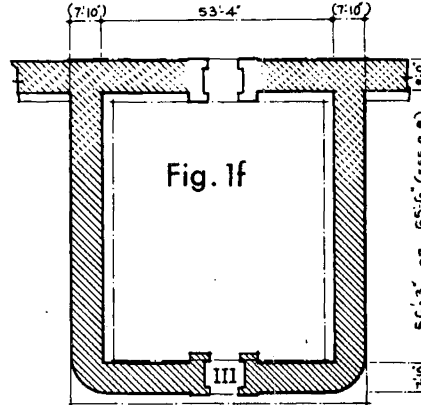
RUDCHESTER BURN M/c.13



WELTON M/c.17

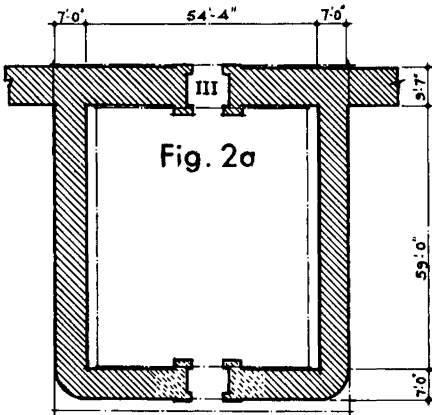


EAST WALLHOUSES M/c.18

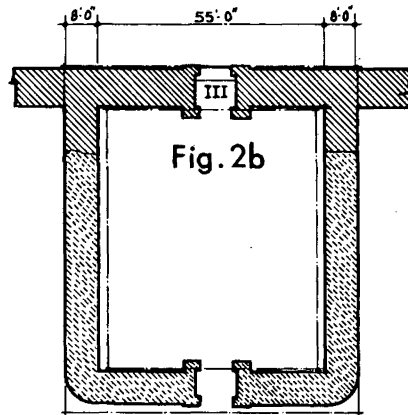


MATFEN PIERS M/c.19

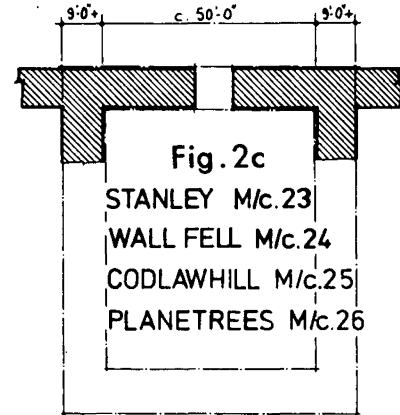
Fig. 1.



