# Archaeology of East Oxford Project: Minchery Paddock 2012
# Trench 1 Excavation Narrative report

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## Introduction & Summary

Trench 1 was the northern most of three trenches excavated at Minchery Farm Paddock by the Archaeology of East Oxford Project (Archeox) in October/November 2012. Trench one was approximately 50m downslope and to the northwest of Trench 2. It was positioned to investigate peat deposits associated with the line of the Littlemore Brook. Peat deposits had previously been recorded at a number of locations both on (Williams 2006), and close to the current site Oxford Science Park (Moore 2001), Minchery Farm Paddock Kassam Stadium/Ozone Leisure Park (Parker and Anderson 1996, RPS 2001 and 2002), and Northfield School (Bayer 2014). Whilst palaeoenvironmental sequences have been analysed from several of these peat deposits, to date none have an independent radiocarbon chronology. The principle aim of Trench 1 was to obtain samples from which to acquire a palaeoenvironmental sequence with an independent radiocarbon chronology. A secondary aim was to examine the nature of anthropogenic activity at the interface between the 'wetland' peat deposits associated with the brook and the 'dryland' deposits upslope to the south. Trench one measured approximately 5m wide (east/west) by 20m long (north/south), and on the surface sloped slightly from south (c 59m OD) to north (c 58.4m OD).

## 1. Machine removal of topsoil (1000) and sub-soil (1002), and exposure of stone spread (1004)

### Layer (1000)

A layer of wet topsoil (1000) was removed from the full extent of the trench under archaeological supervision using a mechanical excavator fitted with a 1.5m toothless grading bucket. Topsoil (1000) was a soft, dark-brown/black, humic clay-silt with a maximum thickness of 0.3m. Occasional pieces of unmodified waterlogged wood (up to 40mm maximum diameter) were recovered from this deposit as well as small quantities of CBM, animal bone and shaped stone.

### Layers (1001), (1002) and (1003)

Following the removal of topsoil (1000) an underlying layer of subsoil (1002) was encountered. Subsoil (1002) was a firm, mid-blue/grey-brown, clay-silt, with frequent veins of iron staining. Layer (1002) extended across the full length of the trench to a maximum depth of approximately 0.25m. It contained small amounts of CBM, pottery, flint, glass and animal bone. A further discussion of subsoil (1002) and its relationship with layers (1008A), (1008B) and stone spread (1004) is included in section 2 of this document.

Layer (1002) was machine excavated starting from the northern edge of the trench. This revealed the surface of an underlying peat deposit (1001). The top of a spread of stone fragments (1004) was encountered within layer (1002) close to the southern extent of peat deposit (1001). It was decided to hand excavate stone spread (1004). The remainder of context (1004) was exposed with the machine under close archaeological supervision. To the south of context (1004), layer (1002) was removed to expose the underlying geology (1003). Context (1003) consisted of a firm, light-grey, silty-clay.

Due to the very wet conditions a spade-width drain was excavated to a depth of c. 0.3m into the machine excavated surface of contexts (1001), (1002/8) and (1003). The drain ran along the western edge of the trench leading to an approximately 1x1x1m sump in its northwest corner. The drain and sump enabled the trench to be pumped dry several times a day throughout the rest of the excavation. At this stage the trench was cleaned, photographed and planned at a scale of 1:50 (see plan 101).

## 2. Hand excavation of stone spread (1004)

### Stone spread (1004)

Context (1004) comprised a curvilinear spread of limestone fragments measuring approximately 5m southwest to northeast by 12.5m northwest to southeast. It was located in the centre of trench 1 and close to the southern extent of peat (1003). Following the exposure of its top by machine the remainder of this context was hand excavated with trowels and mattocks.

The spread consisted of angular and sub-angular limestone fragments typically measuring 250mm x 350mm x 100mm. Some of the stone pieces appeared to have been deliberately shaped and several appear to have been formerly bonded. Finds of tile, animal bone, CBM, glass, Roman and Medieval ceramics were all found within and beneath the spread of stone fragments.

