

Excavations in Caves and Rock-shelters on New Laund Farm, Whitewell, Lancashire, 2011

Draft Interim Report

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I Introduction

Fieldwork was carried out on two possible small cave sites on New Laund Farm during August and September of 2011. The work was part of an ongoing project investigating the use of caves, rockshelters and other natural landscape features in the limestone landscapes around the south-eastern fringes of the Forest of Bowland Area of Outstanding Natural Beauty. The particular focus of the project is the use of these features in later prehistory, building on earlier fieldwork by the author and colleagues in South Wales (Aldhouse-Green & Peterson 2007) and recent reviews of the use of caves for burial in the Neolithic and Early Bronze Age (Dowd 2008; Leach 2008; Schulting 2007).

Prior to the fieldwork season; site visits, inspection of aerial photographs and the Lancashire HER had established 17 possible locations within the Whitewell part of the wider study area (see figure 1.1). All of these were either rockshelters, caves or swallowholes currently exposed or likely to have been formerly exposed during prehistory and which had not been disturbed or truncated by subsequent lime-extraction. In all cases the focus of excavation will be the deposits just outside the caves and in the immediate daylight zone of the entrance.

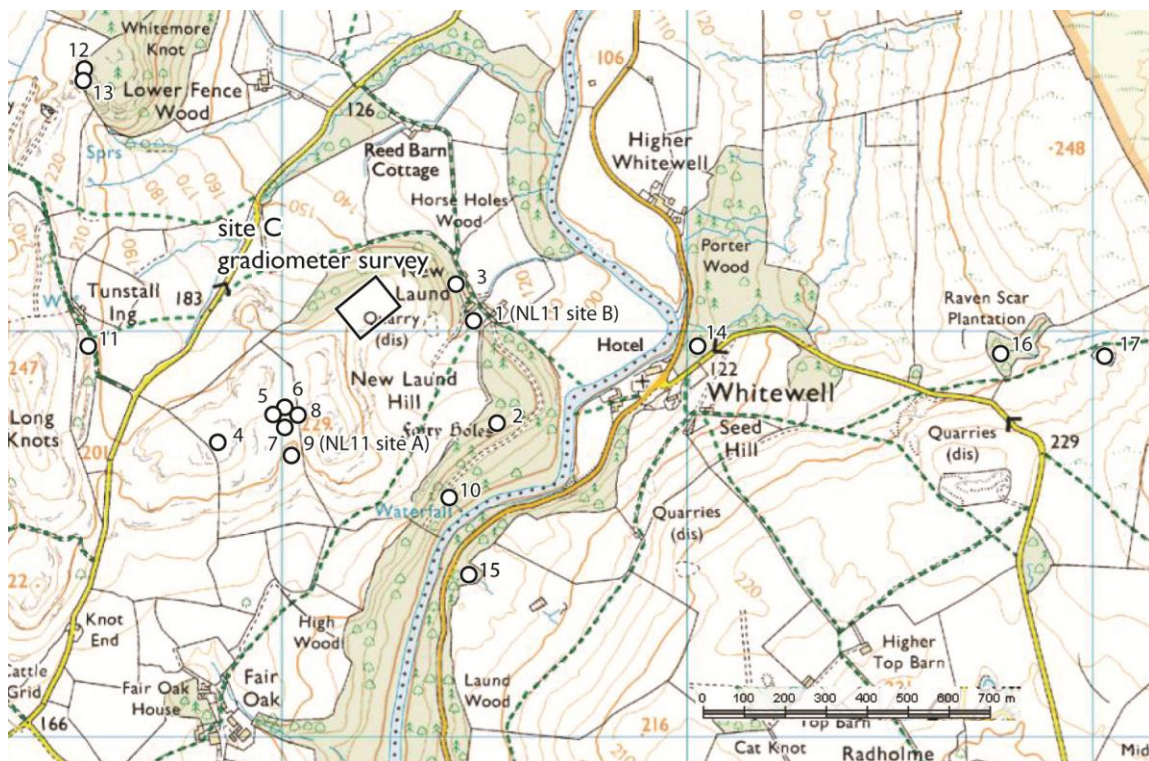


Figure 1.1: Potential sites in the Whitewell study area and the location of sites A, B and C

All potential sites within the study area were given a number. Once excavation has commenced at a particular site it will be given a letter code. The following sites are of relevance to the 2011 fieldwork season:

1 A small (c. 2 m wide and 1 m high) west-facing rock arch currently visible in the tributary stream valley immediately to the south of New Laund Farm. This became NL11 site B upon excavation.