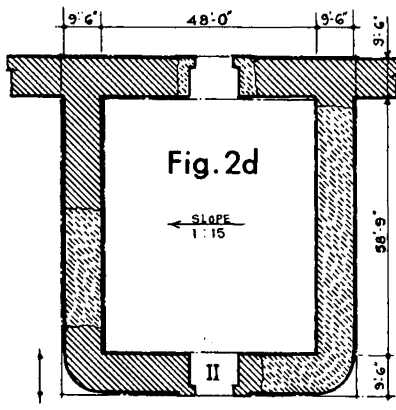
HALTON SHIELDS M/c.20



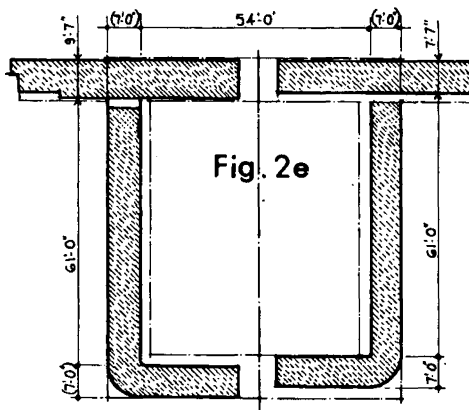
PORTGATE M/c.22



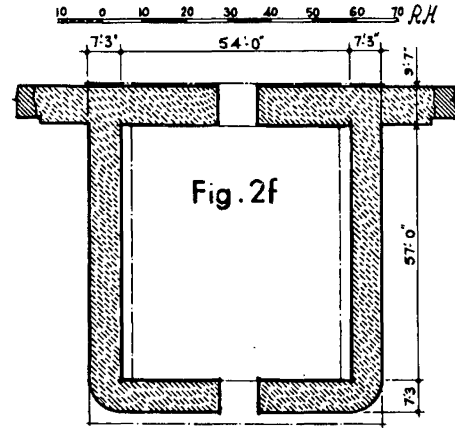
MILECASTLES 23-26



LOW BRUNTON M/c.27

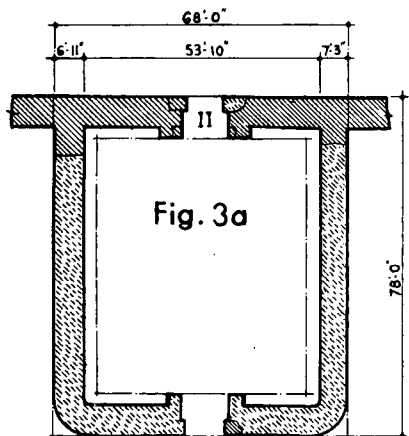


TOWER TYE M/c.29

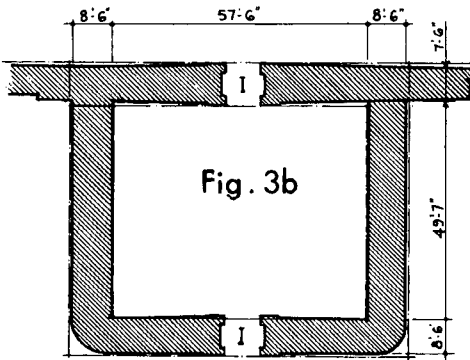


LIMESTONE CORNER M/c.30

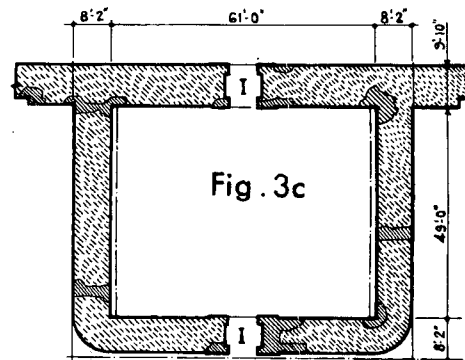
Fig. 2.



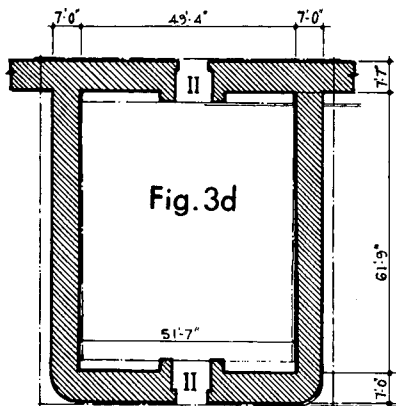
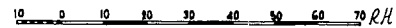
SHIELD - ON - THE - WALL M/c. 33



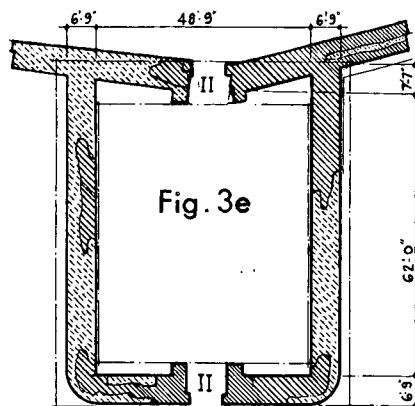
HOUSESTEADS M/c. 37



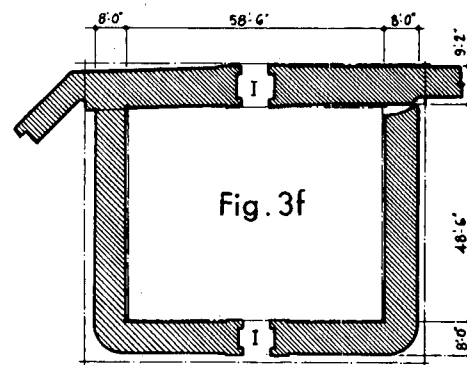
HOTBANK M/c. 38



CASTLE NICK M/c. 39



WINSHIELDS M/c. 40



CAWFIELDS M/c. 42

Fig. 3.