Three 1m wide slots were hand excavated across this feature. On excavation stone spread (1004) proved to be 0.2-0.25m deep and generally only a single block thick. No traces of any underlying foundations or other structure were observed. The lack of any formal structure to this deposit suggests that (1004) may simply be a spread of rubble (presumably acquired from a nearby structure or structures) used to make up soft ground on the edge of peat. Combined plan (102/3) shows in detail the form and extent of stone spread (1004). Importantly (and inconveniently) stone spread (1004) does not extend as far east as section 1B recorded along the eastern edge of trench one. This has made it difficult to relate (1004), excavated in plan, with the deposit sequence, recorded in section 1B.

### Subsoil (1002/1008a/1008b)

During its excavation in plan, stone spread (1004) appeared to be within (both overlain and sealed by) subsoil (1002). The subsequent excavation of the L-shaped sondage along the northern and eastern edges of the trench (see sections 3 and 4 below) added further information about the nature of subsoil (1002). When recorded in section (sections 1A and 1B), the subsoil was divided into two contexts (1002) and (1008) on the basis of clay to silt ratio. At the top of the subsoil profile (1002) contained more clay than silt, whereas the base of the subsoil profile (1008) contained more silt than clay. This distinction is discernible at the upper and lower extremes of the subsoil profile. However, the transition from (1002) to (1008) was difficult to identify, and the boundary between the two contexts (as shown in sections 1A and 1B) is necessarily somewhat arbitrarily drawn.

Both the nature of the deposit surrounding stone spread (1004) and its elevation relative to section 1B, indicate that it is within the lower part of the subsoil profile i.e. context (1008). For ease of stratigraphic representation subsoil (1008) was subdivided into two units (1008a) above and (1008b) below stone spread (1004).

## 3. Hand excavation of an 'L'-shaped sondage along the northern and eastern edges of trench 1.

Following the excavation in plan of stone spread (1004), an 'L' shaped sondage, 2m wide and between 0.5 and 1.05m deep (below the ground surface), was hand excavated along the northern and eastern edges of trench one. The primary aim of excavating the sondage was to expose and record a section running from the present day land surface to the top of natural deposits along the northern and eastern edges of the trench. A further aim was to hand excavate a substantial portion of peat deposit (1001) to determine whether it preserved any organic anthropogenic structures or artefacts.

### Peat layer (1001)

The top of peat layer (1001) was exposed at the southern end of the trench following the machine removal of subsoil (1002/8) (see plan 101). Peat layer (1001) consisted of a friable, dark brown-black, clay-silt with a very high organic content. There were frequent roots and organic material. This layer was gradually peeled back in a series of spade-depth spits using trowels, spades and mattocks. Context (1001) extended across the full width of the northern end of the trench at a maximum thickness of 0.5m. Its southern edge can be seen to fade out in the eastern trench edge (section 1B), at approximately 12m south of the northern edge of the trench.

Although frequent pieces of waterlogged wood and other plant material were recovered from peat deposit (1001) none showed signs of human modification and no other cultural material was identified. It is likely that this substantial peat deposit is associated with original course of Northfield/Littlemore Brook. Similar deposits are known from development led excavations on the current site (Williams 2006, trench 1 deposit 1), Oxford Science Park (deposits 613, 614, 804, 805) to the west of the current site (Moore *et al.* 2001), and the Kassam Stadium (Parker and Anderson 1996; RPS 2001) and Northfield School (EOX TP47, context 504, Bayer 2014) to the east.

### Cut [1010] & fill (1005)

With the exception of traces of modern features [1011] and [1018], no features were observed cutting peat (1001) in plan. However, a single feature [1010], filled by (1005), was recorded in section 1B only, cutting peat (1001). Feature [1010] is located approximately 9m south of the northern edge of trench one. It cuts from the interface between layers (1008) and (1001) through layer (1001) into layer (1003) below. It is approximately 2.3m wide by 0.3m deep with an irregular concave profile. Its east/west extent is unknown. It has an indistinct break of slope at the top of the sides, shallow sides (less than 45 degrees) and an indistinct break of slope between both sides and the base. Fill (1005) is a tenacious dark-grey-brown, silty-clay with occasional fine root intrusion. Its boundaries with (1001) and [1010] below and (1008) above are indistinct. The relationship between (1005) and (1008)/(1002) are indistinct in section 1B and are not seen in plan. Fill (1005) is very similar in composition to (1008)/(1002) above. Fill (1005) contains two limestone blocks very similar to those making up stone spread (1004). It is suggested that fill (1005) is contemporary with, or later than, the deposition of stone spread (1004).

