

ART. V – *The Cutting of the Turf Wall at Appletree*

By A.M. WHITWORTH

THE Turf Wall at Appletree (NY 597655) was first recognised in 1895 by F.J. Haverfield while directing excavation work under the auspices of the Cumberland and Westmorland Antiquarian and Archaeological Society (Haverfield 1896, 185). The site (Fig. 1) is situated in Wall Mile 50, approximately $1\frac{1}{4}$ miles (2 km) west of Birdoswald Fort, in the only surviving visible length of Turf Wall. The excavation trench was located immediately east of the track leading to Lanerton Farm. In his report to the excavation committee Professor Haverfield noted: "On the south side of the ditch a very remarkable discovery was made. For nearly 30 ft from its southern tip, the subsoil was found to be overlaid by alternate black and white lines. Parallel trenches revealed similar features more clearly; at 200 yards east and at the same distance west we found seven or eight rows of black lines distinctly marked in grey loam or clay, the whole being 12 ft in length and perhaps $2\frac{1}{2}$ ft in height, though a single black line (as in the first trench) extended further on each side. The lines appear to represent a turf wall, built of regularly laid sods. The lines themselves consist of carbonaceous matter, which can hardly be anything else than decayed vegetation. The interspaces of white clay consist of the natural subsoil decomposed and discoloured by the overlying vegetable matter. The whole strongly resembles the remains which the Glasgow Archaeological Society found in the interior of the Antonine Vallum and took to represent the decayed vegetation of sods laid regularly one on the other to make a turf wall". Haverfield and other archaeologists had visited the Antonine Wall excavations which were carried out in 1892/3. His report continued "The sods appeared to have been laid face downwards (as Roman writers prescribe), to have been cut with 'feather edges' and to have been laid as to break the joints, in each case, of the layer below". Two coloured sketches by Mrs Elizabeth Hodgson of sections through the Turf Wall at Appletree were included in Haverfield's article (CW1, xiv). These sketches are however rather different from the original large-scale drawings which she and her husband eventually presented to the Society of Antiquaries of London and which are therefore reproduced here in Plate 1. During the Third Pilgrimage of the Roman Wall in 1896, which visited the site at Appletree, Sir William Crossman of the Society of Antiquities of Newcastle upon Tyne, expressed the wish that as many accurate sections through the wall and vallum had been made in Northumberland as by T.H. Hodgson in Cumberland "and so correctly laid down and delineated by Mrs Hodgson" (Birley 1961, 30).

Ever since 1906 the Turf Wall at Appletree has been opened up at the time of the Pilgrimage to allow the participants the opportunity to examine the core and its method of construction. During this period it appears that no detailed scale drawing or photographic record of the remains of the Turf Wall has been published by those bodies connected with its exposure although it should be noted that F.G. Simpson published a photograph of the Turf Wall at High House, slightly to the east of Appletree, where he

