Kennel Farm Field Investigation An interim report
Little Missenden

Introduction

The summer of 2018 turned out to be very dry and various cropmarks appeared in the Chess and Misbourne valleys. Because of the large number of suggested features the Society flew a drone over both valleys to document the events encountered.
One particular area was a field belonging to Kennel Farm immediately east of Little Missenden and bounded on its southern margin by the River Misbourne (Grid SU92979 98732). The field contains various independent cropmarks. To the west were two rectangular structures which were outlined by wide, green swathes. One of these rectangles is cut by a re-routing of the river. In addition a long linear feature extended from a nearby pond to the western edge of the field while two linear, dry patches lay at right angles to each other to the east (fig. 1). Further investigation, using LIDAR, also indicated that an additional field to the east again contained a number of complex related features (fig. 2).
The origin of these features is a subject of speculation. Settlement at Little Missenden has a long history dating from at least the Roman period. No structures have been found but Roman building material is reported in the fabric of St John the Baptist Church. The Misbourne did contain a number of watermills with the nearest to Kennel Farm at Mill House some 380m to the west. This was known to be in operation from the 14th century until at least the end of the 19th. It should be noted that the river running from this mill site through Kennel Farm was at some time straightened or canalized over a distance 0f 800m. Old maps show that this was between 1825 and 1880. Finally there are a series of commercial watercress beds, the last ceasing production about 1962. Two lie to the west of the village. The third is immediately to the east of the field of interest. There is no documentary record of these watercress beds except on the early OS maps.

Geophysical surveys.

Our geophysical field investigations commenced in early May 2019 starting with resistivity based on a 1m grid sampling. All three cropmark zones were shown as anomalies on the survey. In the east the right-angled linear zone stretched c.90m in length, while to the west the two rectangular structures were also obvious, with dimensions of c.22m and 28m respectively. A complex relationship in the subsurface associated with movement of earlier river courses and gravel beds was also recognised. One modern underground water pipe

was identified, east-west, across part of the surveyed area (fig. 3). For the sake of completeness the survey was continued south of the river but no anomalies of interest were found.

Later in May, our colleague Kris Lockyear and his Community Archaeology Geophysics Group (CAGG) team, together with CVAHS members, completed a further series of geophysical surveys over much of the region (fig. 4). This included an unmanned aerial vehicle (drone) which produced a detailed 3D picture of the surface similar to a LIDAR view. A gradiometer survey covered a similar area to the resistivity. The only cropmark to have any magnetic response was the long linear near the pond. This anomaly meanders and extends eastward to the edge of the survey (fig. 5). Neither of the other two cropmark zones have any magnetic response. The strong magnetic response zone south of the river is believed to be a buried pipeline. Its existence was unknown to the farmer.

The final geophysical approach involved the ground penetrating radar (GPR). This covered two discrete areas, the eastern zone and western rectangular features. Both cropmark zones gave a GPR response while the eastern anomaly also encountered a dark strip identified as an earlier course of the river (fig. 6).

Three excavated areas.

Based on the geophysical surveys it was decided to excavate three trenches. Trench 1 and 2 were located in the east and trench 3 covering one of the more western rectangular features. All trenches were initially 5x1m (fig. 7).

Trench 1 was positioned nearest to the river. Three separate zones were encountered both in appearance and depth (fig. 8). The initial area nearest to the river was c.1.6m in length and identified as a dark, orange-rich sandy soil. This sandy soil was excavated downwards to a depth of c 55cm.

In the intermediate adjacent zone, on the north easterly side, an interesting bank of grey stiff clay was encountered, about c 38cm across and c.30cm high. Dark, orange-rich sandy soil was shown to continue beneath it.

Abutting the clay on its north-east side at a depth of c35-40cm was a vertical wooden stake c.14cm long and a width of c.2-4cm. The soil around the stake proved to consist of dark brown soil with a flint base. It was retrieved for recording and eventually radiocarbon dating. A similar stake was seen on the opposite side of the trench at the same relative level.