**Layer (1003)**

Layer (1003) is a firm, light-grey, silty-clay and was initially recorded as the lowest lying deposit across the entire extent of Trench 1, beneath peat (1001) and subsoil (1002/1008). As is discussed further in section 4 of this document layer below, context (1003) was subsequently divided into two deposits (1003) and (1009) (see plan 1005 and sections 1A and 1B). Layer (1003) is now taken to be *in-situ* weathered bedrock and extends across the southern approximately 60/70% of trench one. The layer has frequent worm and fine root intrusion and contains no cultural material.

## 4. Excavation of NW, NE and SE 1x1m sondages

Following the removal of layers (1001) and (1002/8) in the L-shaped sondage, three 1x1m sondages were excavated in the northwest, northeast and southeast corners of Trench 1. These sondages were excavated to establish the nature of what was then thought to be weathered *in situ* natural deposits (1003).

**SE corner**

A 1m x 1m x 0.3m deep sondage was hand excavated in the south-east corner of Trench 1. Here the silty-clay of (1003) gradually merged with bedded solid geology. Excavation was stopped at 58.10m OD due to rising water levels.

**NE corner**

A 1m x 1m x 0.5m deep sondage was hand excavated in the north-east corner of Trench 1. Here the base of the silty-clay was encountered at a depth of 57.3m OD, overlying a mixture of silty-clay and sub-angular gravel (1013). Excavation was stopped at 57.10m OD due to rising water levels.

**NW corner**

In the north-west corner of the trench the previously excavated sump was enlarged to a 1m x1m x 0.5m deep sondage. In this sondage the base of the silty clay sloped from east to west, from 57.45 - 57.15m OD. The silty-clay was underlain by a mixture of silty-clay and sub-angular gravel (1006).

**Layers (1003) and (1009)**

Based on the results of the three sondages it was decided to divide context (1003), which had been previously recorded as *in situ* natural deposits extending across the whole of Trench 1, into two contexts, (1003) and (1009). As outlined in section 3 of this document above, context (1003) is now interpreted as *in situ* natural deposits, extending across only the southern 60-70% of trench one. On the basis of the excavation of the north-west and north-east sondages the light-grey silty-clay seen at the northern end of trench one is now recorded as deposit (1009). Whilst being identical to (1003) in composition, the fact that deposit (1009) is seen to overly gravels (1006) and (1013), suggests that it is distinct from (1003). Deposit (1009) is interpreted as being derived from material similar to (1003), originating further upstream in the Littlemore/Northfield Brook catchment and redeposited by water action in the area of trench one on top of overlying gravels (1006) and (1013). It has not been possible to define the north/south boundary between contexts (1009) and (1003) in either plan or section (see plans 104 and 105, and section 1b).

Following the removal of peat deposit (1001) within the 'L-Shaped' sondage, a large number of pieces of round wood were observed in the surface of layers (1003) and (1009) at the northern end of trench one. This end of the trench was below the water table and required near constant pumping to allow recording. As a result it proved impossible to expose and record all of the pieces of round wood in a single event. A planning frame was used to clean and record the surface of layers (1003)/(1009) 0.1 x 0.1m at a time. The results of which are shown in plan 104. As is shown in plan 104 the distribution of round wood is far from uniform and is chiefly confined to the long north/south arm of the sondage. No internal patterning is obvious in the distribution of the round wood pieces, suggesting that they are natural in origin. Where examined more closely these pieces of wood proved to be naturally rooted saplings rather than anthropogenic structures. One possibility is that the apparent northern limit of the rooting (as shown in plan 104) marks the northern limit of deposit (1003).

**Cut [1012]**

As outlined above the junction between layers (1009) and (1006) in the north-west sondage slopes from east to west at approximately 45 degrees (as seen in section 1A). It is suggested that this junction [1012] was created by a southern migration of the Littlemore/Northfield Brook cutting into gravel deposit (1006) and subsequently overlain by deposit (1009). Further shallower traces of cut [1012] are seen in plan as an amorphous feature in the area of north west corner of Trench 1 (see plans 104 and 105). Due to its location in the north-western corner of trench one the extent, form and nature of cut [1012] is difficult to define.

