

**An Archaeological Evaluation at  
Upper Mole, Flood Alleviation Scheme  
Tilgate, Crawley, West Sussex.**

**NGR 528009, 134394  
(TQ 28009, 34394)**

**Project No: 4175  
Site Code: ICT 09**

**ASE Report No. 2010028**

**OASIS id: archaeol6-74393**

**Nick Garland  
With a contribution by  
Dr Lucy Allott, Gemma Ayton,  
Luke Barber and Elke Raemen**

**March 2010**

**An Archaeological Evaluation at  
Upper Mole, Flood Alleviation Scheme  
Tilgate, Crawley, West Sussex.**

**NGR 528009, 134394  
(TQ 28009, 34394)**

**Project No: 4175  
Site Code: ICT 09**

**ASE Report No. 2010028**

**OASIS id: archaeol6-74393**

**Nick Garland  
With a contribution by  
Dr Lucy Allott, Gemma Ayton,  
Luke Barber and Elke Raemen**

**March 2010**

**Archaeology South-East  
Units 1 & 2  
2 Chapel Place  
Portslade  
East Sussex  
BN41 1DR**

**Tel: 01273 426830  
Fax: 01273 420866  
Email: [fau@ucl.ac.uk](mailto:fau@ucl.ac.uk)**

**Abstract**

*A programme of archaeological evaluation was undertaken on land to the north of Tilgate Dam, Tilgate, Crawley, West Sussex, in advance of a proposed raising of the height of the dam and associated works.*

*The work was undertaken between the 23<sup>rd</sup> and 25<sup>th</sup> of February 2010 on behalf of Jacobs and the Environmental Agency. Five evaluation trenches measuring between 5m and 8.5m in length sampled the archaeology across the site. The natural horizon varied in depth from 85.144m OD in the east of the site and 86.560m OD in the west of the site.*

*The remains of several post-medieval buildings were uncovered as shown on the 1<sup>st</sup> edition OS map. The remains relate to the Lower Tilgate House and two possible mill buildings (Trench 4 and 5).*

## **CONTENTS**

- 1.0 Introduction**
- 2.0 Archaeological Background**
- 3.0 Archaeological Methodology**
- 4.0 Results**
- 5.0 The Finds**
- 6.0 The Environmental Samples**
- 7.0 Discussion**
- 8.0 Conclusions**

**Bibliography**  
**Acknowledgements**

**SMR Summary Sheet**  
**OASIS Form**

**Appendix 1:** Quantification of the finds

## **FIGURES**

- Fig 1: Site location
- Fig 2: Trench location
- Fig 3: Trench location overlain onto 1<sup>st</sup> edition Ordnance Survey
- Fig 4: Trenches 1 and 2, plan and photographs
- Fig 5: Trenches 4 and 5, plan and photographs

## **TABLES**

- Table 1: Quantification of site archive
- Table 2: Recorded contexts within Trenches 1 & 2
- Table 3: Recorded contexts within Trench 3
- Table 4: Recorded contexts within Trench 4
- Table 5: Recorded contexts within Trench 5
- Table 6: Residue quantification
- Table 7: Flot quantification

## **1.0 INTRODUCTION**

### **1.1 Site Background**

1.1.1 Archaeology South-East (ASE), the contracting division of The Centre for Applied Archaeology at the Institute of Archaeology, University College London, was commissioned by Jacobs on behalf of the Environment Agency, to undertake an archaeological evaluation in advance of development on land at Mole Hill, Tilgate, Crawley, West Sussex, hence referred to as the 'site' (NGR 528009, 134394).

### **1.2 Geology and Topography**

1.2.1 The site is located immediately to the north of Tilgate Dam and is bounded by forested areas to the north, east and west. The trenches are all located within Tilgate Forest Park.

1.2.2 The British Geological Survey (BGS) sheet (302) shows that the site lies on solid geology of Upper Tunbridge and Wells Sand Formation.

### **1.3 Planning Background**

1.3.1 Planning permission was granted by Crawley Borough Council for the raising of the dam height from 5.5m to 8.1m and associated works to construct a borrow areas to the east of the lake to provide material to build the dam. Following consultation with John Mills, (Archaeologist, West Sussex County Council), in his capacity as advisor to Crawley Borough Council on archaeological matters, a condition (3) was attached to the permission requiring that:

*'An archaeological investigation of the site shall be carried out at the expense of the developer in accordance with a specification to be submitted to and agreed by the Local Planning Authority in writing before the commencement of any tree clearance, topsoil striping, landscaping or other construction works.'*

*REASON: The site is of archaeological significance and it is important that it is recorded by excavation before it is destroyed by development in accordance with Policy BN17 of the Crawley Borough Local Plan 2000.*

1.3.2 A Specification was produced by Jacobs in February 2010 in response to the planning condition and was submitted to John Mills, Archaeologist for West Sussex County Council, for approval prior to the commencement of work (Brossler 2009a). The documentation consisted of aims and objectives as well as the methods to be used during the excavation of five evaluation trenches. During the fieldwork, amendments were made to the location and the number of trenches excavated, the reasons for which are described in the methodology (Section 3)

### **1.4 Aims and Objectives**

1.4.1 The aims of this work were outlined in the Jacobs specification and are summarised below (Brossler 2009a).

1.4.2 Generic aims and objectives were as follows:

- to identify the presence or absence of any buried archaeological remains;
- to identify, investigate and record any such archaeological remains to the extent possible by the methods put forward in this Specification;
- establish the preservation of any buried remains;
- establish a broad phased plan of the archaeology revealed following the evaluation of the site;
- provide a refined chronology of the archaeological phasing;
- investigate the function of structural remains and the activities taking place within; and
- to disseminate the results through reporting that will inform the requirement for further work.

1.4.3 Specific aims were:

- to identify the presence, extent and state of preservation of the former buildings;
- Trenches 1 and 2 – to establish the presence or absence of Lower Tilgate House;
- Trench 3A and 3B - to establish the presence or absence of a possible mill building
- Trench 4 - to establish the presence or absence of a possible mill building
- Trench 5 - to establish the presence or absence of a possible mill building.

## **1.5 Scope of Report**

1.5.1 This report details the findings of an archaeological evaluation undertaken by Nick Garland between the 23<sup>rd</sup> and 25<sup>th</sup> February 2010. The project was managed by Darryl Palmer (Senior Project Manager) and Jim Stevenson (Project Manager, Post-Excavation).

## **2.0 ARCHAEOLOGICAL BACKGROUND**

**2.1** A Desk Based Assessment of the area was undertaken by Jacobs in 2009 and is summarised below with due acknowledgment (Brossler 2009b).

### **2.2 Summary**

#### *2.2.1 Mesolithic and Neolithic*

Mesolithic activity within the immediate area of the area site is restricted to an excavation undertaken by the Mid Sussex Archaeological Society between 1961 and 1965 revealing finds including flakes, scrapers, fabricators, petit tranchet derivatives and two pieces of polished axe, which may be of Neolithic date.

#### *2.2.2 Medieval*

Crawley and Horsham were major areas of iron production in the Weald in the late medieval period and iron working in the area is seen in the presence of Furnace Plain and a mine pit, however, the date of these sites is unknown.