The north-eastern end of the trench encountered a continuous chalk layer at c 26cm depth. This proved to be some 20cm thick. Interestingly immediately beneath this chalk disarticulate animal bones began to be exposed. These bones covered an area of about

c.50x50cm and were placed in an elongated pit to a depth of c.55cm (fig.5. Tr.1B); they were recognised as mostly *Equid*, horse-bones. There was also one pig skull. This led to an extension of the area, which was excavated towards the north-east; as anticipated this revealed more horse-bones lying below the chalk. The bones were photographed and drawn in position (fig. 9).

The horse skeletons were of significant interest. The mandible and teeth along with parts of the skull were close together; the scapula and humerus were also recognisable as were pieces of the pelvis, femur and patella, while some elements from the vertebrae were also present but scattered. In all 191 pieces of horse bone were identified. It was decided that the horse scapula should be retrieved and cleaned, for radiocarbon dating.

A small area of the horse bones was carefully removed to one side. This exposed stiff sticky moist clay beneath and the water table was eventually reached at 75-80cm.

Trench 2 was positioned 20m distant from the river across the second right angle linear (see fig. 6).

The trench was excavated to a depth of c27- 30cm exposing an area made up of round pebbles and several flints. Further excavation at the western and southern ends of the trench, uncovered a fine gravel base at a depth of 39-43cm. At the same level, the central section of the trench encountered orange clay with gravel as well as small to large flint pieces. No unusual features were found as the excavation continued downward in these areas.

In comparison, large flints and stiff grey clay emerged from the northern end at the same level. This clay lay over a shingle base mixed with large stones. In addition we found a zone of scattered peg-tile pieces, (fig. 10), at about 43cm depth. Mixed with a large numbers of small ‘blue’ burnt flints and burnt soil spread across this northern-most area

Further deepening of this northern part of the trench exposed a roughly hewn, upright post. This was positioned at about 2m away from the northern end of the trench in standing water which was encountered at c.46cm. In addition deep in the water and immediately north of the post at 68cm depth large horizontal timbers were identified (fig. 10).

At this position and depth in the water these timbers were too large to move, properly measure or excavate further. Using the farmer’s equipment an attempt was made to pump out water from the trench. Although this allowed us to view the timbers more clearly the water flow was too great to expose the wood to the air. However it was possible eventually

to remove the upright wooden post. This proved to be 1m 52cm in length (fig.11). A section of the post has also been recovered for radiocarbon dating.

Trench 3 was located over one of the western rectangular cropmarks (fig. 7). Removal of the overburden down to a depth of c.18cm exposed both loam and small flints, while beneath, to a 24cm depth was a friable soil with minor, small rounded flints. At about 30cm depth and towards the centre there was a poorly defined chalk surface with olive 'greenish clay' on its northern margin. This latter layer varied in thickness from 12-20cm and partially filled a shallow poorly defined ditch. Unexpectedly, within this layer a near complete clay pipe was discovered. Later examination showed this to be of 17th C manufacture (fig. 12). Just north of the centre of the trench, underneath the clay and at a depth of c.36cm two loam filled circular holes appeared in the brown soil layer and were identified as possible post holes, each about 12cm in diameter. These did not reach any significant depth and eventually a gravel level was encountered. It was concluded that the natural river deposits had been reached and the excavation concluded.

Discussion

As mentioned above we have a very limited understanding of the origin of the cropmarks. Little Missenden was known to have a Roman settlement and various mills were in operation possibly from Anglo Saxon times until the 19th century. The coming of the railways the 19th century marked a period of watercress production. Three commercial watercress beds are recorded, but in addition, the 1st edition of the OS map does mention watercress beds in the field of study.

The geophysical surveys gave mixed results. The resistivity and GPR both showed all three cropmark zones while the gradiometry only highlighted the long meandering east-west anomaly across the field. This was not investigated further and its origin(s) remain unknown.

Trench 1 encountered an artificial clay bank and had associated vertical wooden stakes. Trench 2 excavated a vertical wooden stake with associated large horizontal wooden beams. The speculation is that the bank and wooden structures acted as barriers perhaps stopping the river water from flooding or invading the local vicinity, or alternatively, were there to control flooding of the land for whatever reason. The large horizontal beams now lie below the water table. Was this the case when they were put in place? What was their function? Do they extend far or are they localized with a specific purpose?