2 Fairy Hole Cave – excavated in 1946 (Musson 1947). All the surviving deposits appear to have been removed at this date and the only recorded finds were a few chert

blades, sherds of pottery identified as Early Bronze Age urn and animal bones ('nothing of importance as there were none of extinct animals or humans' Musson 1947, 166). Brook et. al. (1994, 260) record two further entrances adjacent to the site excavated by Musson

5 Swallow hole around 4 m in diameter, close to

6 Swallow hole around 4 m in diameter, and

7 Large swallow hole around 10 m in diameter, and

8 Swallow hole around 4 m in diameter, all of which form a single system which was believed to have a buried outlet at:

9 Vertical limestone outcrop with a talus slope obscuring the base of the cliff. This became NLI I site A upon excavation.

Two trenches were opened in 2011, at site A and site B. Gradiometer survey was also carried out over the north-eastern flank of New Laund Hill to investigate a possible prehistoric enclosure in this area (site C). The excavation methodology at the cave sites was focussed on the recovery of very fragmentary remains with a high degree of spatial control. In all cases archaeological remains were contained within naturally accumulated scree and silt layers. These layers were hand excavated in 100 mm spits using trowels and geology hammers. Both sites were divided into 1 m² units with 75% of the material from each unit dry-sieved through a 5 mm mesh. A 1 litre sample of the remaining 25% of each spit was wet-sieved through 1 mm mesh sieves. All prehistoric finds were recorded in 3 dimensions.

2 Results of Excavations

2.1 Site A (Mouse Hole)

Excavation at Site A (NGR SD 6503 4667) exposed a small cave opening (around 0.8 m wide and just over 1.2 m high) which was entirely filled with cave earth deposits. In line with the broader research aims of the project and the desire to sample as many potential sites as possible, excavation was confined to the successive scree deposits outside this newly discovered cave mouth. A 3 x 3 m trench was excavated: this was reduced to a 2 x 2 m area in the north western corner of the original trench once the base of context A004 (see below) was reached.

The most recent layer over the whole of this area was context A001. This was an actively developing topsoil with a high humic content which was around 0.15 m deep. The matrix was a very dark grey (10YR 2/2) friable silty clay loam and it was almost completely stone free with the exception of very occasional angular limestone fragments. Finds from this layer included animal bone and three fragments of worked flint and chert.



Figure 2.1: Site A (Mouse Hole) after excavation from the south-east with the exposed limestone bedrock in the foreground and the successive scree layers visible above this. The blocked entrance to Mouse Hole cave is visible to the right of the photograph.

Beneath context A001 on the northern and eastern parts of the site was context A002. This was a very dark grey (10YR 3/1) peaty layer with an extremely high humic content. The matrix was a friable silty clay loam and was slightly stoney; with around 5% small angular limestone fragments and 1% very small rounded sandstone pebbles. This layer was around 0.3 m deep in the north-east corner of the excavated area but thinned out considerably to the south and west and only covered about 25% of the total excavated area. It is likely that context A102 is a localised peat deposit which has developed as a result of the water emerging from the newly discovered entrance to Mouse Hole. There was more animal bone from this layer and another piece of worked stone debitage.

Beneath context A002 was a 0.32 m deep layer of limestone scree. This context, A004, was primarily a matrix-supported scree which also contained two silty lenses, contexts A005 and A007. The matrix was a mid orange brown (7.5YR 3/4) friable silty clay loam with the scree clasts making up between 60% and 80% of the deposit. These clasts were poorly sorted angular limestone fragments ranging in length from 40-140 mm. Context A005 was a lens within the lower part of A004. It was 0.15 m deep and almost 1.0 m long at the northern edge of the trench and consisted of an almost completely stone free patch of mid orange brown (7.5YR 4/5) friable silty clay loam. Context A007 was a similar lens around 0.1 m deep with identical properties. There were three more pieces of worked stone debitage from context A004 and some animal bone, although this was primarily small vertebrate remains recovered by wet sieving. The matrix-supported scree in context A004 is probably the remains of gradual and intermittent rock-falls in this area over a considerable period of time.