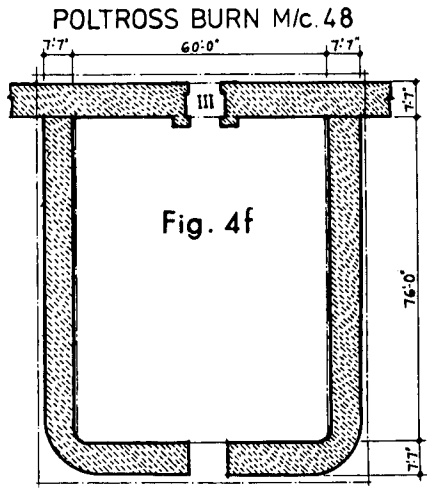
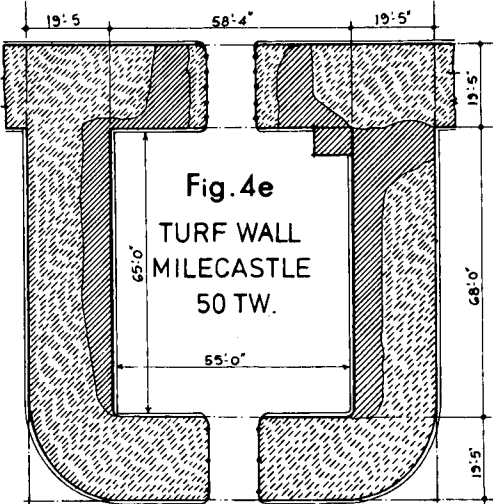
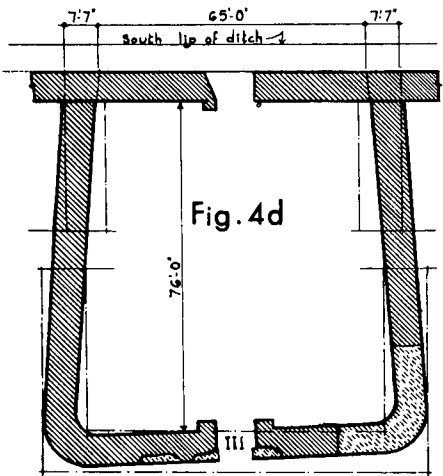
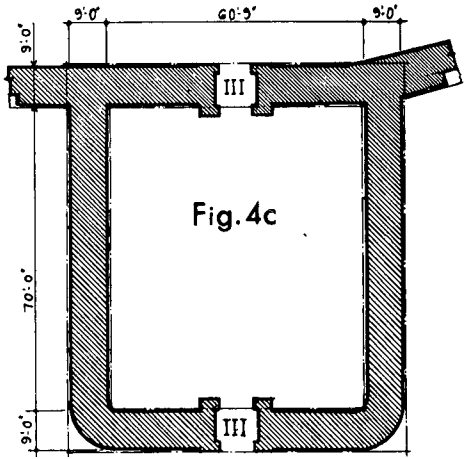
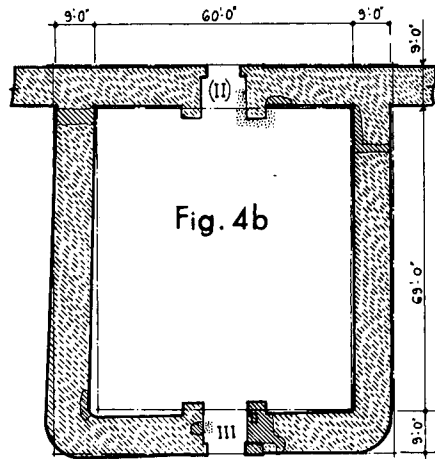
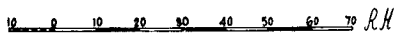
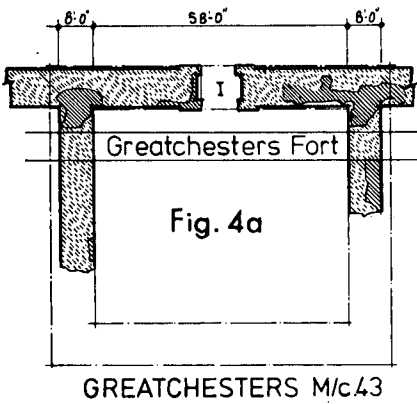


Fig. 4.