Then in Trench 1 there is the large extent of horse bones adjacent to the clay bank and beneath an artificial chalk “floor” that extends beyond the limits of the trench excavation. Were the bones placed there before, at the time of bank construction, or do they post-date this? When was the chalk surface laid down? We have sent two pieces of wood and one bone for radiocarbon analysis and hopefully the results will tie down dates and clarify some of the questions above.

Finally there is Trench 3 over the rectangular features. This does not appear to have any association with the discoveries in Trenches 1 and 2. One of these cropmarks is truncated by the canalized river and so must predate this event. There was one important find of a 17th century pipe embedded in the clay with the implication these rectangles were constructions about this period. Are they contemporaneous with the structures above or were they earlier? Again the radiocarbon results should help clarify this.

It is early days but we can speculate. We know that Little Missenden contained watercress beds either side of the village and the features found in the field would suggest that we have excavated part of such beds. The 19th century canalization/straightening of the river would support this idea. We wait for the dating results.

The origins and purpose of the rectangular features remain a mystery with our present knowledge.

CVAHS is very grateful to David Bazzard for his interest in our excavations and his permission to work on his land.

Figures

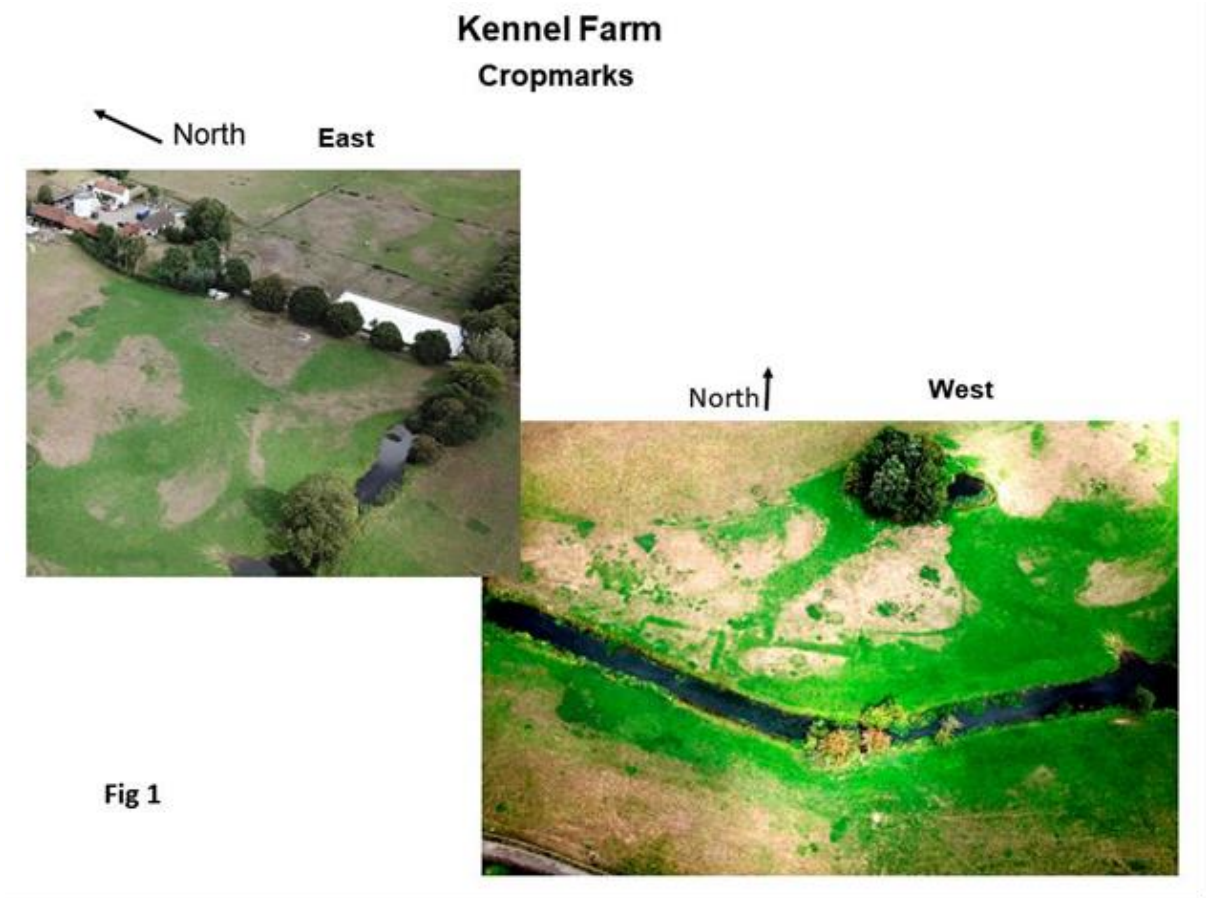


Fig 1

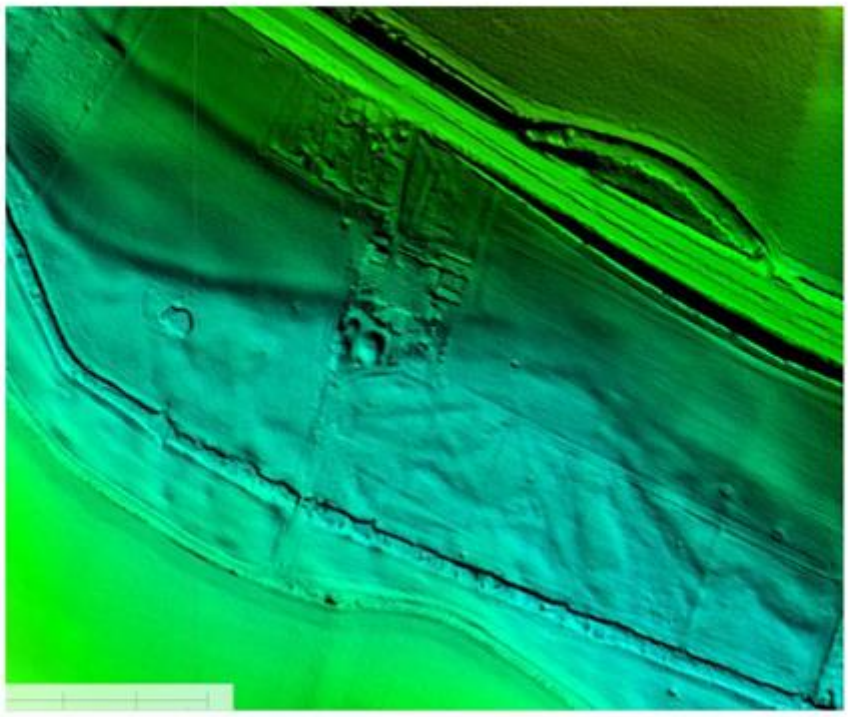


Fig 2

Resistivity

Fig. 3

Kennel Farm

Earth Resistance survey underway

Fig. 4

Running the Magnetometer

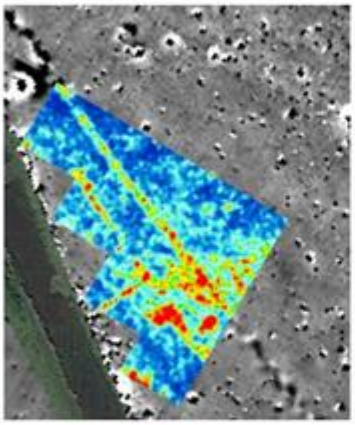
Operating Ground Penetrating Radar

Magnetometry

Fig. 5

Ground Penetrating Radar

West



East

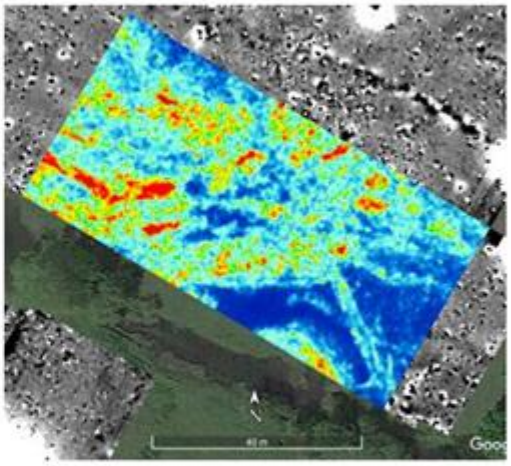


Fig. 6

Kennel Farm

Survey Geophysics. Trench positions and number.