**Layers (1006) and (1013)**

As outlined above contexts (1006) and (1013) are mixed deposits of silty-clay and gravel recorded only in the bases of the northwest and northeast sondages respectively. As with cut [1012] these deposits are only partially exposed within trench one and their full form and extent remain uncertain. No stratigraphic relationship was observed between these two layers, however, on the basis of their near identical composition and levels it is suggested that (1006) and (1013) are in fact the same context and that together they represent gravels laid down by the Littlemore/Northfield Brook.

**Palaeoenvironmental sampling**

Three overlapping 0.5m long monolith samples (<1010>, <1011> and <1012>) were taken from the south facing section of the north-west sondage (see section 1A) and form the basis of the palaeoenvironmental report for trench one.

## 5. Modern disturbances and previous excavations

Six areas of modern disturbance were recorded cutting from below topsoil (1000) into layers (1002), (1008), (1001), (1009) and (1003). Each of these three features is described in sequence following sections 1A and 1B from west to east to south.

**Cut [1014] & fill (1015)**

Cut [1014] was seen only in the south facing section (1A) of trench one. It cuts from beneath subsoil (1000) through subsoil (1002) and (1008) to approximately the base of peat deposit (1001).

[1014] is 0.58m wide by 0.9m deep. This cut appeared to be a modern disturbance of mid-20th century date: a crushed oil can and several milk bottles were found deposited at the base of the cut.

**Cut [1011] & fill (1007)**
Cut [1011] was observed in the north-east corner of trench one during the machine excavation of deposits (1002)/(1008) and the hand excavation of peat deposit (1001). This feature was subsequently recorded in section only at the junction between sections 1A and 1B. The cut's width immediately under topsoil (1000) was 0.8m narrowing to 0.5m at its base. The fill's (1007) composition was friable mid-grey-brown silty-clay and contained redeposited chunks of layers (1001) & (1009). The overall shape was uncertain and only seen in section. The cut had steep sides (slightly shallower side at the top of the western edge), extended to a depth of around 0.9m and had a flat base. No finds were recovered from this deposit.

**Cut [1016] & fill (1017)**
During the hand excavation of peat deposit (1001) an un-bonded terracotta land-drain was discovered at 5m from the northern edge of the trench at a depth of approximately 0.5m below the surface. The land-drain had an approximately east/west orientation and was within an approximately 0.6m wide cut [1016] filled by deposit (1017). The land-drain was left *in situ* and cut [1016] was not bottomed. No trace of cut [1016] was seen further west in trench one.

**Cut [1018] & fill (1019)**
During the hand excavation of peat deposit (1001) a vertical sided 1.5m wide cut [1018] was observed in section 1A. This corresponds exactly with the location of John Moore Heritage Services evaluation trench 1 (Williams 2006). The centre of this feature was approximately 7m from the northern edge of the trench one. Traces of fill (1019) were visible on the surface of peat deposit (1001) immediately after machining.

**Cut [1020] & fill (1021)**
At 13m south from the northern edge of the trench, and around 7m from the southern edge of the trench, a water pipe was observed at a depth of 1.2m below the top of the trench. Cut [1020] within which the water pipe lay was around 1m wide, lay in an east west orientation and was not bottomed. No traces of this feature observed further to the west in the surface of the trench.

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**Figure 1.** Trench 1 after machining looking north. Contexts (1001), (1002)/(1008), (1004) by the cane with hazard tape and (1003) visible.

**Figure 2.** High tide in trench one, looking north.

**Figure 3.** Stone spread (1004) under excavation, looking east.

**Figure 4.** Stone spread (1004) after excavation, looking west. 3 possibly formerly bonded blocks to the left of the long scale.

**Figure 5.** Two naturally rooted saplings twisted around each other within layer (1003), looking east – 25cm scale.

**Figure 6.** Section 1B looking south east.

**Figure 7.** Section 1A looking north. From top to bottom topsoil (1000), subsoil (1002), subsoil (1008), peat (1003) and clay (1009).