A map of Sussex, dating to 1610, suggests that Tilgate was a managed forest or park. Forests in this period were multi-functional and often included open areas of heath, woodland pasture and ponds.

#### *2.2.3 Post-Medieval (AD 1550 – to date)*

Ten sites of post-medieval date have been identified within the area of the site. These comprise Tilgate Parkland, a retaining wall associated with the dam, a circular feature associated with Tilgate Lake, the site of Tilgate Mill, Tilgate Lake, the cascade between Silt Lake and Tilgate Lake, the site of Tilgate Warren, the London and Brighton Railway, Lower Tilgate House and a series of buildings identified on the OS map in front of the dam.

Documentary evidence from the Sergison family archive dating from 1702 describes the landscape as largely agricultural with some references to small areas of wood, pasture and meadow, however, the after heath the next largest type is referred to as “land”, likely referring to arable fields. A corn mill and watercourses are also mentioned. By 1759 there is a reference to a principal dwelling in the Manor of Tilgate and specific references to six ponds, Tilgate Forest, dovecotes and Tilgate Warren.

Sometime between 1809 and 1839 Tilgate Warren had been cleared and the land converted into parkland. It is likely that the estate was landscaped in the early 1800s when the Sergison estate was broken up and sold off.

The first development of the park is apparent on the 1839 Tithe map. The Tithe Apportionment identifies Sir Bart, William Joliffe as the landowner; the 1<sup>st</sup> Baron Hylton The garden comprises an area of meadow in front of “Upper Tilgate”, which was flanked by two areas of woodland to create a vista onto Tilgate Lake.

A record dating to 1849 refers to Tilgate Manor House complete with lawn, pleasure grounds and kitchen garden. The extent of the gardens is suggested to include the area around the house and forest to the east of the site that is now Tilgate Forest Golf Club. The map shows the addition of a boat house, which is more clearly labelled on the 1<sup>st</sup> edition Ordnance Survey map of 1874. The kitchen gardens were

extensive and were located to the rear of the house. All of the maps from this point identify Tilgate Lake and Silt Lake as fishponds. The map also shows a series of buildings to the north of the dam. These comprise three rectangular structures that may be part of Tilgate Mill.

The majority of the landscape remained largely unchanged during the later part of the 19<sup>th</sup> century, but there were a small number of minor modifications. The most obvious changes are seen on the 1<sup>st</sup> edition Ordnance Survey map which identifies fountains and an aviary in front of Lower Tilgate. By 1897 these no longer appear on the 2<sup>nd</sup> edition Ordnance Survey map. The grounds appear to have undergone little change during the early part of the 20<sup>th</sup> century and Tilgate House was demolished in 1965.



### **3.0 ARCHAEOLOGICAL METHODOLOGY**

- 3.1** Five trial trenches were machine excavated across the area of proposed development under archaeological supervision (Figure 2). Trench 1 measured 5m x 2, Trench 2 measured 3m x 2m, Trench 3A and 3B measured 7m x 2m, Trench 4 measured 8.5m x 2m and Trench 5 measured 6m x 2m.
- 3.2** The location of the trenches was established using an Electronic Distance Measurer (EDM) compatible with Global Positioning System (GPS). The location of some of these trenches had to be moved to avoid on-site obstacles and allow excavation. Trench 1 was moved slightly to the south to avoid existing tree stumps, Trench 3B could not be excavated due to its position in an area of ecological restraint, Trench 4 was moved slightly to the north to avoid existing tree stumps and Trench 5 was moved slightly to the south to avoid an existing tree canopy.
- 3.3** The trial trenches were scanned prior to excavation using a Cable Avoidance Tool (CAT). All of the trenches were excavated under constant archaeological supervision, using an 8 tonne 360° tracked excavator fitted with a toothless ditching bucket. Revealed surfaces were manually cleaned in an attempt to identify any archaeological deposits or features. The sections of the trenches were selectively cleaned to observe and record their stratigraphy. All spoil removed from the trenches was scanned visually for the presence of any stray, unstratified artefacts.
- 3.4** All encountered archaeological deposits, features and finds were recorded according to accepted professional standards in accordance with the approved ASE Written Scheme of Investigation using pro-forma context record sheets. Archaeological features and deposits were planned at a scale of 1:20 and sections generally drawn at a scale of 1:10.
- 3.5** A full photographic record of the trenches and associated deposits and features was kept (including monochrome prints, colour slides and digital), and will form part of the site archive. The archive is presently held at the Archaeology South-East offices at Portslade, East Sussex, and will in due course be offered to a suitable local museum.
- 3.6** Only undifferentiated topsoil, subsoil and overburden of recent origin was removed by machine and kept separately. The excavation was taken, in spits of no more than 0.1m for the top and sub soil, down to the top of the first significant archaeological horizon or the top of the underlying 'natural'.

|                           |                                    |
|---------------------------|------------------------------------|
| Number of Contexts        | 28 contexts                        |
| No. of files/paper record | 1 folder                           |
| Plan and sections sheets  | 1 sheets                           |
| Bulk Samples              | 2 samples                          |
| Photographs               | 5 colour slides, 5 B+W, 40 digital |

Table 1: Quantification of site archive

## 4.0 RESULTS

### 4.1 Trenches 1 and 2 (Figure 4)

| Number | Type    | Description                     | Max. Length | Max. Width | Deposit Depth | Height m.AOD |
|--------|---------|---------------------------------|-------------|------------|---------------|--------------|
| 1/001  | Layer   | Topsoil                         | Tr.         | Tr.        | 0.16 m        | 87.340       |
| 1/002  | Layer   | Subsoil                         | Tr.         | Tr.        | 0.31 m        | 87.180       |
| 1/003  | Layer   | Natural                         | Tr.         | Tr.        | N/A           | 86.560       |
| 1/004  | Layer   | Demolition layer                | 2.05 m      | 1.1 m      | 0.31 m        | 86.870       |
| 1/005  | Cut     | Cut of foundation trench        | 3.4 m       | 0.8 m      | 0.6 m         | 86.110       |
| 1/006  | Fill    | Fill of foundation trench       | 3.4 m       | 0.8 m      | 0.6 m         | 86.110       |
| 1/007  | Cut     | Cut of foundation of structure  | 2.15 m      | 0.4 m      | 0.4 m         | 86.701       |
| 1/008  | Fill    | Fill of foundation of structure | 2.15 m      | 0.4 m      | 0.4 m         | 86.701       |
| 1/009  | Masonry | Foundation of structure         | 2.15 m      | 1.95 m     | N/A           | 86.701       |
| 1/010  | Fill    | Fill within structure           | 1.25 m      | 1.20 m     | N/A           | 86.701       |
| 1/012  | Cut     | Cut of foundation trench        | 5.05 m      | 2.10 m     | 0.5 m         | 86.590       |
| 1/013  | Fill    | Fill of foundation trench       | 5.05 m      | 2.10 m     | 0.5 m         | 86.590       |