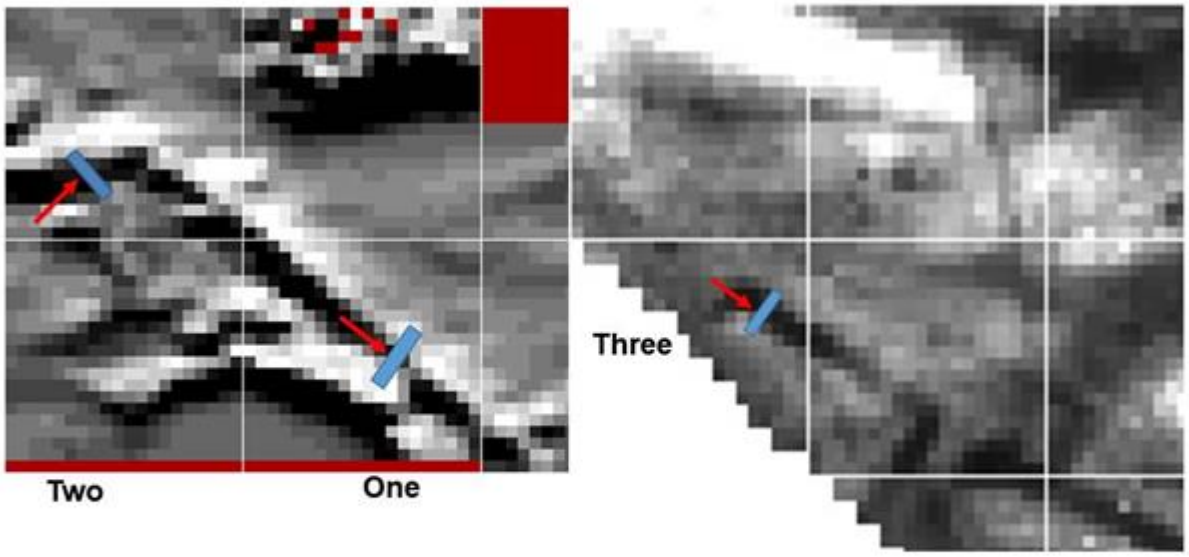


Fig. 7

Kennel Farm

Tr. 1 (5x1m) Excavation in progress

Feature in central area on west side of Tr. 1A: a solid brown/grey sticky clay c. 38cm across

Fig. 8

Kennel Farm

Tr. 1B Equid (horse) bones at c. 40-55cm depth and 2m width

Measuring the distribution of equid bones

Fig. 9

Kennel Farm

Tiles

Tr. 2 C Large wooden feature behind the post

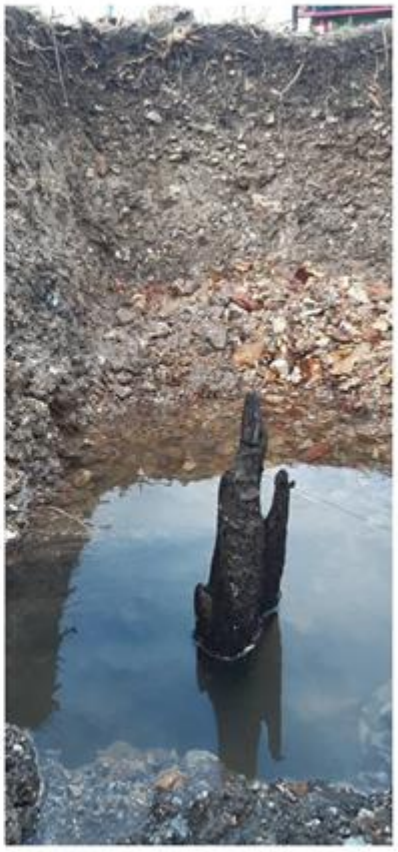


Fig 10

Kennel Farm

Tr. 2 measured post

1m 52cm in length

Tr. 2 measured post

Fig 11

Kennel Farm

Tr. 3 A Surface measurement with circular holes

Tr.3 B. Pipe at low level

Fig 12

Tr. 3 C. Lowest level with shallow ditch