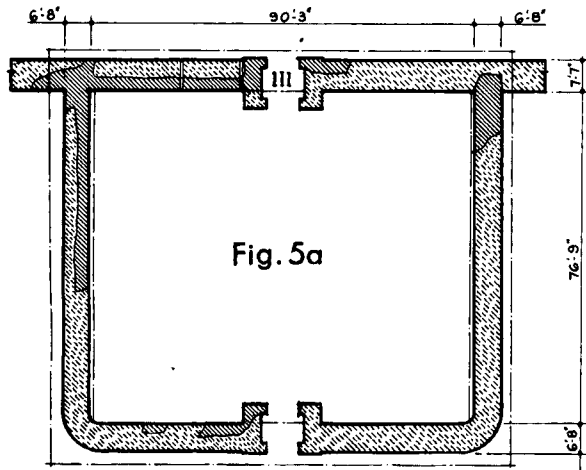


Fig. 5a

BANKSHEAD M/c. 52.

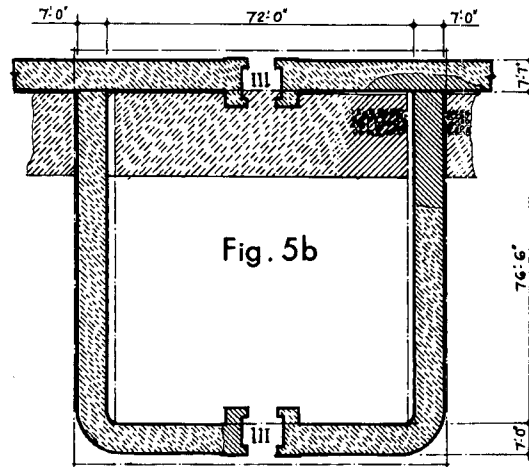


Fig. 5b

BANKS BURN M/c. 53.

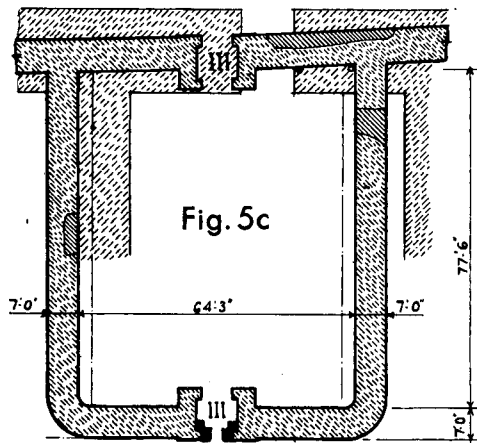


Fig. 5c

RANDYLANDS M/c. 54.

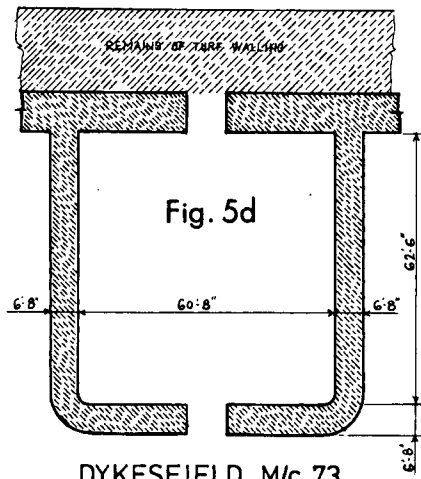
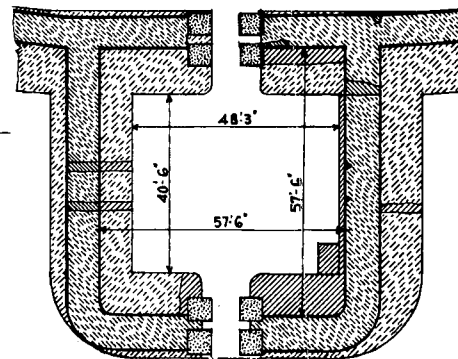


Fig. 5d

DYKESFIELD M/c. 73.