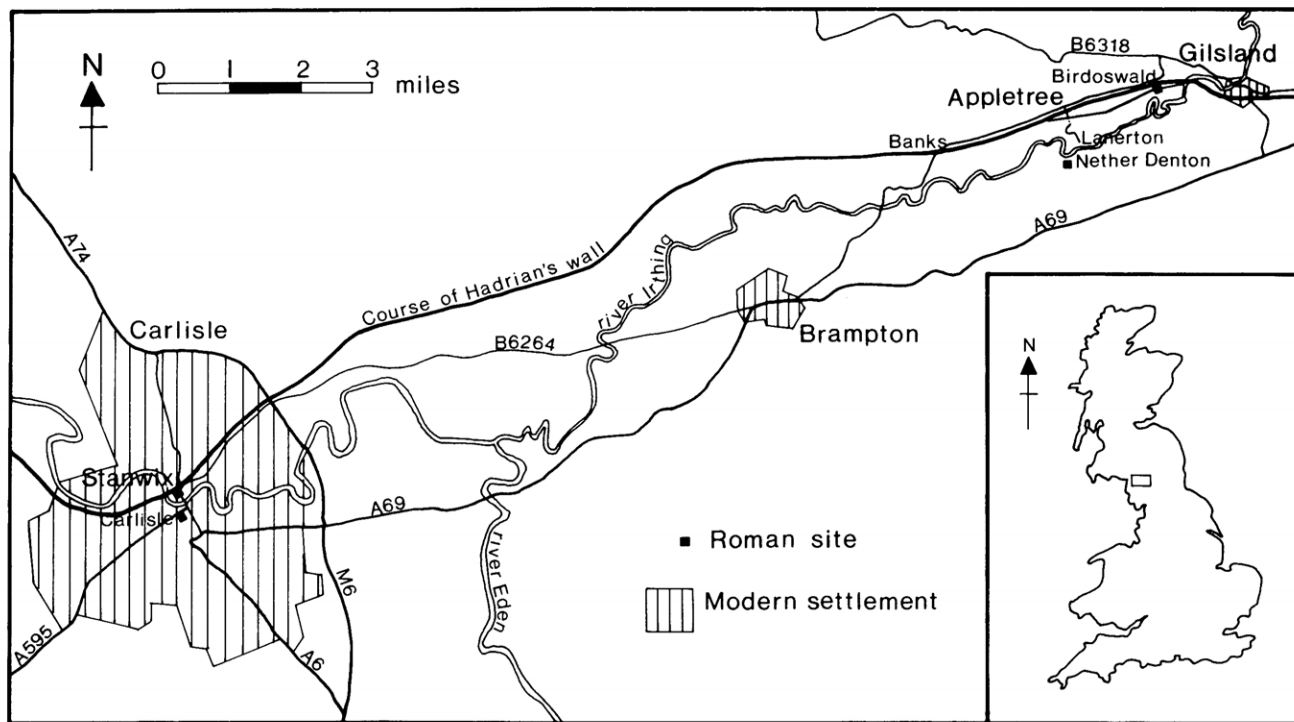


FIG. 1 Location Map

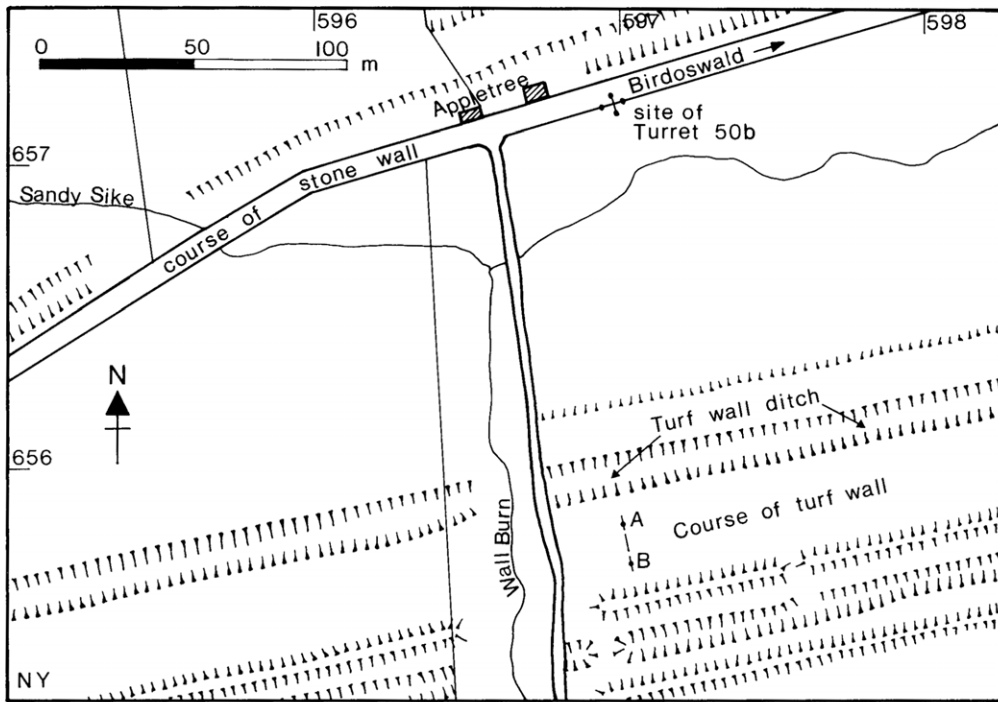


FIG. 2 Appletree: Location of Turf Wall Cutting, Section A-B.

had been undertaking archaeological excavations (Simpson 1928, 378; reprinted in Simpson and Richmond 1935, pl. II).

