

BURTON HALL

AN ARCHAEOLOGICAL SURVEY REPORT

by Amy Lax





BURTON HALL

EDEN

CUMBRIA

NMR No: NY 71 NW 1

NGR: NY 7452 1854

Surveyed: July 1997
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INTRODUCTION AND BACKGROUND TO SURVEY

In July 1997 the RCHME surveyed the remains of Burton Hall (NY 7452 1854) and a moated group of fishponds which are located 3km north of Warcop, Cumbria, in the Ministry of Defence's Warcop Army Field Training Centre.

The c.18th-century hamlet of Burton (Figure 1), which has been almost completely demolished over the past 50 years, comprised two, possibly three, farms of which Burton Hall farm was the largest. Burton Hall and the other dwellings are thought to have dated to *circa* the 18th century and replaced earlier buildings of medieval date. Indeed it is almost certain that Burton Hall farmhouse occupied the site of a Medieval house or hall. The current survey has revealed the earthwork remains of further settlement, probably of medieval date, on the south-eastern side of the site of Burton Hall, and surrounding Burton, extensive remains of ridge-and-furrow cultivation which are overlain by the enclosures associated with 18th-century Burton. The most imposing feature of the site is the group of three rectangular fishponds contained within a rectangular moat, situated to the north-west of the site of the Hall.

The survey of Burton Hall was requested by Lieutenant Colonel N E Emson, officer-in-charge of the Warcop Army Field Training Centre, to inform the army's management of the site, and was an initiative which arose from the Warcop Conservation Group.

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BURTON HALL 2

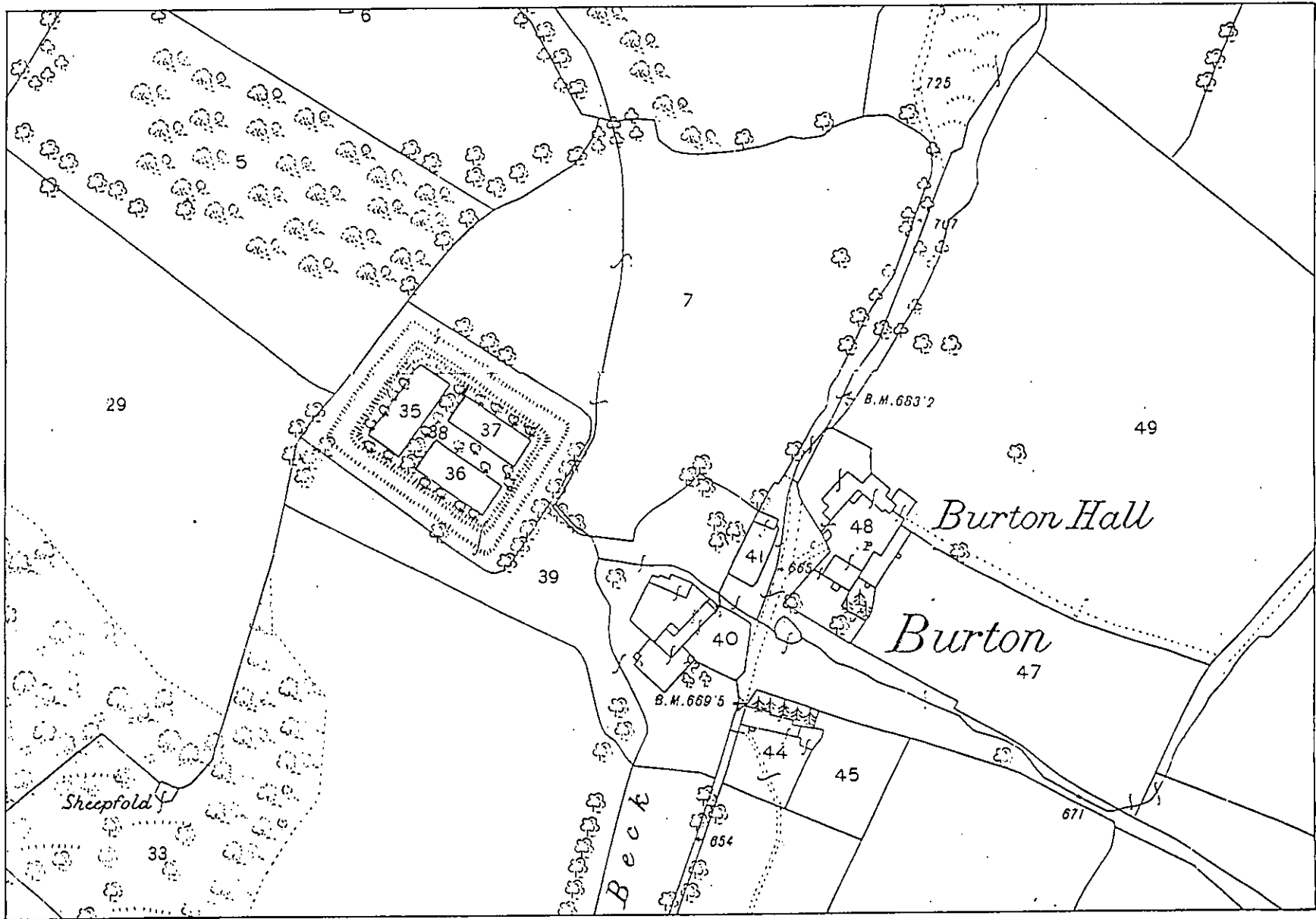


Figure 1. Burton Hall, 1st Edition 25-inch Ordnance Survey map 1861 (Westmorland, Sheets XVI.1 & 5)

GEOLOGY, TOPOGRAPHY AND LAND USE

Burton lies on gently undulating glacial deposits of boulder clay, overlying red sandstone. To the north-east of the former settlement the land rises to a limestone scar known as Roman Fell, some 600m above OD at its highest point. From the base of the limestone scar a series of springs issue and Burton is situated at the confluence of three of these. Cringle Beck, which is the largest and only-named of these streams, has cut deeply into the glacial deposits, creating a narrow but steep-sided gully which flattens out as it reaches Burton, flowing past the western side of the site of Burton Hall.

Burton is one of a series of small settlements located along the foot of the fells. Although it appears to be in a remote situation it is only 2km north of the Stainmore (present day A66), a principal east-west route throughout history.

The remains of Burton are situated on opposing sides of a shallow valley, oriented north-west - south-east, overlooking the stream which flows through it. The fishponds straddle the base of the same valley, to the west of the main settlement area.

The land was acquired by the army in 1949 since when it has been used as a training range; a number of MOD structures have been built on or close to the site including bunkers, targets and trenches. Burton also lies within the danger area where live firing takes place. The land, which is characterised by rough grassland, is still used as sheep pasture.

HISTORY OF RESEARCH

The RCHME research was limited to primary published sources. However, documentary research has been conducted by Bette Hopkins, Sites and Monuments Records Officer for Cumbria County Council (Hopkins 1997), who has examined the material held in the County Record Office in Kendal, and by local historian Dorothy Hinchcliffe (Hinchcliffe 1995); their findings are summarised below. Further documents relating to Burton are known but were not examined. These are the Wybergh papers in Carlisle Record Office, dating from the early 16th century, and the Baker Baker papers at The Prior's Kitchen, The College, Durham which contain mid 18th-century references.

Secondary sources refer to an early family named Burton who were the Lords of the Manor of Burton (in the parish of Warcop) although the original source is unknown or unspecified (Nicolson and Burn 1777, 610; Hinchcliffe 1995; Hopkins 1997, 1). The Lords of the Manor were the de Heltons or Hilton family from 1283 until 1720 when they were succeeded by the Wybergh family, through marriage (Nicolson and Burn 1777, 614; Hinchcliffe 1995). The Wyberghs were owners until the land was sold to the Ministry of Defence (MOD) in 1949, as is recorded in sale documents held by the MOD (MOD, Defence Lands Service (North)).