Table 2: Recorded contexts within Trenches 1 and 2

#### Summary

- 4.1.1 The natural [1/003], a light greyish yellow clay, was observed between 86.531 OD in the south of the trench and 86.589 OD in the north of the trench. Overlying this was [1/002], a mid greyish brown clayey silt subsoil. Overlying this was the topsoil, [1/001].
- 4.1.2 A linear possible foundation cut [1/005] was located to the east of the trench and was orientated in a north-east to south-west direction before turning towards the east. [1/005] was cut into the natural clay, [1/003] and sealed by the subsoil, [1/002]. The cut probably represents a set robbed out foundations that pre-date structure [1/009] (discussed below). It was filled by a mid greyish brown silty clay [1/006] that contained pottery dating from the 15<sup>th</sup> and 16<sup>th</sup> century.
- 4.1.3 A small structure, [1/009], was located in the centre of the trench. It was approximately square in shape and constructed from a combination of red brick and sandstone blocks. The foundation trench, [1/007], was cut into the natural clay, [1/003]. The foundations were irregularly laid, although they did survive to three or four courses. A single deposit [1/010] filled the inside of the foundations and was not fully removed, however, finds recovered included pottery, ceramic building material (CBM), fire cracked flint, iron, copper alloy, glass and a bone toothbrush (see section 5). A layer of demolition material, [1/004], a mixed mid grey and red silt, overlay structure [1/009].
- 4.1.4 A second possible foundation cut [1/012] was located to the west of the trench in a north-south orientation. This cut also possibly represents a set robbed out

foundations, cutting the natural clay. It was filled by dark greyish brown silty clay [1/013]. No finds were recovered from the fill of this feature

## 4.2 Trench 3A

| Number | Type  | Description          | Max. Length | Max. Width | Deposit Depth | Height m.AOD |
|--------|-------|----------------------|-------------|------------|---------------|--------------|
| 3/001  | Layer | Topsoil              | Tr.         | Tr.        | 0.06 m        | 85.684       |
| 3/002  | Layer | Re-deposited Natural | Tr.         | Tr.        | 0.17 m        | 85.624       |
| 3/003  | Layer | Subsoil              | Tr.         | Tr.        | 0.65 m        | 85.794       |
| 3/004  | Layer | Natural              | Tr.         | Tr.        | N/A           | 85.144       |

Table 3: Recorded contexts within Trench 3

### Summary

4.2.1 The natural [3/004], a light greyish yellow clay, was observed between 84.961 OD in the east of the trench and 84.647 OD in the west of the trench. Overlying this was [3/003], a mid greyish brown clayey silt subsoil. Above this was a light yellowish brown clay (re-deposited natural), [3/002]. Overlying this was topsoil, [3/001].

4.2.2 No archaeological features or deposits were present.

## 4.3 Trench 4 (Figure 5)

| Number | Type    | Description               | Max. Length | Max. Width | Deposit Depth | Height m.AOD |
|--------|---------|---------------------------|-------------|------------|---------------|--------------|
| 4/001  | Layer   | Topsoil                   | Tr.         | Tr.        | 0.06 m        | 86.719       |
| 4/002  | Layer   | Re-deposited natural      | Tr.         | Tr.        | 0.59 m        | 86.659       |
| 4/003  | Layer   | Made ground               | Tr.         | Tr.        | 0.12 m        | 86.069       |
| 4/004  | Layer   | Subsoil                   | Tr.         | Tr.        | 0.06 m        | 85.949       |
| 4/005  | Cut     | Cut of foundation trench  | 3.5 m       | 0.35 m     | N/A           | 85.969       |
| 4/006  | Fill    | Fill of foundation trench | 3.5 m       | 0.35 m     | N/A           | 85.969       |
| 4/007  | Masonry | Wall foundations          | 3.5 m       | 0.35 m     | N/A           | 85.969       |
| 4/008  | Layer   | Natural                   | Tr.         | Tr.        | N/A           | 85.889       |

Table 4: Recorded contexts within Trench 4

### Summary

4.3.1 The natural [4/008], a light greyish yellow clay, was observed between 86.876 OD in the south-east of the trench and 86.562 OD in the north-west of the trench. Overlying this was, [4/004], a mid greyish brown clayey silt subsoil. Above this was a layer of made ground, [4/003], a mid greyish brown clayey silt with a moderate amount of brick and tile inclusions. Overlying this was a layer of re-deposited natural, [4/002]. Above this was the topsoil, [4/001].

4.3.2 Some 'L' shaped wall foundations, [4/007], were present within this trench. The construction trench for the foundations, [4/005], cut the natural clay and the

foundations were sealed by the subsoil, [4/003]. These foundations were orientated in a north-south and east-west direction and represented the corner of building. The foundations were constructed using red brick and mortar and have been dated to the early/ mid 19<sup>th</sup> century.

#### 4.4 Trench 5 (Figure 6)

##### List of recorded contexts

| Number | Type  | Description          | Max. Length | Max. Width | Deposit Depth | Height m.AOD |
|--------|-------|----------------------|-------------|------------|---------------|--------------|
| 5/001  | Layer | Topsoil              | Tr.         | Tr.        | 0.11 m        | 87.037       |
| 5/002  | Layer | Re-deposited natural | Tr.         | Tr.        | 0.17 m        | 86.927       |
| 5/003  | Layer | Made Ground          | Tr.         | Tr.        | 0.21 m        | 86.756       |
| 5/004  | Layer | Subsoil              | Tr.         | Tr.        | 0.21 m        | 86.546       |
| 5/005  | Layer | Natural              | Tr.         | Tr.        | N/A           | 86.336       |
| 5/006  | Cut   | Cut of linear        | 3.2 m       | 0.85 m     | N/A           | 86.265       |
| 5/007  | Fill  | Fill of linear       | 3.2 m       | 0.85 m     | N/A           | 86.265       |

Table 5: Recorded contexts within Trench 5

##### Summary

- 4.4.1 The natural [5/005], a light greyish yellow clay, was observed between 86.318 OD in the south-east of the trench and 86.355 OD in the north-west of the trench. Overlying this was, [5/004], a mid greyish brown clayey silt subsoil. Overlying this was, [5/003], a mid greyish brown clayey silt with moderate brick and tile inclusions. Pottery dating to the late 19<sup>th</sup> century was recovered from this deposit. Above this was [5/002] a layer of re-deposited natural. Above this was the topsoil, [5/001].
- 4.4.2 A L-Shaped linear foundation cut, [5/006], was observed across the trench, orientated an north-south and east-west orientation and cut into the natural clay. Due to flooding in the trench the feature could not be excavated, although it appeared from visual inspection that it representation the robbed out foundation cut of a possible structure. The cut was backfilled by a light brown silty clay that contained occasional small and medium sub-rounded stones.

## **5.0 THE FINDS**

### **5.1 Introduction**

5.1.1 A small assemblage of finds, mainly consisting of ceramic building material (CBM), was recovered during the evaluation. A summary can be found in Appendix 1. In addition, a bone toothbrush (wt 20g) was recovered from [1/010] and was assigned Registered Finds number <1>.

### **5.2 The Pottery** by Luke Barber

5.2.1 The archaeological work recovered a small assemblage of pottery, virtually all of which can be placed in the post-medieval period. On the whole, sherd sizes range from medium to large (over 50mm across) and lack signs of abrasion suggesting the material has not been subjected to repeated reworking.