SOLWAY M/c. 79.

Fig. 5e

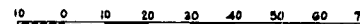


Fig. 5.

19 (fig. 1f), have broad north walls irrespective of the thickness of their perimeter walls. East of MC. 22 (fig. 2b), the milecastles were built in conjunction with a broad gauge curtain but their perimeter walls are narrow and west of MC. 22, as far as the North Tyne, the perimeter walls are broad but the curtain is narrow. It has been suggested,⁶ that the change in curtain thickness near MC. 22 was the result of a disruption in the working parties when it was decided to place the forts on the line of the Wall.

This suggestion, however, is based on the proposal that the curtain and structures east of MC. 22 were built wholly to the broad gauge but in fact, many of the milecastles have narrow perimeter walls. It seems simpler to assume therefore that instead of disruption occurring at MC. 22 (fig. 2b), there was merely one legion east of MC. 22 attempting to complete the curtain before the perimeter walls and another legion west of MC. 22 completing the milecastle walls before the curtain. That neither legion was able to complete their legionary length before the scheme was revised suggests that the allotted lengths were too long for building in the time available. The difference in priority between the milecastles east and west of MC. 22 indicates that each legion enjoyed some degree of flexibility in the building sequence, although the butt joint found at MC. 27, built entirely to the broad gauge, shows that all legions were required to construct the north wall and north gate before anything else.

In the central sector of Hadrian's Wall, from the North Tyne to the River Irthing, there is evidence of similar priorities, but this time, building in broad gauge began at the Irthing and progressed eastwards. Milecastles 48 (fig. 4c) and 47 (fig. 4b) are built wholly to the broad gauge while MC. 43 (fig. 4a), 42 (fig. 3f), and 38 (fig. 3c), like those in the eastern sector, have only the north wall completed to this thickness. At MC 37 (fig. 3b), the north wall tapers from broad at the gateway to narrow at the side walls and the perimeter walls are broad gauge. This suggests that MC. 37 may be the last milecastle of a legionary length for MC. 36 is recorded as having a long axis and narrow walls.⁷

East of MC. 36, as far as the North Tyne, the milecastles appear to be built entirely to the narrow gauge although the north gateways and turrets continue to be constructed as though for the broad curtain. It is significant that these structures have their north faces occupying the positions intended under the original scheme and the north face of the curtain, whether broad or narrow, was maintained after the scheme was revised. When the Roman builders reduced the thickness of Hadrian's Wall from broad to narrow gauge, they endeavoured to keep the north setting-out line thus causing the previously laid foundation to project southwards by an amount equalling the difference in the two gauges. Because there is no broad foundation beneath the perimeter walls of milecastles built to the narrow gauge, no similar projection is available to tell us how the Roman builders modified the perimeter walls to suit the new gauge. If, for example, the Romans had actually laid the broad foundations of the perimeter walls at the same time as the curtain, would they have used the external setting-out lines when building the narrow walling as they did with the curtain, or would they have used the internal setting-out lines? The external setting-out lines would provide a larger area inside the milecastle, but the internal setting-out lines

would involve less material and maintain the original internal measurements. As we shall see, different legions used different setting-out lines and these can be used to identify them.

Three milecastles, MCs. 37 (fig. 3b), 38 (fig. 3c) and 42 (fig. 3f), have all produced dedication slabs naming Legion II and as all three have short axes, type I gateways and Standard A footings, it can be said that these features represent building by this legion. Of the three, MC. 37 (fig. 3b) most closely resembles a milecastle built wholly to the broad gauge in that the perimeter walls are broad and, despite a tapering north wall, rest entirely on a broad foundation. At ground level therefore, MC. 37 is typical in size and area of all milecastles from as far east as MC. 9, and as far west as MC. 43 (fig. 4a). It is reasonable to assume that if all these milecastles had been completed to the original scheme, i.e. totally to the broad gauge, all would have the same plan if not the same axis, and all would measure 50 × 60 Roman feet internally. The English equivalents of these dimensions are (at 11.65 inches to the Roman foot) 48' 6" and 58' 3" and it will be seen from fig. 3b, that these closely approximate to those given for MC. 37 at 49' 7" × 57' 6". If one examines another short axis milecastle but this time built with narrow gauge perimeter walls, say MC. 17 (fig. 1d), one finds that the internal setting-out lines have been used. At 49' 0" × 58' 0", MC. 17 is extremely close to those of MC. 37 (fig. 3b) and the Roman equivalents. The following table gives the internal dimensions of the excavated milecastles in the Stone Wall sectors of Hadrian's Wall.