A hall is shown on Morden's map of Westmorland (1695) and also on a plan of 1764 by George Wheatley (Hopkins 1997). Whellan (1860, 772) noted the presence of earthworks around the hall, concluding that 'from the remains of foundations Etc. seen on every side the hall must have been at one time an extensive building' and also that 'in the neighbourhood of the hall are the remains of an ancient entrenchment whether British or Roman cannot now be ascertained'. The latter is most likely to be a reference to Howgill Fold (NMR No. NY 71 NE 4, NGR NY 7585 1900), an enclosed settlement of probable Iron Age or Romano-British date. Whellan (1860, 772) also reported on a local belief that the hall was built on the site of an old friary, which is probably the origin of a continuing local tradition that Burton was a friary. Nicolson and Burn (1777, 614) reported that Cardinal Christopher Bainbridge was born there, probably meaning Burton township rather than Burton Hall as Whellan (1860, 772) suggests, although other sites have also been claimed as his birthplace, including Murton (Hopkins 1997, 1).

Although Burton and Burton Hall occur in early documentary references the first mention of the fishponds does not occur until 1846 when the Burton Tithe Award parcels them with Burton Homestead (226 acres) rather than Burton Hall Homestead (288 acres) (Hopkins 1997, 2).

The 1st edition Ordnance Survey (OS) 25-inch map (Figure 1) shows the buildings and fishponds in detail (Ordnance Survey 1861).

The hall and fishponds were recorded by the RCHME in 1930 during the compilation of the of the RCHME's inventory of Westmorland (RCHME 1936, 239), in which Burton Hall is described as follows:

'The House is of two storeys: the walls are of rubble and the roofs are slate covered. It belonged to the family of Hilton but the present building is largely modern. The porch has an outer doorway with moulded jambs and square head with a narrow riband-panel above and the whole enclosed in a cable-moulding; the mouldings are of Gothic form but the doorway in its present form is presumably of 16th-century

or later date. The inner doorway is of the 14th or 15th century and has moulded jambs and ogee head. The outbuilding adjoining the house on the E. is of the same age and appears to have formed part of a larger house. Inside the house is a carved head-corbel and an early 16th century stone shield with a variation of the Hilton arms. In the garden is the head of a window of two round-headed lights; it is probably of the 13th century. Other fragments are built into the house itself and into neighbouring buildings.'

The field notes made during the investigations still survive and furnish a few additional details which were omitted from the published work; in the White House (Figure 2; 10), south-west of the Hall was a corbel carved with a pair of human heads, and in its garden was a medieval stone mortar, 10.5 inches in diameter (National Monuments Record 1935).

After Burton Hall farm was purchased by the MOD the buildings were left vacant and were gradually destroyed as the army made use of them in training exercises. The doorway to the Hall was saved, however and re-erected in Warcop churchyard in 1957. By January 1978 the OS field investigator (NMR No. NY 71 NW 1, authority 6) reported that 'Burton Hall, along with surrounding farm buildings has been completely demolished leaving only a few scattered wall footings with no recognisable plan' and the site had presumably arrived at its present state. The earthworks of the medieval settlement were observed in 1974 but no details recorded (Medieval Village Research Group 1974).

In 1990, Dr J B Innes of the University of Liverpool conducted an environmental analysis of the sediments of at least one of the ponds in order to determine whether the ponds could have been used for flax retting; the findings of the report (Innes 1990) are summarised below. The cores of material taken from the pond were about 1m deep and comprised 0.3m of organic detrital mud overlying the clay pond-lining. Above the organic mud was a layer of Sphagnum peat. The pollen samples which were taken from the cores revealed little variation between individual levels except to demonstrate the increasing silting of the pond. The samples suggested that the surrounding area was dominated by grassland with some cultivated fields. The cores did not contain any flax pollen or flax macrofossils thus ruling out the possibility that they were used as flax retting ponds. Although no fish bones or scales were recovered from the ponds, the report considered that this fact did not preclude their use as fishponds.

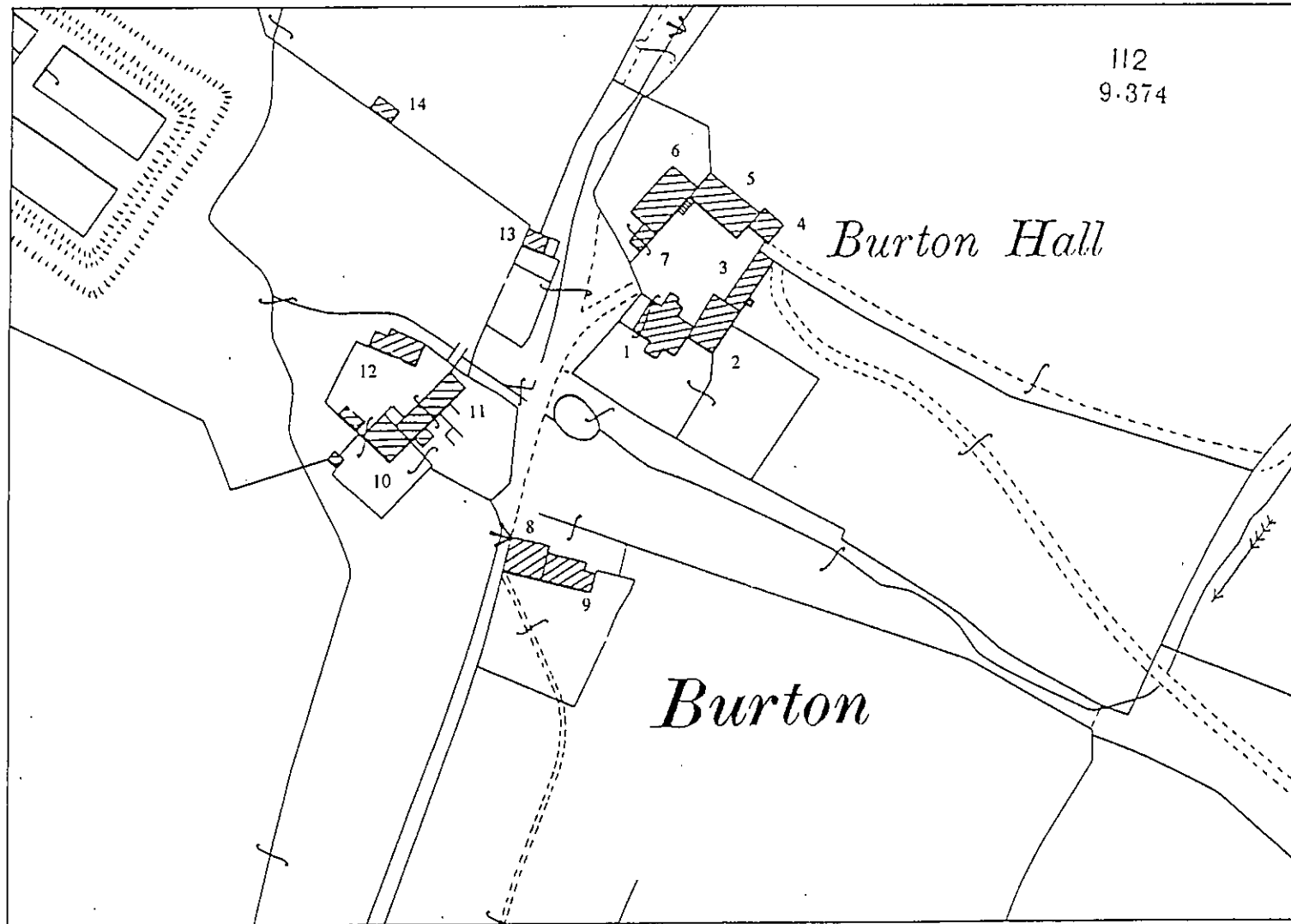


Figure 2. Burton, from 25-inch Ordnance Survey map 1915. Annotated numbers refer to Appendix II.