During this century the section of Turf Wall at Appletree has been cut for the benefit of the Pilgrimage on eight occasions—1906, 1920, 1930, 1949, 1959, 1969, 1979 and 1989. There was also a gas pipe trench cutting made in 1975 at NY 600656, slightly east of Appletree, and recorded by C. Daniels (Goodburn 1976, 309). The Eleventh Pilgrimage of Hadrian's Wall took place between 26 August and 1 September 1989 with the participants visiting Appletree on 28 August to view the specially exposed section. This was cut on the 24 and 25 August by staff from the Birdoswald excavations which were then in progress, under the direction of Mr D. Sherlock, English Heritage's Inspector of Ancient Monuments for Hadrian's Wall. There were no records available from the previous cutting of the Turf in 1979 to show where exactly that trench had been. A new trench was laid out 1.70 m wide as near as possible to the scarp above the modern track at Appletree so as to minimise the exposure and potential destruction of virgin turf wall. Near the middle of the trench, at a depth of approximately 300 mm, polythene was discovered from the last backfill, so the excavation was able to proceed by following the extent of the polythene. The cutting thus exposed was approximately half a metre east of the estimated line and revealed a somewhat eroded west-facing north-south section of the turf wall. The western section of the trench was virtually non-existent because of the slope of the ground down to the

modern track and presumably also because of previous "exposures" for previous pilgrimages. In order to present a clean, intelligible section across the surviving Roman turves the eroded 1979 section was cleaned back, which entailed the destruction in places of up to 200 mm of undisturbed archaeology. The trench was then fenced off to keep cattle out until the day of the pilgrimage when the section was given a minimal manicure just before the pilgrims arrived from their coaches which dropped them off by the main road.

As there are no drawn sections published from previous cuttings of the trench the opportunity was taken immediately after the Pilgrimage to produce a detailed drawing of the turf face together with a series of colour photographs (Plate 2 and Fig. 3). Due to the effect of compression on the turves the section drawing has been compiled by combining the initial field drawing with the photography to help show the turves in more detail. Following the visit of the pilgrims the section was recorded and photographed under the supervision of the author. At the same opportunity Turf Wall core samples were taken by staff of the Ancient Monuments Laboratory for soil and pollen analysis (see below). Soil samples from Appletree had first been taken in 1934 by the Cumberland Excavation Committee and analysed by Dr A. Raistrick of the then Armstrong College, Newcastle (Simpson *et al.* 1935, 245). This analysis showed that grass spores and humic matter was very abundant. A soil sample, taken in 1979 when the wall was cut for the Tenth Pilgrimage, showed that "the turves and buried soil contained abundant charcoal indicating considerable human activity in the area prior to the building of the bank" (Keeley 1980, 1).

The 9.40 m-long trench which was cut in 1989 showed that the maximum surviving height of the turves was 45–50 cms. Although well preserved internally some sections of the upper layers had been eroded by cattle which use the field for pasture. There were five main elements of the Turf Wall surviving in the section (Fig. 3):

- A heavily leached subsoil.
- The original ground surface.
- Overlapping turf blocks forming the wall core.
- A clay revetment.
- Present ground surface.

Over the subsoil (Fig. 3, 8), which consists of a firm coarse sandy clay, a thin black line extends across the full width of the trench. This line together with its underlying root system (6) represents the original ground surface prior to the Turf Wall construction. Above this is a series of turf blocks (I, II) laid horizontally, as well as soil mix. The first layers of cut turf blocks appear to have been placed directly down – grass to grass – on the ground surface. Evidence from the recent excavations across the Turf Wall at Birdoswald Fort, directed by Mr T. Wilmott, (Wilmott forthcoming) shows that the original ground surface was still in place when the mound was constructed. The lower turves were placed with the grass facing downwards and the second turves then placed with the grass uppermost. This was demonstrated by the delamination of the upper vegetation layer, where the turves parted such that the herbage adhered to both of the surfaces on which it had formerly grown (Wilmott pers. comm.). This certainly confirms the observations of Haverfield and Hodgson at Appletree nearly a century ago.