TABLE 3 Short axis milecastles—Stone Wall
(all dimensions in English feet)

MC.	Internal dimensions		wall thickness (average)	Setting-out
	north/south	east/west		
13 (1c)	50' 0"	59' 9"	7' 8"	internal
14	?	60' 0"	narrow	internal
17 (1d)	49' 0"	58' 0"	7' 11"	internal
37 (3b)	49' 6"	57' 6"	9' 6"	broad
38 (3c)	49' 0"	(61' 0")	8' 2"	internal?
42 (3f)	48' 6"	58' 6"	8' 0"	internal
43 (4a)	?	58' 0"	8' 0" approx.	internal

All milecastles, except MC. 14, are recorded as having Type I gates.

Long axis milecastles on the Stone Wall are of two sizes. East of MC. 43 (fig. 4a), all excavated examples have been found to measure 50 × 60 Roman feet internally, while MC. 47 (fig. 4b) and MC. 48 (fig. 4c) measure 60 × 70 Roman feet internally. Considering the smaller sizes first, it appears that MC. 27 (fig. 2d) most represents the plan of a long axis milecastle built entirely to the broad gauge of the original scheme. MC. 27 belongs to the legion that built Type IV gateways, a variant of Type II, and Standard A footings. The walls of this milecastle were all 9' 6" thick and the internal sizes are recorded as 48' 0" from east to west and 58' 9" from north to south. In common

with many milecastles of similar size, MC. 27 was found to have the north wall built before the perimeter walls. This supports the assertion that the broad milecastles in this legionary length were constructed before the curtain. Type IV gateways are found in conjunction with broad wall milecastles such as MC. 9 (fig. 1a), and MC. 10 (fig. 1b), but when the walls are narrow, the gates were modified slightly to allow for the change in gauge and are called Type II. Two milecastles, MC. 39 (fig. 3d) and MC. 40 (fig. 3e), are recorded as having Type II gateways and these were both built wholly to the narrow gauge, including the north wall in each case. As MC. 40 (fig. 3e) is the more irregular shape, it is better first to consider MC. 39 (fig. 3d) when comparing plans with MC. 27 (fig. 2d). The following table gives the internal dimensions of long axis milecastles with Type IV or Type II gateways, and Standard A footings, all of which denote building by a legion other than Legion II Augusta. On this basis, the legion who incorporated these features into their milecastles must be either Legion XX Valeria or Legion VI Victrix, the two other legions known to have taken part in the building of Hadrian's Wall.

TABLE 4 (all dimensions in English feet)

MC.	Internal dimensions		Wall thickness (average)	Setting-out
	north/south	east/west		
9 (1a)	60' 0"	48' 10"	9' 0"/8' 4"	internal
10 (1b)	58' 0"	47' 0"	9' 7"	broad gauge
27 (2d)	58' 9"	48' 0"	9' 6"	broad gauge
39 (3d)	61' 9"	49' 4"/51' 7"	7' 0"	internal
40 (3e)	60' 0"/62' 0"	48' 9"	6' 9"	internal

It will be seen from the above and from the plans given, that MC. 39 (fig. 3d) and M.C. 40 (fig. 3e) make use of the external setting-out in a north/south direction but use the internal setting-out lines from east to west. This suggests that the north and south gateways were standing before the decision to reduce the gauge from broad to narrow.