Settlement and Trackways (Figure 4)

Settlement related features on the site can be distinguished as two distinct phases, the earliest being a small settlement of the Medieval period followed by a slight shift during the post-Medieval period.

The Medieval settlement

To the south and south-east of the site of Burton Hall are a series of earthworks which indicate the remains of buildings, enclosures and an integral street. The symmetry and morphology of these features are suggestive of a small settlement ranged either side of a central street, although due to the high level of disturbance on the site the full extent is somewhat unclear; their general form and relationship to the post-Medieval complex suggests they are of an earlier date and probably have their origins in the Medieval period.

These earthworks can be clearly discerned in two areas; to the south-east of the site of the hall (S1) and to the south of the hall, on the opposite side of the beck (S2). These remains are characterised by an extremely regular pattern of scarps, laid out in relation to the stream which sub-divides them.

In the latter area are two rectangular buildings which adjoin one another (H1), which are likely to be houses or a house and barn. The south-easternmost one measures 15.3m by 3.7m internally within turf-covered banks 1.8m wide overall and an average of 0.3m high internally. Adjoining its north-eastern side is a rectangular platform, its top measuring 4.5m by 3.5m, which probably represents an additional building or pen. The other building measures 14.7m by 3.9m overall and probably was divided into two parts. The long axes of the buildings are at right angles to two long, west-facing scarps (B9, B10)(Figure 5), oriented north-east - south-west, the eastern one of which is 1.1m high and terminates where its southern end is truncated by track (T7). These are likely to be the remains of croft boundaries. To the rear of the building structures are three scarps, the most prominent of which delineates a platform 1.1m high and approximately 10m by 8m.

The area (S1) immediately south-east of Burton Hall displays a similar pattern of perpendicular scarps fronting onto the stream, some of which can be identified as houses and yards. The best preserved of these is a rectangular house (H2) situated on a platform overlooking the marshy ground adjacent to the stream. It measures 13m by 4.8m internally, and has a central division. The entrance appears to have been in the centre of the northern side, opening onto a small rectangular yard, 14.5m by 7.5m. A second yard, 12.1m by 16.5m, on the western side of the house, has been terraced into the slope.

There are two other much more poorly preserved houses, also situated overlooking the stream. A well-defined rectangular house platform (H3), 5.5m by 12.5m and 0.4m high, displays very slight scarps which were not surveyed. On its northern side is a yard, 13.2m wide apparently accessed by a hollow way which tapers away towards the south-east. On its south-eastern side is one other house (H4) which measures internally 9.4m by 5.5m. Some stone is evident in the scarps which only survive to a maximum height of 0.2m. At (H5), set further back than the other houses, is another building measuring 11.1m by 4.3m

internally. The pattern of scarps between the yards and houses suggests that a trackway (T1) may have extended from the latter building, westwards, taking a dog-leg around the crewyards adjacent to (H2). This would have divided the remaining building platforms or enclosures, to the north of (H2), from the rest of the village and thus suggests that either the pattern of land holding changed or that the track was a later insertion

The layout of houses overlooking the stream, with their attendant crofts laid out behind implies that the stream channel was the main street (T2) and that the overall plan of the village was one of a street-green. On the southern side of the stream, a well-defined track (T3), 2.5m wide, terraced into the slope, leads from the base of stream bed up to the top of the southern bank. Two other hollow ways (T4, T5) leading to the stream at the western end of the village also appear to be joining the central street. It is noticeable that this divergence of the main street (T2) appears to be avoiding the fishponds, or a precursor, suggesting that (T4 & T5) post-date the ponds. The present track (T6) running eastwards, after it curves through the site of the Burton Hall may have originated as the backstreet at the end of the crofts; that delineating the southern perimeter of (S2) is the same (T7).

Although it is possible that the settlement has shifted slightly, a comparison of the alignment of the Medieval earthworks and Burton as depicted on the OS map suggest that the site of the Hall and the unnamed cottages at (D3) (Figure 7) overlie earlier remains. Whether Medieval buildings were present on the site of the White House is not certain due to the large amount of disturbance there.

The findings of the RCHME in 1935, and also Whellan's observations on the extent of the Hall (Whellan 1860, 772), coupled with the archaeological evidence, strongly suggest that although Burton Hall had been largely rebuilt it occupied much the same site as an earlier hall. A Medieval hall may be expected to be associated with other features such as enclosures, paddocks, orchards etc; the only likely remains of such an enclosure are those of (B6) (Figure 5), an imposing scarp, 2.5m high, which appears to demarcate the northern perimeter of a large enclosure. A slightly less pronounced L-shaped scarp (B7) (Figure 5) may well be part of the same feature.

Post-Medieval Burton (Figure 4)

The demolition of the complex at Burton has been comprehensive; for the large part the visible earthworks bear little relation to the farmsteads depicted on the OS 25-inch maps (Ordnance Survey 1861, 1915) (Figures 1 & 2), apparently being the product of large scale military earth-moving rather than gradual decay. These earthworks are therefore not described in detail. Instead the areas of disturbance which mark the approximate former locations of buildings, are shown in Figure 7: Burton Hall (D1); Burton Farm Homestead or 'The White House' (D2) and a third cottage with attached barn (D3) which is unnamed but could have formed part of the latter holding. At the time of the survey the site of the White House was marked by uneven ground but the small amorphous scarps were not surveyed since they were not considered to contribute to the archaeological understanding of the site. With the exception of fragments of two field barns on the periphery of the complex, nothing survives of any of the buildings of Burton although much of the associated system of enclosure walls can still be identified as earthworks and are described separately below. Despite the physical loss of the buildings, detailed ground photographs taken by the MOD (1949) and RCHME (1935) show that the OS map depiction (Ordnance Survey 1915) is

accurate and also allow the functions of individual buildings to be roughly identified (Figure 2, Appendix II).

The few identifiable remains are as follows. The ruinous remains of a former barn (S3) are situated at the northern end of a small yard (Figure 2; 13). In its present form it measures 3.5m wide internally and survives to a maximum height of 0.7m where its northern wall is built into the natural slope. To the south of this building, within the adjoining yard, is a stone-lined rectangular pit (S4) 3.3m wide and 1.5m wide. It is 0.8m deep maximum and is sub-divided down its length by a line of flagstones set on end. Its function is uncertain but it could have been used for sheep-dipping.

The byre to the north-east of the White House (Figure 2, 12) survives to a maximum height of 0.6m externally, where the remains of a revetment wall (S5) protect the stream bank from erosion. Its northern wall, 0.5m wide, is of red sandstone bonded with mortar and is surrounded by scattered rubble.

The remains of a field barn (S6) surviving as a partly embanked hollow, 0.5m deep internally and measuring 4.8m by 4.5m, are situated on the crest of the eastern bank of Cringle Beck close to the corner of an enclosure. The barn, and the enclosure it lies within, are not shown on any of the early OS maps (Ordnance Survey 1861, 1898, 1915) and therefore must have been already derelict by 1861, when the 1st edition map was published. A short length of the enclosure wall extends from the south-western corner of the barn.

Burton Hall farm was served by a road which entered the farm yard from the south-west and exited from the east; this has now been consolidated into a single curved track, roughly metalled (T6). A grassy track (T8) runs from the western side of Burton Hall farm and up through the enclosed field. It is later than the ridge-and-furrow and although it is evidently partly modern since the south-eastern end of the track overlies the demolition, three linear scarps in the extreme southern corner of the main enclosure (Figure 5, W2) suggest the track may have originally crossed the beck 13m to the south of the present fording point and also that a short branch from the main path gave access to the upper level of the field barn (S3).