5.2.2 By far the earliest pottery was recovered from context [1/006]. An abraded green glazed sherd from this deposit is likely to be from a residual fragment of a Surrey coarse border ware vessel of 15<sup>th</sup>- century date (6g). The remaining sherds from [1/006] are notably larger and fresher and include two sherds of oxidised fine sand tempered painted ware vessel (33g) and a well fired internally green glazed fine sandy earthenware (26g) sherd. In addition a large proportion of a neck and shoulders from a Martincamp stoneware flask was recovered (145g). Taken together a date in the 16<sup>th</sup> century is probable.

5.2.3 The remaining pottery can all be placed in a later 18<sup>th</sup>- to 19<sup>th</sup>- century date bracket. Context [1/004] produced a piece of later 18<sup>th</sup>- to 19<sup>th</sup>- century glazed red earthenware bowl rim. Another sherd, probably of 19<sup>th</sup>- century date, was recovered from [1/010] along with a piece of unglazed earthenware flower pot. Context [5/003] produced a sherd from a yellow ware bowl and an ironstone china transfer-printed serving dish sherd decorated with black floral design and almost certainly of the latter half of the 19<sup>th</sup> century.

### **5.3 The Ceramic Building Material** by Luke Barber

5.3.1 A relatively large assemblage of ceramic building material was recovered from the site. The material is dominated by bricks of different periods and a number of complete examples are present. The earliest pieces were recovered from [1/006], dated by the ceramics to the 16<sup>th</sup> century. The six pieces from this context are quite roughly formed and low fired. They are tempered with fine sand and white clay pellets to 4mm. Only one has complete dimensions, showing them to be 110mm wide by 55mm tall. These bricks would be in keeping with the date of the pottery. Context [1/004] produced further bricks of generally similar type, presumably residual in this deposit. These include three fragments (1,307g) of identical fabric and dimensions to those in [1/006] though somewhat higher fired and a very roughly made quite hard fired complete brick, measuring 220 x 110 x 50mm, tempered with sparse fine sand and moderate iron oxide inclusions to 8mm (most to 4mm). A general 16<sup>th</sup>- to 17<sup>th</sup>- century date is likely.

5.3.2 Context [1/004] also produced two smaller fragments from well formed sparse fine sand tempered bricks likely to be of mid 18<sup>th</sup>- to 19<sup>th</sup>- century date. Most of the remaining bricks appear to belong to this general 18<sup>th</sup>- to 19<sup>th</sup>- century date range. Context [1/009] produced two well formed and fired bricks mortared together in a pale yellow grey mortar. Both appear to be tempered with fine sand and iron oxides to

3mm though one is notably softer fired. The complete example measures 215 x 100 x 60mm. Another complete brick, from [4/007] and set in a dull yellow sandy mortar with white inclusions to 3mm, measures 225 x 110 x 62mm. This example is well formed and fired, tempered with fine sand and moderate iron oxides/slag to 3mm, with a shallow double early frog suggesting an early/mid 19<sup>th</sup>- century date.

- 5.3.4 Context [3/003] produced a very mixed group of bricks spanning the 19<sup>th</sup> to early 20<sup>th</sup> centuries. These include the following: a 70mm tall quite crude frogged brick (similar to that in [4/007]) set in a dull yellow sandy mortar; another frogged example measuring 105mm wide by 65mm tall set in similar mortar; a 70mm tall yellow stock brick with shallow frog (...W stamped in frog) and a double frogged (opposed) machine-formed brick measuring 220 x 103 x 63mm stamped WARNHAM SBC within the frog (Warnham Sussex Brick Company), the latter of late 19<sup>th</sup>- to early 20<sup>th</sup>- century date.
- 5.3.5 Context [5/003] produced a similar fragment of Warnham frogged brick together with two fragments from well formed and fired double frogged bricks similar to that noted in [4/007] (110mm wide by 63mm tall). Of note is a well formed and hard fired dense floor brick (45mm tall) tempered with sparse fine sand and moderate iron oxides to 2mm. A later 18<sup>th</sup>- to 19<sup>th</sup>- century date is probable. Context [1/010] produced a well fired fragment from a 19<sup>th</sup>- century 40mm tall moulded brick, possibly for decorative floor inlay, though without the complete piece it is difficult to be absolutely certain.
- 5.3.6 Relatively little roofing tile was recovered from the site. All of the material consists of quite well formed and hard-fired peg tile fragments tempered with sparse fine sand with occasional iron oxide inclusions to 2mm. All are thin (10-11mm) and a mid 18<sup>th</sup>- to 19<sup>th</sup>- century date is probable. The only exception to this may be a slightly finer example from [1/010] with circular peg hole which could be a little earlier. The only other item of note consists of a fragment from an 18<sup>th</sup>/19<sup>th</sup>- century well thrown unglazed red earthenware drain segment tempered with sparse fine sand (context [5/003]).

#### **5.4 The Glass** by Elke Raemen

- 5.4.1 A total of 23 glass fragments was recovered from three different contexts. All date to the late 19<sup>th</sup> to 20<sup>th</sup> century. Included are fragments of a clear glass Shippam's paste jar ([1/004]). Most fragments are from bottles, including body sherds from a pale green oval bottle, a small, clear cylindrical bottle, a pale green rectangular bottle and a pale blue panelled bottle. This range of bottles could have been for pharmaceutical or household use. A body sherd from a brown cylindrical beer bottle was recovered from [3/003]. The same context also contained clear glass tumbler fragments of 20<sup>th</sup>- century date. A clear glass complete tube (height 75mm, di. 16.25mm) was recovered from [1/010] and is likely to have contained medication.

#### **5.5 The Clay Tobacco Pipe** by Elke Raemen

- 5.5.1 A plain clay tobacco pipe (CTP) stem fragment was recovered from [1/010]. The piece dates to the mid 18<sup>th</sup> to 19<sup>th</sup> century.

#### **5.6 The Metalwork** by Elke Raemen

- 5.6.1 A small assemblage of seven objects was recovered from two individually numbered

contexts. A general purpose iron nail and a small iron strip/tool fragment were found in [1/004]. Context [1/010] contained another general purpose iron nail, a small iron rod fragment, a copper alloy ferrule and two zinc mesh fragments. Pieces are all of late post medieval date.

### **5.7 Bone Toothbrush** by Elke Raemen

5.7.1 A complete bone toothbrush (RF <1>) was recovered from [1/010]. The head is rounded, with the holes for the tufts completely pierced and with grooved back. The latter shows copper-alloy staining, probably caused by the wire fixing the tufts. Some of these tufts survive inside the holes. At the base of the head there is an "A" stamped above "X.N". The handle contains the stamp "ALLEN&HANBURYSLTD TRADEMARK AD1715 L(...)" with in addition on the back "ANATOMICAL". The piece dates to the late 19<sup>th</sup> to early 20<sup>th</sup> century.

### **5.8 The Metallurgical Remains** by Luke Barber

5.8.1 Surprisingly little slag was present: a single solidified droplet of post-medieval blast furnace slag was recovered from context [1/004].