Beneath the whole of A004 was context A006. This was a clast-supported scree: 80-90% of this deposit was made up of poorly sorted angular limestone fragments. The bulk of these were very small, less than 5 mm in length, but there were occasional pieces around 90-100 mm long. The sediment matrix in this deposit was a friable-loose mid orange/grey brown (10YR 3/3) silty clay loam. This scree seems to be a combination of the weathering of the exposed limestone bedrock, which was visible beneath the context over most of the excavated area, and rapid erosion of the rockface and cave roof above over a relatively short space of time.

2.2 Site B (Temple Cave)

Excavation at site B (NGR SD 6546 4702) commenced inside the rock arch. A 2 x 2 m area of the deposits spanning the modern dripline was investigated. The limestone roof of the arch was cracked and flaky in places: steel props and a timber beam were used to ensure that no material fell into the cave while it was being excavated.



Figure 2.2: Temple Cave from the east during a public visit to the farm and excavations as part of the annual Bowland Festival

The uppermost layer within the cave was context B100, an actively forming clast-supported scree around 0.35 m deep. Around 80% of the deposit was large to very large angular limestone fragments – some up to 0.4 m long. Between the clasts was a sediment matrix of brown (7.5YR 4/4) friable silty clay. There were large quantities of modern finds in the upper part of this layer and considerable amounts of animal bone, most of which is likely to be similarly recent in origin. Context B100 seems to represent the result of recent collapse from the cave roof.

Beneath B100 was a matrix-supported limestone scree, context B101, which was 0.3 m deep. Around 65% of the deposit was angular limestone fragments between 0.1 and 0.2 m

long. The sediment matrix in this context was a dark yellowish brown (10YR 4/4) friable sandy loam. There were no artefacts within this layer but there were considerable amounts of animal bone, particularly in the upper parts of the deposit. It is likely that context B101 is also formed from material which fell from the roof of the cave.

Beneath context B101 was a very deep silt layer, context B102: this deposit is greater than 0.9 m deep. Nowhere in the excavated area was the base of context B102 reached. It was almost completely stone free: a very dark greyish brown (10YR 3/2) friable silt loam with laminations of almost pure clay towards the lower limits of the excavation. No finds were recovered from B102 except for a very few small vertebrate bones and broken soda straw stalactites from wet sieving. The clean silty nature of the deposit would seem to indicate that it formed through 'ponding' in a body of standing water trapped within the cave. This must have been a protracted process, given the great depth of the context, but it should also be noted that the top surface of context B102 was not level. This shows that, despite the apparently undisturbed nature of the clean silt loam, context B102 has either slumped or moved from its original position.



Figure 2.3: south facing section at site B showing the great depth of context B102 and the clay laminations visible in section. Above this are the two more recent layers B101 and B100

2.3 Site C Gradiometer survey

On the eastern flank of New Laund Hill there is an arc of ditch visible as a standing earth work. This flank of the hill is a relatively level plateau at around 190 m OD bounded to the north-west by a steep cliff descending to the alluvial plain of the River Hodder. The surviving ditch appeared to enclose part of this plateau. Gradiometer survey was carried out over a 90 x 120 m area of the plateau centred on NGR SD 6512 4709 to try and characterise the extent and character of any possible prehistoric enclosure in this area.