A deeply hollowed track (T9), which is a maximum of 1.7m deep, leads from the rear of Burton Hall farm farmyard to the fields beyond. A slight linear feature (T10), 1.2m wide, partly accompanied by a low bank may possibly be the remains of a track around the periphery of the farmyard but could equally well have military origins.

The building stone used for buildings and enclosure walls was red sandstone. The source of the stone is likely to have been a quarry (NMR No. NY 71 NW 45, NGR NY 7468 1899) located 450m north-east of Burton, where Cringle Beck has exposed the bedrock. It is shown on the 1st edition map (Ordnance Survey 1863) but is not labelled on the 2nd edition (Ordnance Survey 1898).

Field Systems and Enclosures (Figure 5)

Ridge-and-furrow cultivation

There are four areas of broad ridge-and-furrow which were surveyed. The most prominent of these (F1) occupies the hillside to the north-east of the ponds and is laid out parallel to Cringle Beck, crossing the contours of the natural slope. The ridges are between 4-6m in width and are interspersed by three lynchets. The lynchets, from west to east, have heights of 1.1m, 1.4m, and 0.6m respectively. Two other blocks of ridge-and-furrow are situated further to the north-west (F2, F3) both of which are only parts of a larger group of ridges extending further westwards but which lay beyond the limit of the survey area. On the northern, upper half, of the slope (F2) the ridges are very straight and parallel measuring an average of 4m wide, while to the south (F3) the ridges, up to 0.4m in height, are more curved and uneven, varying between 4m and 6m in width. The fourth area of ridge-and-furrow (F4) is on the southern side of the fishponds. The ridges are an average of 7.5m wide and are gently curving; the northern fringe of the block is marked by the scarp of a possible headland suggesting that the ridge-and-furrow post-dates the fishpond complex. Overlain by wall (W1), the ridges continue south but were not surveyed. A hedge bank (B1) may partly overlie the furrows.

There is further ridge-and-furrow in the vicinity of Burton which is visible on air photos but was too slight to be surveyable on the ground. This is to the north-east of the site of Burton Hall, beyond the extent of the surveyed earthworks and apparently respecting hedge boundary (B5). A single broad ridge (F5), 5m wide, mutilated by a slit trench (M9)(Figure 7) is an exceptional survival in this area. To the west of the fishpond complex are very faint traces of ridging.

On the northern side of the fishpond complex is an area of narrow ridge-and-furrow (F6) which is probably an attempt to improve a poorly drained patch of land. The ridges respect the field boundaries (B2) and (B1) and the outflow channel from the pond, and therefore are contemporary with the boundaries or post-date them.

Hedge banks

There are a series of hedge banks around the site, many of which appear on the 1st edition OS map (Ordnance Survey 1861). Surrounding the fishpond complex is bank (B1); this may not be contemporary with the ponds given the relationship between the bank and the ridge-and-furrow on the southern side (already described) and also the similarity of the enclosure to the others. The northern side of (B1) is accompanied by an external ditch which together measure 3.5m wide overall. Bank (B2) extends from the fishpond to the reservoir, measuring 3.2m wide including ditch; at its north-eastern end only the ditch survives. Two further hedge banks (B3, B4) laid out perpendicular to this continue north-westwards. The former is 1m wide and still supports an outgrown beech and hawthorn hedge. On its northern side is a ditch, 2.2m wide, which is evidently a canalisation of the beck which fed the ponds but which was dry at the time of the survey. Bank (B4) is 3m wide, with its ditch.

Bank (B5) is L-shaped and forms a squared enclosure on the north-eastern side of the hall: this is not shown on the 1st edition map as extant and was evidently in disrepair by that date. The bank is noticeably more flat-topped than the others, is also accompanied by a ditch and measures 5m overall along its north-eastern side. The south-eastern side displays much more

stone in its construction. Its layout appears to formalise an earlier division associated with the Medieval settlement (**B6, B7**) and mentioned earlier. At the north-eastern corner of (**B5**) are the remains of a smaller enclosure, probably a stock pen, which cuts both other adjacent features.

On the 1st edition map (Ordnance Survey 1861) a hedge was depicted at (**B8**), its course being partly overlain by a later enclosure wall (**W2**). Although no clear evidence could be seen of its remains it presumably followed the crest of the prominent scarp to be found there.

Banks (**B9**) and (**B10**) have already been described as of probable Medieval origin, but their course appears to have been preserved through their continued use as boundaries as their presence on OS maps demonstrates.

Enclosure walls (Figure 5)

The stone enclosure walls appear to belong to the last phase of enclosure, being used for the smaller yards and paddocks around the farm buildings, and providing two enclosures which are most obviously imposed on the earlier ridge-and furrow. To the south of the fishpond complex is wall (**W1**) which appears to replace the hedge boundary (**B1**) and overlies the ridge-and-furrow. It is shown on the 1st edition map (OS 1861). Towards the south-eastern end of the wall, where it kinks toward the White House, are the remains of a pen, probably a later insertion, surviving as a stone and earth bank.

The sub-rectangular enclosure (**W2**) was built at some time between the dates of the 1st and 2nd edition OS maps (Ordnance Survey 1861, 1898).

On the south-eastern side of the hall are the remains of a small paddock or garden (**W3**) which was added after the date of the 2nd edition map of 1898 but before the date of 3rd edition of 1915. All the other surviving walls are depicted on all of the County Series maps.

Water Management (Figure 6)

The fishpond complex

A rectangular, ditched earthwork enclosure containing three rectangular depressions probably represents the remains of a fishpond complex. This is situated 140m north-west of the site of Burton Hall and comprises the earthworks of three rectangular fishponds of similar dimensions contained within a rectangular moated enclosure measuring 104m by 66m; none of these features now contain standing water but are marshy and contain reeds. The complex is laid out in a pleasingly symmetrical manner and the earthworks are remarkably well-defined.

The ditch or moat surrounding the ponds is flat-bottomed and varies in width from 12.5m wide on the north-western side to 7.9m on the south-eastern side, and varies in depth from a maximum of 2.0m on the north-western side to 1.6m deep on the southern side. The ditch has been partly cut into the sides of the valley with the resultant material having probably been used to create the dams across the valley and part of the central platform. This platform measures 68.5m by 46.5m and around its perimeter is a bank, between 1.5m and 3.1m wide from the outer crest. It varies in height but is at its most pronounced along the south-eastern perimeter where it measures 0.8m above platform.

The dam which forms the south-eastern side of the moat is of two-tier construction; it has a broad foundation upon which rests a narrower bank. The basal part of the structure is 1.1m high externally, about 10m wide overall and appears to have had some stone in its construction. The inner bank is up to 5.7m wide and is a further 0.8m high externally above the foundations. A medial break, 1m wide, marks the site of a sluice where water would have exited from the complex into a small outflow channel.

The western end of the complex is defined by a substantial retaining bank measuring 9.5m wide. Broad and flat-topped, it resembles the foundations of the dam although its outer face is revetted by stone. A linear depression across the top of the retaining wall, adjacent to the canalised stream, probably marks the site of a pipe or culvert which supplied the complex with water from the stream to the west. The stream is very small and carried no water at the time of survey.