### **5.9 The Geological Material** by Luke Barber

5.9.1 A typical assemblage of stone for Crawley was recovered during the work, the vast majority of which was clearly utilised for building purposes during the post-medieval period. Walling material consists of small, roughly cut, blocks of Upper Tunbridge Wells sandstone from [1/004] (1,685g with adhering dull yellow fine mortar) and [1/009] (3,600g with pale yellow grey fine mortar, repatched with a grey harder mortar). The small irregular pieces of fine-grained ferruginous sandstone seams (1/42g from [1/004] and 5/128g from [1/010]) are likely to be from the same geological beds. The remaining stone types were recovered from [1/004] and include a fragment of Horsham stone roofing slab (202g) and two pieces of 19<sup>th</sup>- century Welsh slate (486g).

### **5.10 The Animal Bone** by Gemma Ayton

5.10.1 A total of six animal bone fragments were recovered from contexts (1/006) and (1/004). The fragments were in a fair state of preservation with little sign of surface erosion. Context (1/006) produced one cattle-sized long bone fragment, one fragment of pig mandible and a small fragment of red deer antler. Context (1/004) produced a fragment of pig tibia, a cattle sized femur fragment and a sheep-sized long bone fragment. An environmental sample taken from context (1/004) produced two small fragments of cattle-sized long bone. One of these fragments derives from the shaft of a femur. There was no evidence of butchery, burning, gnawing or pathology on the bone.

### **5.11 The Marine Shell** by Elke Raemen

5.11.1 A fragment from the upper valve of an oyster shell was recovered from [1/006]. No other marine shell was recovered.

**6.0 ENVIRONMENTAL SAMPLES** by Lucy Allott

- 6.1** A single sample was taken from context [1/004] during archaeological work at Ifield and Tilgate, Crawley. The sample was processed in a flotation tank, the residue and flot were retained on 500µm and 250µm meshes respectively and were air dried. The residue was passed through graded sieves and each fraction sorted and the flot was scanned at x7-45 magnifications under a stereozoom microscope. Tables 6 and 7 record the contents of this sample. Charcoal fragments were viewed under an incident light microscope at x50, 100, 200 magnifications and were identified through comparison with reference material held at University College London and reference atlases (Hather 2000, Schweingruber 1990, Schoch *et al.* 2004).
- 6.2** This sample has revealed a small assemblage of environmental remains comprising wood charcoal, occasional charred macrobotanical remains, faunal remains and a small quantity of land snail shells. The flot contained uncharred seeds which are likely to be of modern origin and provide some evidence for potential disturbances within the soil.
- 6.3** Wood charcoal fragments were relatively prominent and may be associated with the blast furnace slag debris also noted in this feature. Taxa noted include beech (*Fagus sylvatica*), hazel (*Corylus avellana*) and oak (*Quercus* sp.). A piece of part charred *Pinus* sp. (pine) roundwood was also recovered from context [1/010]. The few charred macrobotanical remains present were poorly preserved and therefore no identifications have been given.
- 6.4** With the exception of the charcoal assemblage which has some potential to provide evidence for the array of taxa used for fuel, the assemblage holds no potential for further analysis.

Table 6: Residue quantification

| Sample Number | Context | Sample Volume litres | Charcoal >4mm | Weight (g) | Charcoal <4mm | Weight (g) | Bone | Weight (g) | Other (eg ind, pot, cbm)  |
|---------------|---------|----------------------|---------------|------------|---------------|------------|------|------------|---|
| 1             | 1004    | 10                   | ****          | 58         | ****          | 18         | *    | 14         | POT*/4 SLAG/GLASS (blast furnace slag??)***/252 BURNT CLAY**/20 |

Table 7: Flot quantification

| Sample Number | Context | Flot weight g | Flot volume ml | Uncharred % | Sediment % | Uncharred plant remains (modern?)   | Charcoal >4mm | Charcoal <4mm | Charcoal <2mm | Charred botanical remains (cpr) | Identifications                                       | Preservation (cpr) | Fly Pupae | Bird bone | LSS |
|---------------|---------|---------------|----------------|-------------|------------|---|---------------|---------------|---------------|---------------------------------|---|--------------------|-----------|-----------|-----|
| 1             | 1004    | 12            | 29             | 45          | 2          | ***, <i>Rubus</i> sp.,<br><i>Urtica</i> sp.,<br><i>Alnus</i> sp.,<br><i>Chenopodium</i> sp. | **            | **            | ***           | *                               | 1 charred weed seed & charred indeterminate fragments | ++                 | *         | *(1)      | *   |



## **7.0 DISCUSSION**

- 7.1** The evaluation of this site uncovered the remains of structures within Trench 1, 2, 4 and 5. Trench 1 and 2 revealed a small square structure [1/009] and two possibly robbed out foundation trenches [1/005] and [1/012]. Feature [1/005] was clearly earlier than [1/009], and it is possible that [1/012] also predates this structure. Trench 4 revealed the foundations of a corner of a building [4/007] and Trench 5 revealed the possible robbed out foundations of a corner of a building [5/006].
- 7.2** The majority of these features appear to represent the structures located on the 1<sup>st</sup> edition OS map (see Figure 3), although there is some indication, (if the interpretation of [1/005] and [1/012], as robbed out foundation trenches is correct), of several phases of construction around Trench 1 and 2 associated with Tilgate House.
- 7.3** Finds recovered from the fill of [1/005] dated the feature to the 16<sup>th</sup> century and while feature [1/012] could not be dated its similar form may suggest it is of a comparable date. Structure [1/009] was dated by brick evidence to the 18<sup>th</sup> to 19<sup>th</sup> century as were foundations [4/007] within Trench 4. The possible foundations in Trench 5 could not be dated via recovered finds, however, they presumably represent the 19<sup>th</sup> century foundations of the building represented on the 1<sup>st</sup> edition OS map.
- 7.4** The archaeological remains were in most cases sealed by the subsoil and cut into the natural substrate. The exposed features were sealed by between 0.47m, (Trenches 1 and 2) and 0.88m, (Trench 3), of overburden and appeared at between 85.949m OD (Trench 4) and 86.701m OD (Trenches 1 and 2).

## **8.0 CONCLUSION**

- 8.1** The evaluation was successful in determining the presence of archaeological features on site and determining that they survive to a moderate level of preservation.
- 8.2** The location of the trenches in the approximate location of potential buildings as shown on the 1<sup>st</sup> edition OS map has shown some of these buildings to have survived; to a great extent in Trenches 1, 2 and 4, and to a lesser extent in Trench 5. The lack of remains within Trench 3 indicates that the building indicated on the 1<sup>st</sup> edition OS map either no longer survives or lies to the east within the area that could not be excavated for environmental concerns.
- 8.3** While the limited scope of this evaluation has made identifying a function for these structures difficult the evidence from documentary evidence and maps indicate that they were associated with Lower Tilgate House (in the case of Trench 1 and 2) and two buildings possibly associated with Tilgate Mill (in the case of Trench 4 and 5).

## **BIBLIOGRAPHY**

Brossler, A., 2009a. *Upper Mole FAS – Tilgate: Specification for Archaeological Trial Trenching*. Jacobs report

Brossler, A., 2009b. *Upper Mole Flood Alleviation Scheme – Tilgate, Crawley, West Sussex: Cultural Heritage Desk Based Assessment*. Jacobs report

Hather, J. G. 2000. *The Identification of the Northern European Woods: A Guide for archaeologists and conservators*. Archetype Publications Ltd, London.