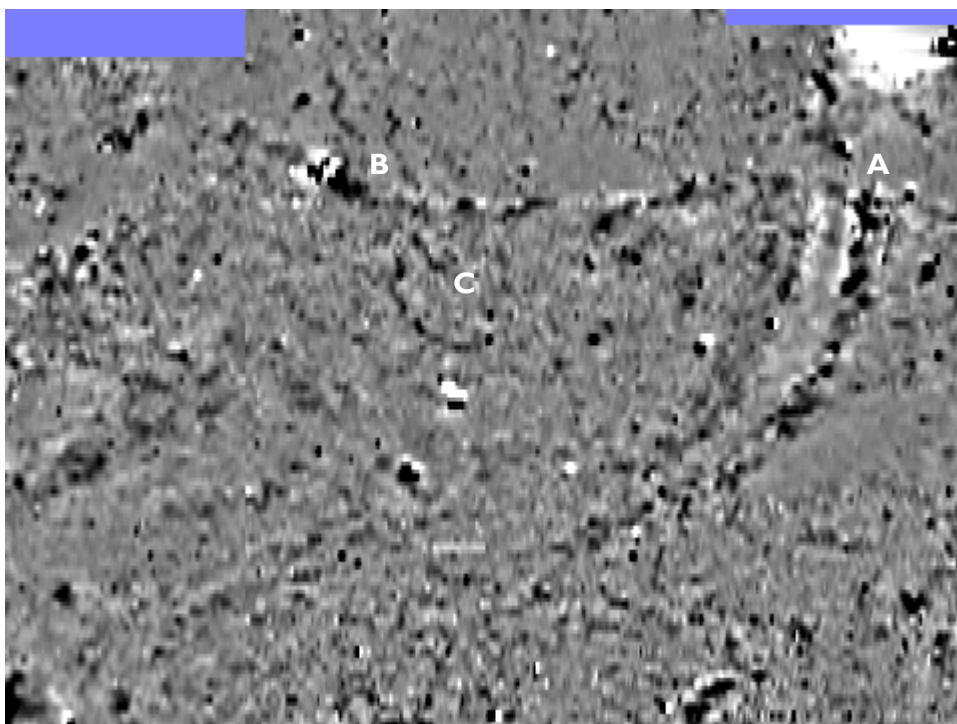


Figure 2.4: processed gradiometer data from site C. The long axis of the survey was aligned north-east to south-west: see figure 1.1 for location of survey. The arc of ditch and bank (A) is visible continuing beneath the sinuous line of the later linear trackway (B) in the northern part of the survey area. There also appears to be at least one internal feature (C).

The gradiometer results seem to indicate that there is a partial enclosure around 90 m in diameter on the plateau consisting of a bank and external ditch with at least one internal circular feature. Later trackways associated with limestone extraction may have partially removed evidence for the enclosure to the south and it is likely that the steep north-western escarpment of the hill precludes any formal enclosure in this area.

3 Conclusions and Discussion

The two excavated sites provide an interesting contrast. The newly discovered Mouse Hole cave at site A has confirmed our expectations that the swallowhole complex on the hillside above had a former outlet at this site. The presence of worked stone from the layers outside the cave indicates that this cave was accessible during prehistory and that it was the focus of some limited human activity.

By contrast Temple Cave has so far not produced any evidence of prehistoric human activity. However, it has proved to be much deeper and more extensive than the original opening appeared. Although excavation was confined to a 2 x 2 m area, airspaces above context B101 could be seen extending down and to the south and east for at least 3 m in each direction. The fragments of soda straw stalactites which were recovered in the wet sieving from the lower layers indicate that the cave was connected to a wider system in the past: there is no active speleothem formation in the cave at present.

The possible prehistoric enclosure identified at site C is an interesting addition to the wider landscape of the research project. It may be either an Iron Age enclosure or an earlier monument with affinities to henges. In either case it will be interesting to see what the

relationship is between this built monument and any human activity in the surrounding caves and rock-shelters.

Further work is planned at New Laund Farm. Site C is part of a biological heritage site and consent has been obtained from English Nature for a limited exploration of the bank and ditch and a portion of the internal circular feature. We will also be continuing to explore the deposits in the entrances to more of the caves and rock shelters; probably focussing initially on site 11 and site 3. Post excavation work on samples taken from Mouse Hole and Temple Cave will include an analysis of the vertebrate fauna and pollen sequences through both sets of deposits to try and characterise the changing prehistoric environment. We have also taken a series of soil micro-morphology samples which should allow a more detailed discussion of the emplacement and origin of the cave deposits.

4 Acknowledgements

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