On the enclosed island, ponds (W1) and (W2) are of almost identical size, measuring 40m by 14.7m and 39m by 14.3m respectively, both being 1m deep. Pond (W3), to the north-west, is 36.8m by 15.9m but is much more silted than the others, in places being defined by a vegetation mark only. Between ponds (W2) and (W3) is a much smaller trough (W4) measuring 13m by 4.2m, and 0.6m deep. A channel, 1.7m wide and 0.4m deep, links the two larger ponds, crossing the smaller pond and cutting into its base. This was noted by the RCHME investigator in 1935 (National Monuments Record 1935b) and appears on his sketch plan. Its most likely function is as a rearing pond for small fish. Ponds (W1) and (W2) have openings to the south-eastern arm of the moat which would probably have held sluice gates. No such arrangement existed for the third pond, the only apparent means of surface water supply coming from the channel described above; however, the overall fall of the ground being eastwards, the water probably flowed through the channel in the other direction which has implications for the manner in which (W3) was filled. On none of the 25-inch maps are either of the sluice openings shown (Ordnance Survey 1861, 1898, 1915) although this depiction might not be significant, such detail possibly being omitted for simplicity. They

were described by the RCHME investigator as a later insertion, for the purpose of draining the ponds after they had gone out of use, but their symmetrical layout and the lack of any spoil suggests that they are original features. It would have been essential for the ponds, in their original form, to have had a steady flow of water otherwise the water would have quickly stagnated so it is reasonable to assume that the pond (W3) was probably fed by an underground pipe, which in turn may have fed into pond (W1); a diminution of the inner scarp of pond (W3) at its south-western end may indicate soil subsidence over such pipes. The surface overflow from pond (W3) may have created a through flow to pond (W2).

The pond

At the northern end of the site is a pond (W5) which has been created by damming a narrow, curving valley. The pond is 140m in length but only the south-eastern end has been included in the survey. It is fed naturally by a small stream entering the valley but also has received water from a channel entering the pond at the eastern end of the dam which appears to have collected water from the hillside. The channel, 6.2m wide, is partly cut into the slope and has a maximum internal depth of 1m. It appears to be later than the dam, with upcast earth from the channel overlying the dam.

The dam is composed of earth, revetted by stone on both inner and outer faces. Externally the dam is a maximum of 2.2m high and is 11.5m wide. In the centre is the sluice which releases the water; no structural features remain and a plastic pipe has been inserted recently to aid drainage. The overflow from the pond drains into a channel (W6) which has become very silted and indistinct at its head but which is well defined as it crosses the enclosure field and then flows across the front of the fishpond complex to join the outflow channel there; this is likely to be following an established natural course.

The date of the construction of the dam is uncertain; it is not depicted as such on the 1st edition 25-inch (Ordnance Survey 1861) but the pattern of field boundaries, which closely mirror the shape of the head of the dam strongly suggest that it was already in existence. It is not depicted by the OS until 1980 (Ordnance Survey 1980) where it is marked as 'reservoir, disused', but is clearly visible on air photographs in 1948 (RAF 1948).

The pond does not feed the fishpond complex, nor has it apparently formed a source of power and was therefore probably either to provide another source of fish or to attract wildfowl; it is not inconceivable that the pond has quite early origins as a fishpond (see discussion).

Earthworks Relating to Military Activities (Figure 7)

A number of small features were noted across the site which can be attributed to the activities of MOD personnel and which in most cases appear to be of recent origin. The features include target bases, slit trenches, shelters, de-turfed ground and tracks made by tanks or similar vehicles. The poor condition of the enclosure walls can also be attributed to military operations. Details of these features are listed in Appendix III.

Miscellaneous Features (Figure 7)

There are a small number of features whose function or date cannot readily be discerned.

Cut into the natural slope, one on either side of the hollow way (T7, Figure 4), are two circular hollows (O1, O2) the first measuring 6m in diameter, the other 6.4m by 4.5m. They bear superficial resemblance to corn-drying kilns but given the amount of later disturbance in the vicinity such an identification must remain tentative. A small trench adjacent to (O2) is probably of recent origin.

Features related to military activity are listed in Appendix III.

DISCUSSION

The RCHME survey of Burton revealed earthwork evidence for probable Medieval settlement at Burton, where the main street through the village was a natural stream gully. Similar plans of Medieval villages, where a stream forms a street, are known elsewhere e.g. Stainton le Vale, Lincs. (RCHME 1991, 177) There is good documentary evidence for the existence of a Medieval hall or house on the same site, or in close proximity to, the site of 18th-century Burton Hall (RCHME 1935). Although no direct archaeological evidence was found to substantiate this, the large enclosure to the north-east of the site of Burton Hall is markedly different from the other settlement remains and is the type of feature that could be expected to be found in association with a Medieval hall. The contrast between the scale of the settlement remains and the fishpond complex is marked; with the exception of the above enclosure the hall lacks features such as closes, paddocks, orchards etc which might be expected to accompany any house which merited such ponds. The question of the contemporaneity of these two elements of the site, the village and the hall, is discussed later.

While the economic basis of the settlement is illustrated by the agricultural remains of ridge-and-furrow, the exact nature of Burton has been a subject of debate in the past, in particular whether the site had lay manorial or monastic origins. Traditionally Burton has been identified as the site of either a friary or a grange but the archaeological remains found during the survey were not diagnostic of a friary. Although it is argued here that Burton is most likely to be a lay manorial site, the theory of a grange does have some credence and needs to be addressed. An understanding of the significance of the fishponds helps to elucidate this question. Fishponds were built throughout the medieval period by the landed upper classes including nobility, gentry, bishops and monasteries. The fishponds at Burton are remarkable for their size; this fact alone may indicate that they were part of a monastic grange which would have necessarily have had a preoccupation with producing large quantities of fish. However, the ponds are also laid out in such a symmetrical and well-planned manner that a partly ornamental function seems also to have applied; this indicates a likelihood of ponds having lay origins (although the fishponds at the Bishop's Palace, Lyddington, Leicestershire, have a remarkably similar design to those at Burton Hall (Hartley 1983, 26)). More compelling is the fact that, despite persistent folk traditions, there is no known hard documentary evidence to support the idea that it was a grange; rather the link with the Helton/Hilton family and the Hilton coat of arms found on the site make it more likely that this was a lay manorial site. In some respects the attempt to distinguish between secular and ecclesiastical ownership is a fruitless exercise since it is widely acknowledged that such settlements often operated in an identical manner to one another. It is of more interest to try and identify the sequence of development at Burton.

The probable Medieval village settlement has a highly regular layout with its apparently planned system of tofts and streets which is suggestive of an ordered tenurial structure, with a manorial oversight. Despite the fact that the large amount of disturbance in the area has removed any definite stratigraphic evidence, the overall plan-form shows that the postulated site of the Medieval manor house (D1) (Figure 7) is very close to the other village earthworks which may suggest that they have been imposed upon them, thus raising the interesting possibility that the village is earlier than the manor house. A theory first put forward by the OS Field Investigator (NY 71 NW 1, authority 6) is that the the fishponds were the site of an earlier manor house, which would have been moated, but that the manor house moved to the later site, which was in turn succeeded by the 18th-century Burton Hall. The phenomenon of the 'moving manor house' is well-documented at sites across the country and

occurred particularly during the 15th century. There are several points in favour of this argument, the first relating the overall layout of the village settlement and the fishponds; a reconsideration of the origins of the fishponds would place the manor house at the end of a village street, forming part of a planned whole. Furthermore, if the manor did move to occupy part of the village, or into close proximity, this may imply that at least part of the settlement had been abandoned by that time; this may be reflected in the possible trackway (T1) identified cutting across the recognised pattern of crofts. If the fishponds are a conversion rather than an original design this may explain their size and unusual design. This may also have implications for the other pond on the northern periphery of the site; if the fishponds are the site of a manor house, their precursor may have been the pond.

The remarkable crispness of the earthworks has been commented on in the description; it is such that it inevitably prompts speculation that the ponds are late in date, ornamental features in the landscape. However, the stratigraphic relationship between the fishponds and the broad ridge-and-furrow, while not conclusive, does not weigh in favour of the pond being a later insertion to a Medieval landscape.