Schoch, W., Heller, I., Schweingruber, F. H., & Kienast, F. 2004. *Wood anatomy of central European Species*. Online version: [www.woodanatomy.ch](http://www.woodanatomy.ch)

Schweingruber, F. H. 1990. *Anatomy of European woods: an atlas for the identification of European trees, shrubs, and dwarf shrubs*. Bern, Verlag P. Haupt .

## **ACKNOWLEDGEMENTS**

The assistance of Adam Brossler of Jacobs and John Mills of west Sussex County Council is gratefully acknowledged.

**SMR Summary Form**

|  |  |               |                |                    |        |       |
|--|--|---------------|----------------|--------------------|--------|-------|
| Site Code  | ICT 09   |               |                |                    |        |       |
| Identification Name and Address  | Mole Hill, Tilgate, Crawley, West Sussex       |               |                |                    |        |       |
| County, District &/or Borough  | Tilgate, Crawley, West Sussex                  |               |                |                    |        |       |
| OS Grid Refs.  | 528009, 134394                                 |               |                |                    |        |       |
| Geology  | Upper Tonbridge and Wells Sand (BGS Sheet 302) |               |                |                    |        |       |
| Arch. South-East Project Number  | 4175   |               |                |                    |        |       |
| Type of Fieldwork  | Eval. <b>X</b>                                 | Excav.        | Watching Brief | Standing Structure | Survey | Other |
| Type of Site   | Green Field <b>X</b>                           | Shallow Urban | Deep Urban     | Other              |        |       |
| Dates of Fieldwork   | Eval. 23/2/10 to 25/2/10                       | Excav.        | WB.            | Other              |        |       |
| Sponsor/Client   | Jacobs   |               |                |                    |        |       |
| Project Manager  | Darryl Palmer                                  |               |                |                    |        |       |
| Project Supervisor   | Nick Garland                                   |               |                |                    |        |       |
| Period Summary   | Palaeo.  | Meso.         | Neo.           | BA                 | IA     | RB    |
|  | AS   | MED           | PM <b>X</b>    | Other              |        |       |
| <p>100 Word Summary.</p> <p><i>A programme of archaeological evaluation was undertaken on land to the north of Tilgate Dam, Tilgate, Crawley, West Sussex, in advance of a proposed raising of the height of the dam and associated works.</i></p> <p><i>The work was undertaken between the 23<sup>rd</sup> and 25<sup>th</sup> of February 2010 on behalf of Jacobs and the Environmental Agency. Five evaluation trenches measuring between 5m and 8.5m in length sampled the archaeology across the site. The natural horizon varied in depth from 85.144m OD in the east of the site and 86.560m OD in the west of the site.</i></p> <p><i>The remains of several post-medieval buildings were uncovered as shown on the 1<sup>st</sup> edition OS map. The remains relate to the Lower Tilgate House and two possible mill buildings (Trench 4 and 5).</i></p> |  |               |                |                    |        |       |

## OASIS Form

### OASIS ID: archaeol6-74393

#### Project details

Project name Upper Mole FAS, Tilgate

A programme of archaeological evaluation was undertaken on land to the north of Tilgate Dam, Tilgate, Crawley, West Sussex, in advance of a proposed raising of the height of the dam and associated works.

#### Short description of the project

The work was undertaken between the 23<sup>rd</sup> and 25<sup>th</sup> of February 2010 on behalf of Jacobs and the Environmental Agency. Five evaluation trenches measuring between 5m and 8.5m in length sampled the archaeology across the site. The natural horizon varied in depth from 85.144m OD in the east of the site and 86.560m OD in the west of the site.

The remains of several post-medieval buildings were uncovered as shown on the 1<sup>st</sup> edition OS map. The remains relate to the Lower Tilgate House and two possible mill buildings (Trench 4 and 5).

Project dates Start: 23-02-2010 End: 25-02-2010

Previous/future work Yes / Yes

Any associated project reference codes ICT09 - Sitecode

Type of project Field evaluation

Site status None

Current Land use Woodland 3 - Mixed

Monument type BUILDING Post Medieval

Significant Finds POTTERY Post Medieval

Significant Finds CBM Post Medieval

Methods & techniques 'Targeted Trenches'

Development type Marine Renewables Development (wave, tidal)

Prompt Planning condition

Position in the planning process After full determination (eg. As a condition)

#### Project location

Country England

Site location WEST SUSSEX CRAWLEY CRAWLEY Upper Mole, Tilgate Forest Park

Postcode RH10 5

Study area 17500.00 Square metres

Site coordinates TQ 28009 34394 51.0940058434 -0.171782056527 51 05 38 N 000  
10 18 W Point

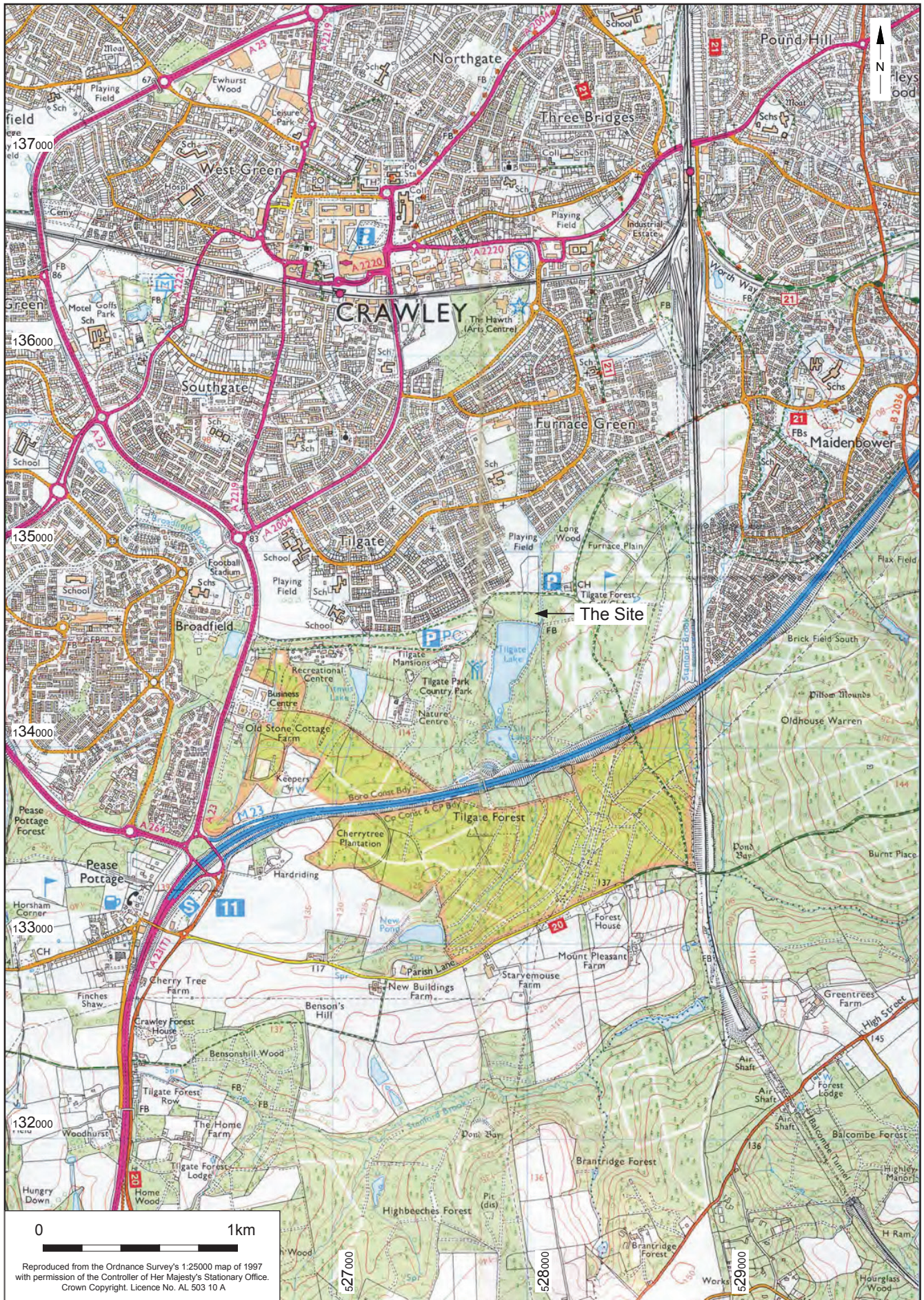
Height OD / Depth Min: 85.14m Max: 86.56m