The other legion building long axis milecastles constructed Type III gates and incorporated Standard B footings, thus differentiating them from the legion which built Type II or IV gateways and used Standard A footings. When these features are clearly in evidence, there is no real problem in placing the milecastles in their respective groups. In some instances, however, the milecastles have been almost totally removed making identification difficult, if not impossible. What is needed is some means of grouping the milecastles when the gateways and footings cannot be identified. It has been demonstrated how Legion II Augusta modified the short axis milecastles using the internal setting-out lines and one of the other legions modified certain long axis milecastles incorporating Type II gateways and Standard A footings. Both legions utilised the internal setting-out lines for this, particularly in an east/west direction, but fortunately for us the remaining legion that built long axis milecastles, Type III gateways and Standard B footings used the external setting-out lines when reducing the gauge of the perimeter walls.

TABLE 5 (all dimensions in English feet)

MC.	Internal dimensions		Wall thickness (average)	Setting-out
	north/south	east/west		
18 (1e)	59' 6"	53' 8"	7' 9"	external
19 (1f)	56' 5"/65' 6"	53' 4"	7' 6"	external
20 (2a)	59' 0"	54' 4"	7' 0"	external
22 (2b)	?	55' 0"	8' 0"	external
29 (2e)	61' 0"	54' 0"	7' 0"?	external
30 (2f)	57' 0"	54' 0"	7' 3"?	external
33 (3a)	63' 6"	53' 10"	6' 11"/7' 3"	external

Dimensions given with a question mark have been worked out from other dimensions, e.g. MC. 33 (fig. 3a) was recorded as 78 × 68 English feet.⁸ This compares well with the Roman dimensions of 80 × 70 feet (77' 8" × 67' 11" English feet). The dimensions north to south given for MC. 19 (fig. 1f), are the result of a doubtful reading of Thomas Hepple's notebook.⁹ MC. 18, in spite of having a Type I gateway, has a long axis and clearly belongs to the legion using the external setting-out lines.

Table 6 which follows groups the known milecastles according to axis, gateway type, footings and setting-out lines. The short axis milecastles are assigned to Legion II Augusta by the dedication slabs found at MCs. 37, 38 and 42¹⁰ whereas the two kinds of long axis milecastle are divided between Legion XX Valeria and Legion VI Victrix. The evidence for allocating to Legion VI is given by a re-used inscription built into turret 33b.¹¹ This turret has an east doorway and a sidewall thickness of approximately three English feet, making it similar to turrets associated with milecastles having Type II gateways and Standard A footings.

TABLE 6 Stone Wall milecastles only

MC.	Axis	Gate type	Footings	Setting-out	Legion
9 & 10	long	II/IV	A	internal (9)	VI Vic.
13, 14 & 17	short	I	A	internal	II Aug.
18	long	I	B	external	II Aug: (gates) XX Val. (walls)
19, 20 & 22	long	III	B	external	XX Val.
23 to 27	long	IV (MC. 27 only)	A	broad gauge	VI Vic.
29 & 30	long	III?	B?	external	XX Val.
33	long	II	A?	external	VI Vic.
34 & 35	long	II	A?	narrow gauge	VI Vic.
36	long	?	?	narrow gauge	VI Vic.?
37 & 38	short	I	A	broad gauge	II Aug.
39 & 40	long	II	A	internal	VI Vic.
41	short	?	?	narrow gauge	II Aug.
42 & 43	short	I	A	internal	II Aug.
44 & 45	long	?	?	?	XX or VI
47 & 48	long	III	B	broad gauge	XX Val.

This suggests that these features are the mark of Legion VI Victrix. If this is correct, the milecastles with Type III gateways and Standard B footings can be assigned to Legion XX Valeria, an hypothesis put forward by Breeze and Dobson¹² and suggested by the inscription found close to MC. 47 (fig. 4b). Table 6 gives an allocation based on this hypothesis.