METHODOLOGY

The survey, at 1:1000 scale, (RCHME Level 3) was executed using a Wild TC 1610 total station to establish a temporary control network and record hard detail. The data was processed by computer and plotted onto a plastic sheet, onto which the subsequent survey detail was recorded, primarily using a plane table and Wild RK-1 self-reducing alidade, although graphical methods were also used. Two profiles of the fishponds were also recorded using the total station.

The full survey archive is deposited in the National Monuments Record Centre, Kemble Drive, Swindon, SN2 2GZ.

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APPENDICES

APPENDIX I: List of Figures

- Figure 1 1st Edition 25-inch Ordnance Survey map, Westmorland Sheets XVI.1 & 5
- Figure 2 Buildings at Burton, numbers correlate with those in Appendix II (from 25-inch OS map, edition of 1915)
- Figure 3 RCHME Survey of Burton 1997
- Figure 4 Settlement and Trackways
- Figure 5 Enclosures and Fields
- Figure 6 Water Management Features
- Figure 7 Military Earthworks and Miscellaneous Features

APPENDIX II: Farm buildings at Burton Hall

Numbers apply to annotated OS 25-inch map (Figure 2)

1. Burton Hall - farmhouse
2. Stable; hay loft above
3. Cart sheds
4. Loose box
5. Stable/cattle shed; granary/hay loft above
6. Barn
7. Loose boxes
8. Cottage
9. Barn
10. Farmhouse
11. Bank barn
12. Cattle shed with extended loose box
13. Field barn
14. Field barn
15. Duck pond

APPENDIX III: Earthworks relating to military activities (see Figure 7)

Targets

M1 - M10. The targets consist of a concrete base, typically 0.9m by 1.8m, which hold or have held a wooden target figure. Some of the targets bases are set deeper into the ground than others and some are surrounded by a bank of upcast soil.

Trenches

M11 - M16. Slit trenches, up to 3.5m long and 1.5m wide.

M17. Trench, measuring 1.3m wide, with a bank of upcast soil.

M18. Trench, measuring 10.4m long and 0.7m wide, with a bank of upcast along its eastern side.

M19. Trench, measuring 10.0m long and 1.5m wide, with a turf bank to its front.

Miscellaneous features

M20 - M22. Three areas recently stripped of turf which has been used to construct M23-4.

M23 - M24. Turf banks which also utilise the remains of the field wall as foundations.

M25 - M29. A series of low drystone banks or walls constructed from and usually abutting the remains of stone field walls.

M30. Situated on the crest of the hill are a series of parallel, flat-bottomed, grooves in the ground, the largest of which is 1.0m deep. None are accompanied by any upcast material. These features continue beyond the edge of the survey area and similar features were noted across the ranges since they are particularly evident on air photographs. The most likely explanation for them is that they have been created by heavy armoured vehicles.

M31. A track leading from the ponds to an army bunker (the latter not surveyed)

M32. Drain or ditch, 0.5m wide, accompanied by a bank of upcast soil.

M33. A series of small turf-covered rectangular depressions, not more than 0.2m deep, along the crest of a scarp. Their origins are uncertain but they may represent an old hedge or fence line which has been removed.

M34. Ditch, 1.3m wide.

M35. Wooden fences.

APPENDIX IV: Table of NMR numbers linked to the site

SITE NAME	COUNTY	DISTRICT	PARISH
Burton Hall	Cumbria	Eden	Warcop

NMR No.	NGR	Site name/description
NY 71 NW 1	NY 745 185	Burton Hall & fishponds
NY 71 NW 51	NY 7439 1871	Pond
NY 71 NW 45	NY 7468 1899	Quarry