|                               |  |
|-------------------------------|--|
| Project creators              |  |
| Name of Organisation          | Archaeology South East   |
| Project brief originator      | Jacobs UK Limited  |
| Project design originator     | Jacobs UK Limited  |
| Project director/manager      | Darryl Palmer  |
| Project supervisor            | Nick Garland   |
| Type of sponsor/funding body  | Environment Agency   |
| Project archives              |  |
| Physical Archive recipient    | Local Museum   |
| Physical Contents             | 'Animal Bones','Ceramics','Environmental','Glass'  |
| Digital Archive recipient     | Local Museum   |
| Digital Contents              | 'Animal Bones','Ceramics','Environmental','Glass','Stratigraphic','Survey','other'                 |
| Digital Media available       | 'Images raster / digital photography','Survey','Text'  |
| Paper Archive recipient       | Local Museum   |
| Paper Contents                | 'Animal Bones','Ceramics','Environmental','Glass','Stratigraphic','Survey','other'                 |
| Paper Media available         | 'Context sheet','Diary','Map','Photograph','Plan','Report','Survey'                                |
| Project bibliography 1        |  |
| Publication type              | Grey literature (unpublished document/manuscript)  |
| Title                         | An Archaeological Evaluation at Upper Mole, Flood Alleviation Scheme Tilgate, Crawley, West Sussex |
| Author(s)/Editor(s)           | Garland, N   |
| Other bibliographic details   | 2010028  |
| Date                          | 2010   |
| Issuer or publisher           | Archaeology South East   |
| Place of issue or publication | Portslade  |
| Entered by                    | Nick Garland (n.garland@ucl.ac.uk)   |
| Entered on                    | 16 March 2010  |

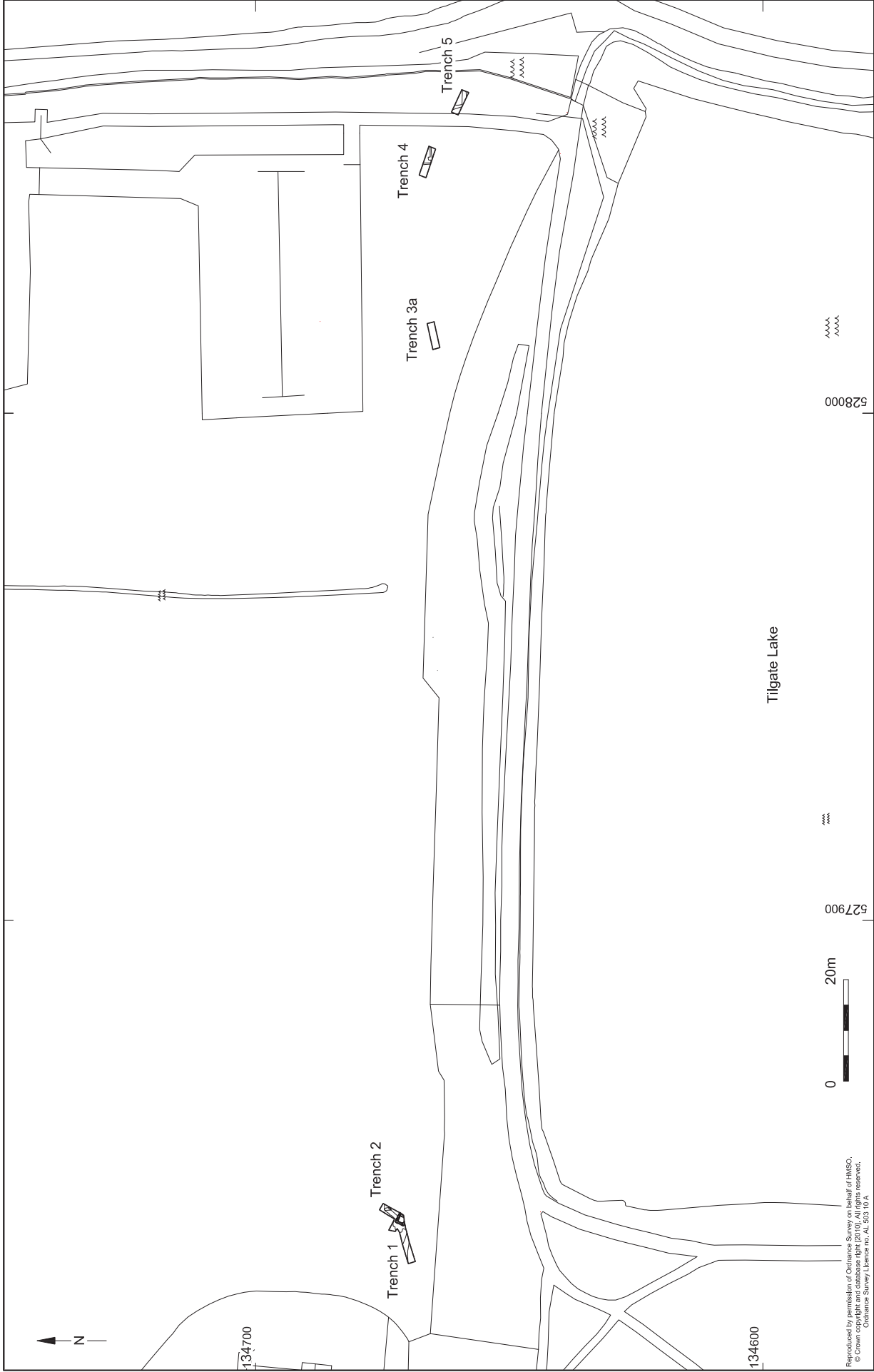
**Appendix 1: Quantification of the finds.**