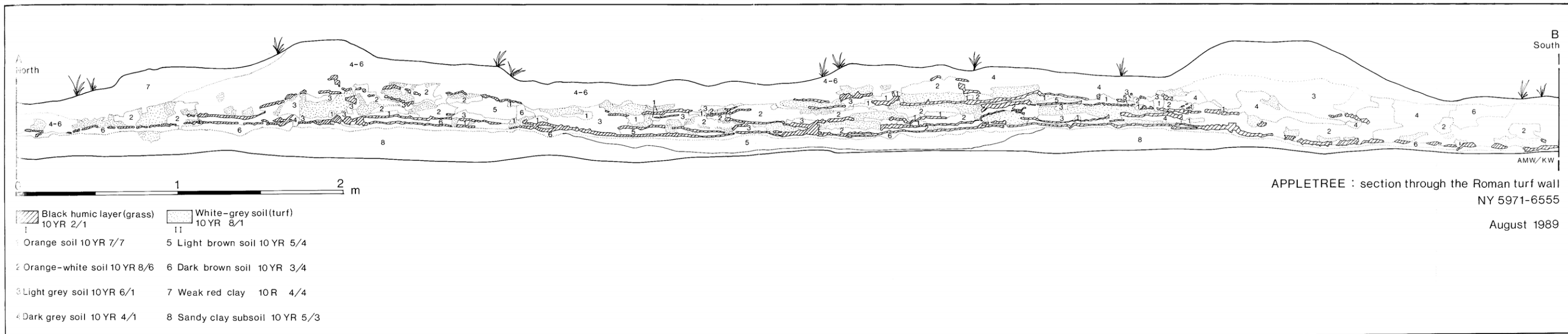


FIG. 3 Section A-B through Turf Wall looking East, 1989.

The pollen analysis for the site notes that “The pollen spectra of the original buried land surface showed that before human activity became intense, the site was dominated by damp alder, birch and possibly hazel carr and a tall herb community. Oak woodland with an understory of ferns and bilberry was probably growing slightly further away, but there is no evidence that pine was growing locally. In spite of the local domination by woodland taxa, areas of disturbed soils and heather-dominated, moorland/bog (probably grazed) were in the vicinity. By the time the first turf of the Wall was laid, the ground surface had been cleared of trees, possibly with the use of fire, and the area was grazed moorland, wet enough to support *Sphagnum* moss. Because of lack of resolution in the pollen data, it is not possible to determine whether the woodland clearance was a rapid event or whether it occurred gradually. The excellent pollen preservation in the old ground surface indicates that the site was not subjected to prolonged occupation before the construction of the Turf Wall. The first turf of the Wall appears to have been inverted onto the ground surface. The pollen spectra indicate that it had been obtained from disturbed woodland”. (Wiltshire forthcoming).

The soil report comments: “The stratification of the lower turf line observed in the field, was clearly visible in thin section. The turf includes two individual units (*in situ* and inverted) each comprising three distinct layers of fragmented black to dark brown carbonised and humified debris, separated by areas of fine yellow organic soil. In some areas the turf comprises approximately 10 cm of what appeared to be an intact inverted turf, while in other areas 2 to 3 cm of mineral turf soil were overlain by a charcoal-rich organic turf line and this in turn by mineral soil and a fine organic or charcoal layer. The Wall had been constructed using inverted turves of a local origin, perhaps from the surface of the ditch. Subsoil had probably been used as an amendment where juxtaposed turves were of different thicknesses.” (McHugh forthcoming).

In 1966 and 1970 experimental work was carried out at the Lunt Fort, Baginton, on various methods of turf rampart construction (Jones 1975, 33). These showed that when turf blocks were laid grass downwards – earth upwards and levelled off to fill in any gaps a much more satisfactory cohesion was achieved. Vegetius, the Roman writer, recommended that: “Turf is cut with iron-shod [tools] and contains soil with grass and roots. A turf should be half a foot thick, a foot wide and a foot and a half long” (*Epitoma Rei Militaris* III, 8, 5). The Baginton experiments showed that blocks this size weighed about 32–34 kgs. A tool which may have been a turf cutter is represented on Trajan’s Column (Scene XXXIX) where it is shown trimming the rampart ends. It is also likely that this was used for cutting turf, as its modern counterpart, with the aid of a spade to cut underneath.

At the north end of the trench is a sloping line of red clay (7), presumably from the ditch upcast, which apparently stabilised the front of the Turf Wall and prevented the turves from slipping forward. The clay may have been “puddled” or beaten before use. Such treatment would certainly increase its power of cohesion. The south end of the trench was composed of disturbed soil overlying the first turves. This disturbed soil/turf mix possibly represents deliberate demolition of the Turf Wall and relates to the construction of the Stone Wall.

Before the section was backfilled by English Heritage to the previous profile of the

ground its face was protected by 3 mm-thick galvanised steel sheeting secured in position by galvanised steel pins driven downwards at metre intervals. Low concrete marker posts imprinted with HBMC (as used to mark the line of the buried sandstone wall above Dovecote Bridge, Walton) were set in the ground at each end of the section to facilitate the future location of the section and to minimise further destruction of the Turf Wall should this exercise be considered worth repeating on the occasion of the next Hadrian's Wall Pilgrimage in 1999. It is hoped that the information in this article with its accompanying illustrations will help the organisers of future pilgrimages decide whether or not to ask for further cuttings to be made. The drawings and photographs are lodged with the Cumberland and Westmorland Antiquarian and Archaeological Society at Tullie House Museum, Carlisle.

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