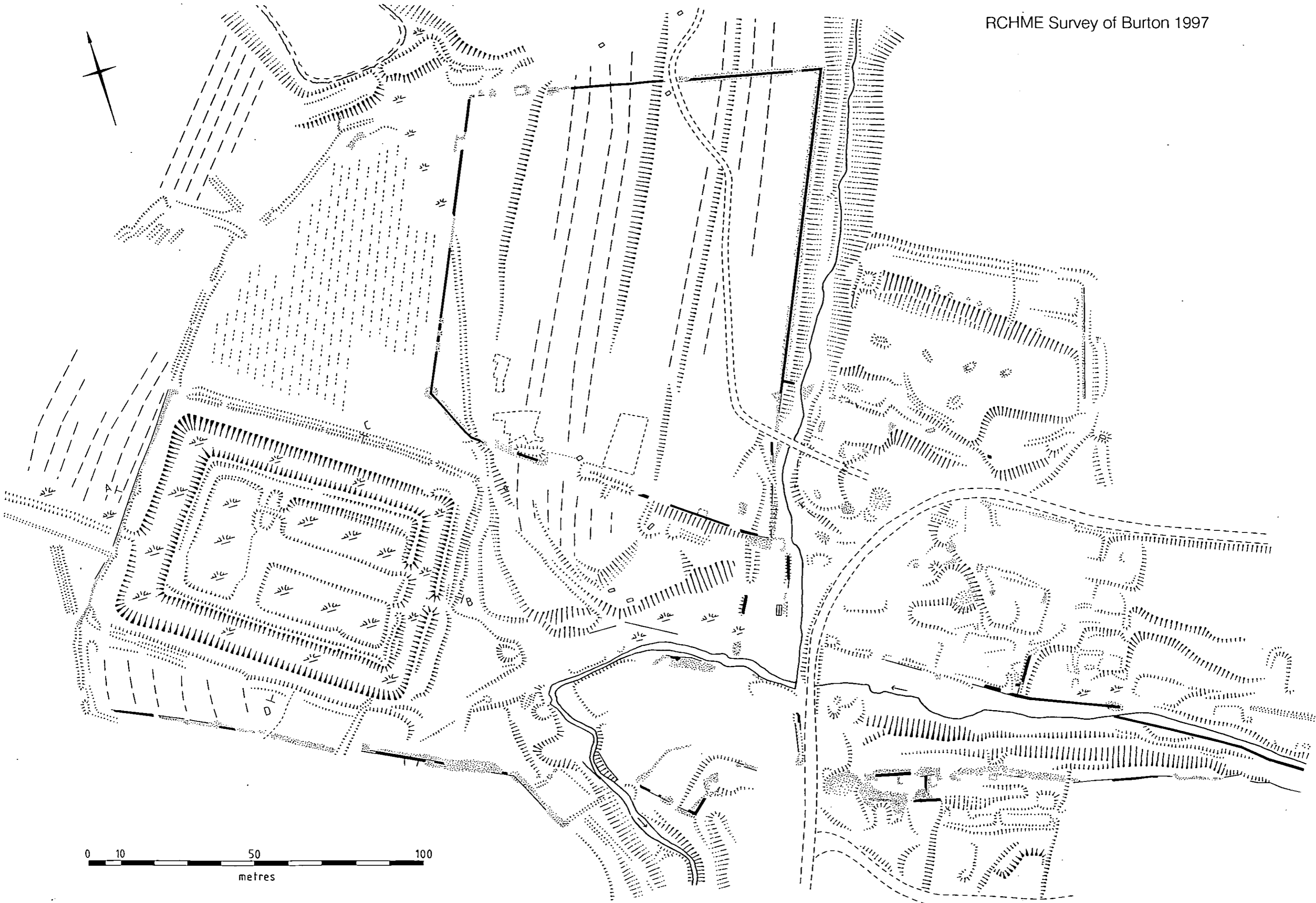


Figure 3

Settlement and Trackways

- Settlement
- Tracks

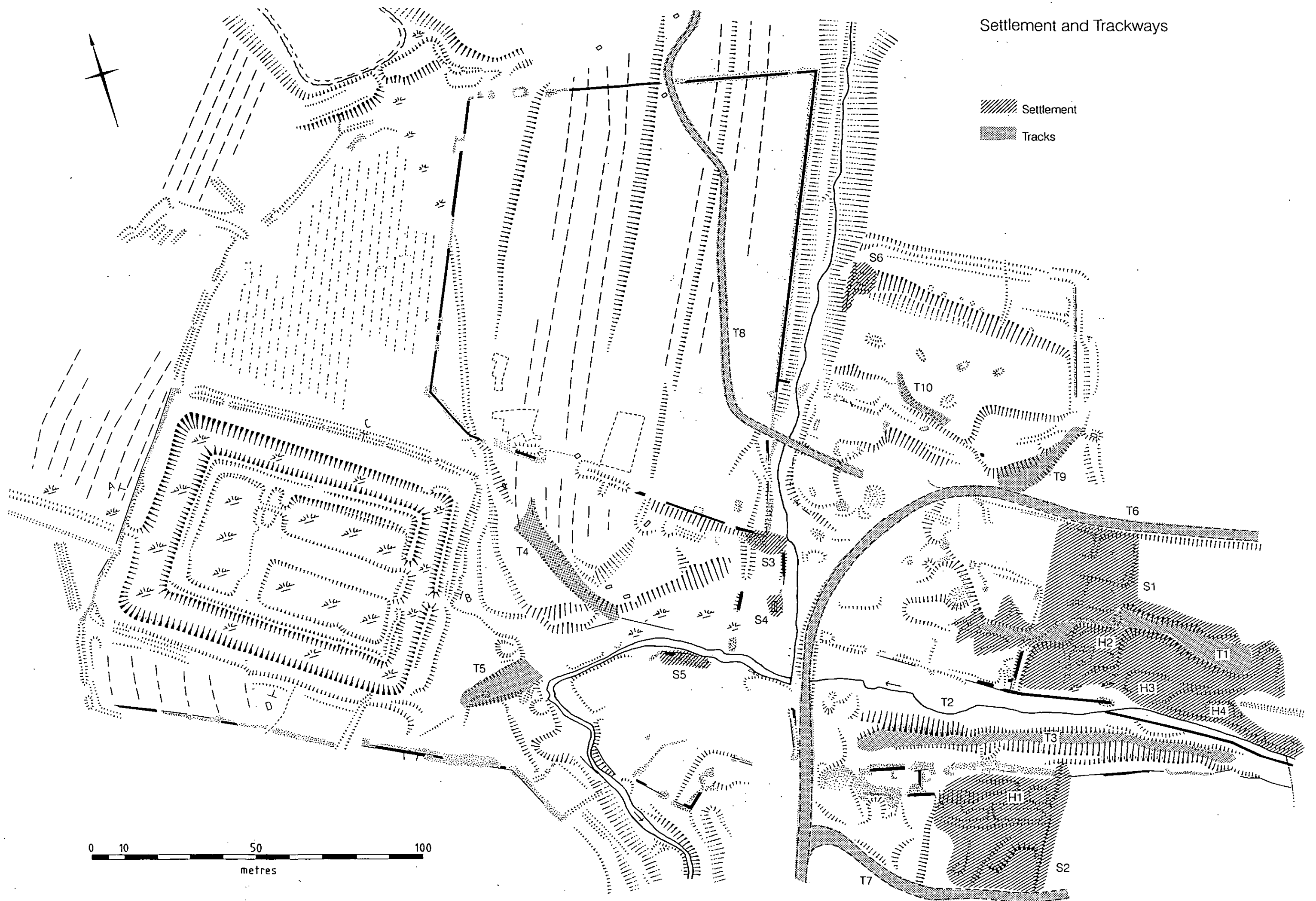


Figure 4

Enclosures and Fields

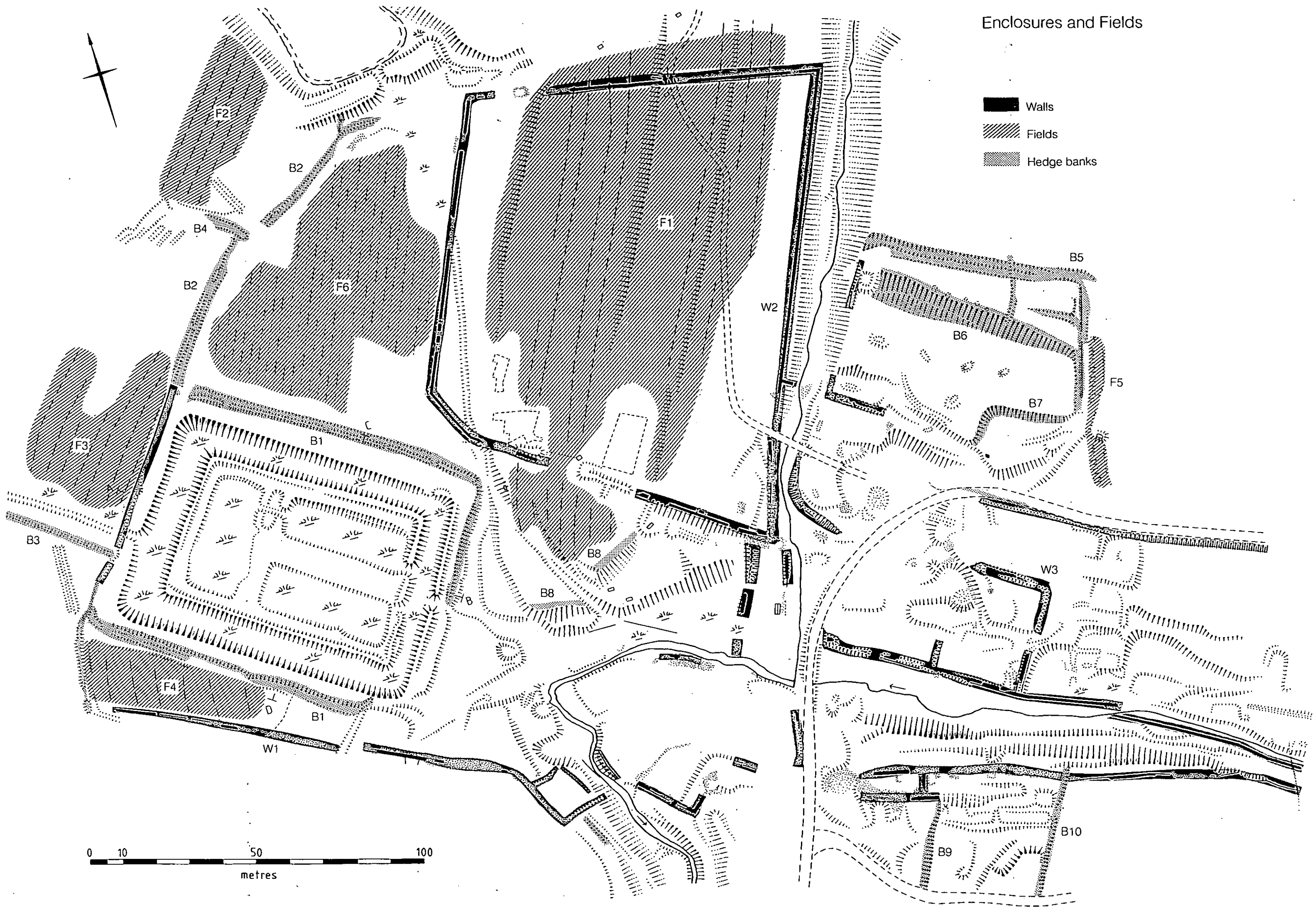