Milecastles 18 and 33, with external setting-out lines and differing gateway types, appear to be hybrids with the gates built by one legion and the perimeter walls by another. All the milecastles listed above, with the exception of MCs. 47 (fig. 4b) and 48 (fig. 4c), measure 50 × 60 Roman feet internally or thereabouts, the last two larger and measure 60 × 70 Roman feet, internally

West of the River Irthing, the original Turf Wall and the turf and timber milecastles were rebuilt in stone. For the most part the new stone wall was built to an intermediate gauge of nine Roman feet but, as though a continuation of the Stone Wall further east, the first five miles as far as MC. 54 (fig. 5c) were built to the narrow gauge. The number of milecastles on the later Intermediate Wall is insufficient to establish the kind of close relationship attempted here but there seems no reason why the milecastles associated with the Narrow Wall cannot be considered in this way. All milecastles between and including MC. 49 (fig. 4d) and MC. 54 (fig. 5c) have features in common which suggest they were built by one particular legion. The gateways are all of Type III which further suggests, according to this paper, Legion XX Valeria and they all appear to be built in the same manner, i.e. with the north wall built as a running barrier first, followed by the perimeter walls which meet it in a simple butt joint at every junction. The north to south dimensions of these milecastles are reasonably constant at about 80 Roman feet (77' 8" English feet) internally, indicating sizes of either 70 × 80 Roman feet or 80 × 90 Roman feet internally. As table 7 shows, both sizes are evident.

TABLE 7 Turf Wall replacement milecastles
(all dimensions in English feet)

MC.	Axis	Gate type	Internal dimensions		Setting-out (east/west)
			north/south	east/west	
49 (4d)	long	III	75' 0"	65' 0"/73' 0"	external
50SW (4f)	long	III	76' 0"	60' 0"	internal
51 (?)	long	III	?	?	?
52 (5a)	short	III	76' 9"	90' 3"	internal
53 (5b)	long	III	76' 6"	72' 0"	external
54 (5c)	long	III	77' 6"	64' 4"	external

It will be seen that only MCs. 52 and 53 have the standard proportions found at milecastles further east, the remainder having widths more suited to milecastles measuring 60 × 70 Roman feet. The setting-out lines used would suggest building by two legions, with MCs. 49, 53 and 54 going to Legion XX and MC. 50SW to Legion VI. This would account for the inscriptions of Legion VI found close to MC. 50 (fig. 4f), and short axis milecastle 52 (fig. 5a) may well be evidence of Legion II Augusta. In the latter case, this is supported by an inscription¹³ recording work done by a detachment

of Legion II Augusta, although this may simply indicate repair at a later date. More evidence is needed if this stretch of Hadrian's Wall is to be fully understood.

Summary

Each legion began building Hadrian's Wall to the original broad scheme and when the scheme was revised to the narrow gauge, each made use of the original setting-out lines to re-position the walls of the modified milecastles. In using different setting-out lines, each legion makes it possible to identify itself as follows:

Legion II	Short axis	Type I gates	Std. A footings	internal setting-out
Legion VI	Long axis	Type II gates	Std. A footings	internal setting-out
Legion XX	Long axis	Type III gates	Std. B footings	external setting-out

In the eastern sector of Hadrian's Wall, there are indications that Legion VI attempted to complete the milecastles before the curtain whereas Legions XX and II built the curtain first. It should be possible to establish the setting-out lines of the milecastles even though other indicators are missing by locating the holes left by the pegs used in positioning the intended faces of the walls.

These are likely to be found at each corner of the milecastles as indicated in fig. 2d, about three or four English feet from the external faces of the walls.

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NOTES

¹ See most recently, D. J. Breeze and B. Dobson, *Hadrian's Wall* (London 1978), 55 ff.

² *Handbook to the Roman Wall* (13th edition), J. Collingwood Bruce, edited by Charles Daniels 1978.

³ D. J. Breeze and B. Dobson, *Hadrian's Wall* (London 1978), 77 ff.

⁴ Figures 1a, 1c, 1d, 1e, 1f, 2a and 2b respectively.

⁵ Breeze and Dobson, *op. cit.*, 64.

⁶ *Ibid.*, 67.

⁷ *The building of Hadrian's Wall* by C. E. Stevens (2nd edition), Titus Wilson (1966).

⁸ *AA*⁴, xiii 262 f.

⁹ *Hadrian's Wall—Some structural problems* by E. Birley, *AA* 4 xxxviii (1960).

¹⁰ *Roman Inscriptions of Britain* 1634, 1637, 1638 and 1666.

¹¹ *Britannia* II (1971), 291.

¹² Breeze and Dobson *Hadrian's Wall* (London 1978), 60 f.

¹³ *Roman Inscriptions of Britain*, 1955.