Figure 5

Water Management Features

Water management features

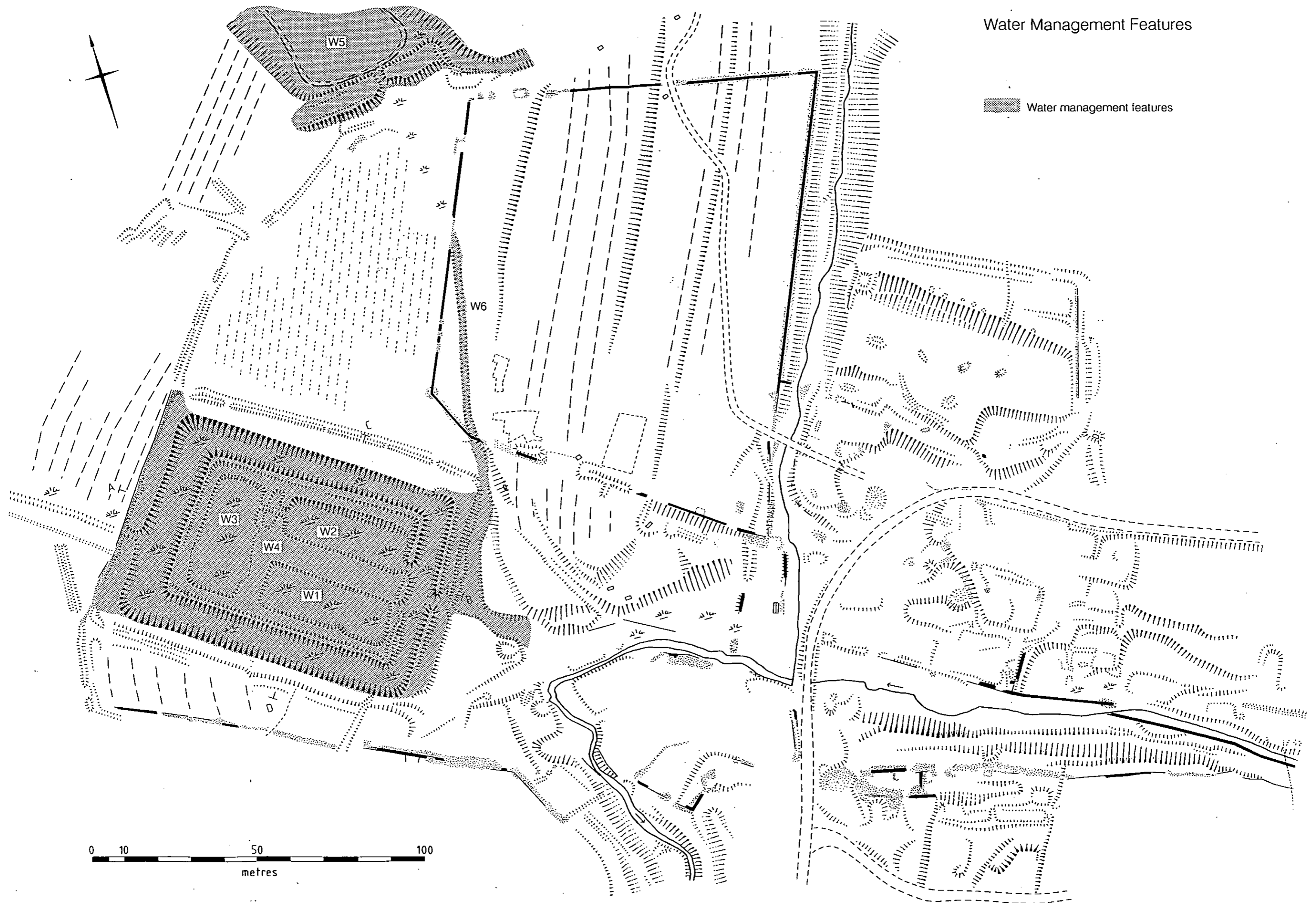


Figure 6

Military Earthworks and Miscellaneous Features

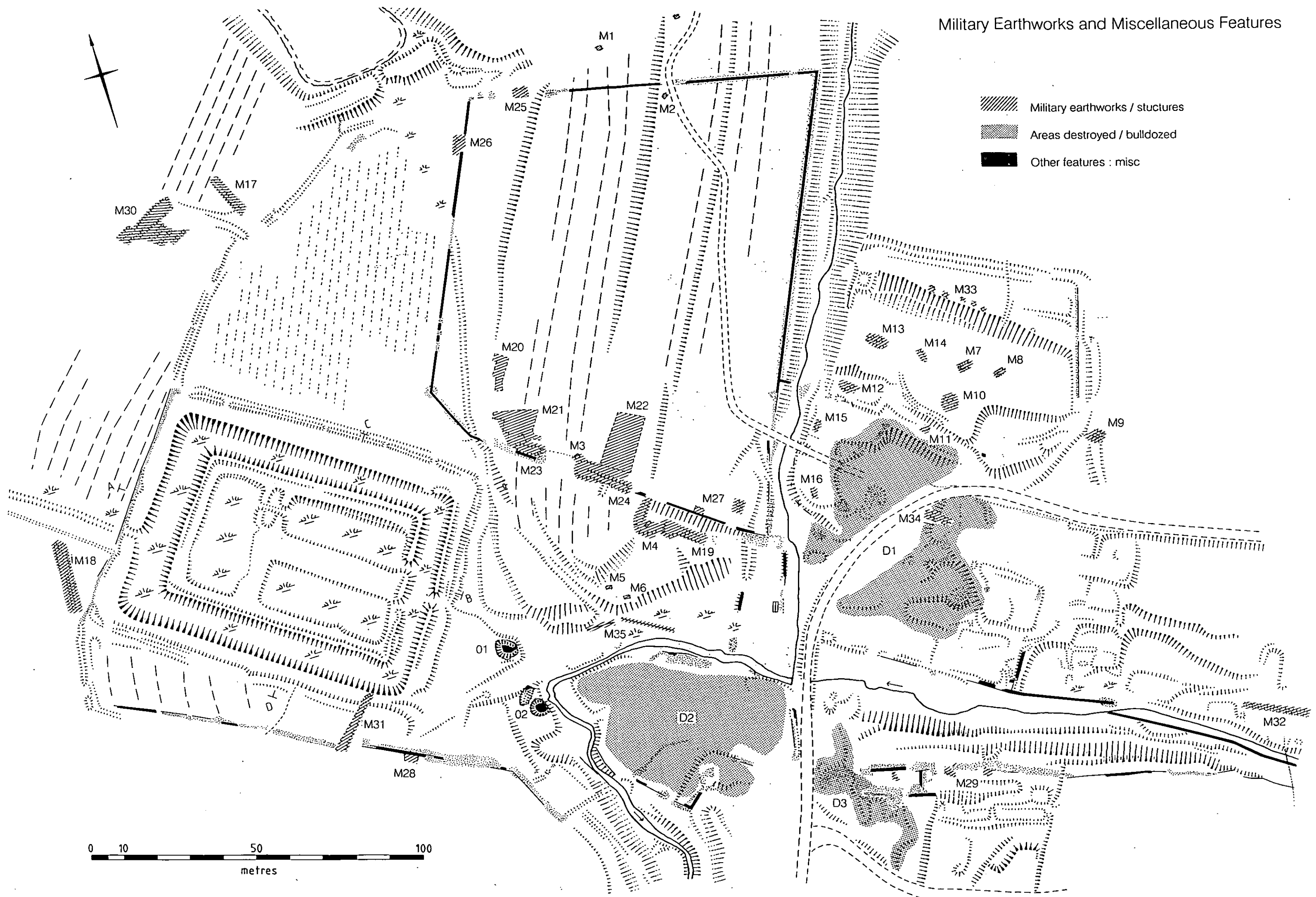


Figure 7