| Context      | Pot      | Wt (g)     | CBM       | Wt (g)       | Bone     | Wt (g)     | Shell    | Wt (g)   | FCF      | Wt (g)   | Stone     | Wt (g)      | Fe       | Wt (g)    |
|--------------|----------|------------|-----------|--------------|----------|------------|----------|----------|----------|----------|-----------|-------------|----------|-----------|
| 1/004        | 1        | 6          | 4         | 3660         | 3        | 118        |          |          |          |          | 5         | 2414        | 2        | 20        |
| 1/006        |          |            | 8         | 530          | 4        | 74         | 1        | 4        |          |          |           |             |          |           |
| 1/009        |          |            | 1         | 4724         |          |            |          |          |          |          | 1         | 3650        |          |           |
| 1/010        | 4        | 106        | 2         | 488          |          |            |          |          | 1        | 4        | 5         | 128         | 2        | 34        |
| 3/003        |          |            | 8         | 6342         |          |            |          |          |          |          |           |             |          |           |
| 4/007        |          |            | 1         | 3134         |          |            |          |          |          |          |           |             |          |           |
| 5/003        | 3        | 258        | 7         | 4890         |          |            |          |          |          |          |           |             |          |           |
| <b>Total</b> | <b>8</b> | <b>370</b> | <b>31</b> | <b>23768</b> | <b>7</b> | <b>192</b> | <b>1</b> | <b>4</b> | <b>1</b> | <b>4</b> | <b>11</b> | <b>6192</b> | <b>4</b> | <b>54</b> |

| Context      | Cu. Al.  | Wt (g)    | Zinc     | Wt (g)    | Slag     | Wt (g)   | CTP      | Wt (g)   | Glass     | Wt (g)     | Charcoal | Wt (g)   |
|--------------|----------|-----------|----------|-----------|----------|----------|----------|----------|-----------|------------|----------|----------|
| 1/004        |          |           |          |           | 1        | 4        |          |          | 12        | 90         |          |          |
| 1/006        |          |           |          |           |          |          |          |          |           |            |          |          |
| 1/009        |          |           |          |           |          |          |          |          |           |            |          |          |
| 1/010        | 1        | 24        | 2        | 14        |          |          | 1        | 4        | 6         | 70         | 2        | <2       |
| 3/003        |          |           |          |           |          |          |          |          | 5         | 90         |          |          |
| 4/007        |          |           |          |           |          |          |          |          |           |            |          |          |
| 5/003        |          |           |          |           |          |          |          |          |           |            |          |          |
| <b>Total</b> | <b>1</b> | <b>24</b> | <b>2</b> | <b>14</b> | <b>1</b> | <b>4</b> | <b>1</b> | <b>4</b> | <b>23</b> | <b>250</b> | <b>2</b> | <b>0</b> |



|                          |               |                  |        |
|--------------------------|---------------|------------------|--------|
| © Archaeology South-East |               | Tilgate, Crawley | Fig. 1 |
| Project Ref: 4175        | March 2010    | Site location    |        |
| Report Ref: 2010028      | Drawn by: JLR |                  |        |



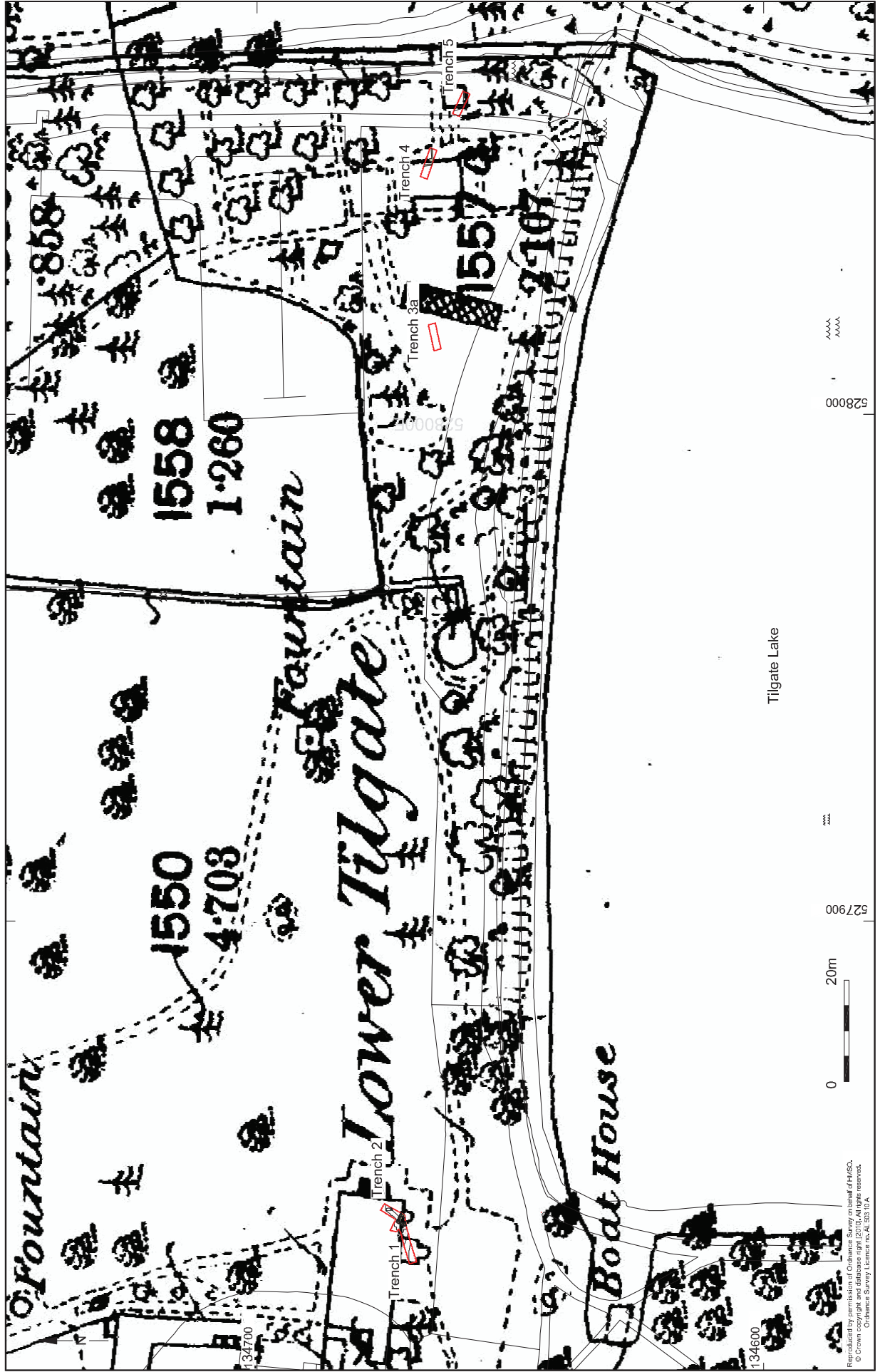
Reproduced by permission of Ordnance Survey on behalf of HMSO.  
 © Crown copyright and database right [2010]. All rights reserved.  
 Ordnance Survey Licence no. AL 503 10/A

© **Archaeology South-East**  
 Project Ref: 4175    March 2010  
 Report Ref: 2010028    Drawn by: LD/JR

Tilgate, Crawley  
 Trench location

Fig. 2

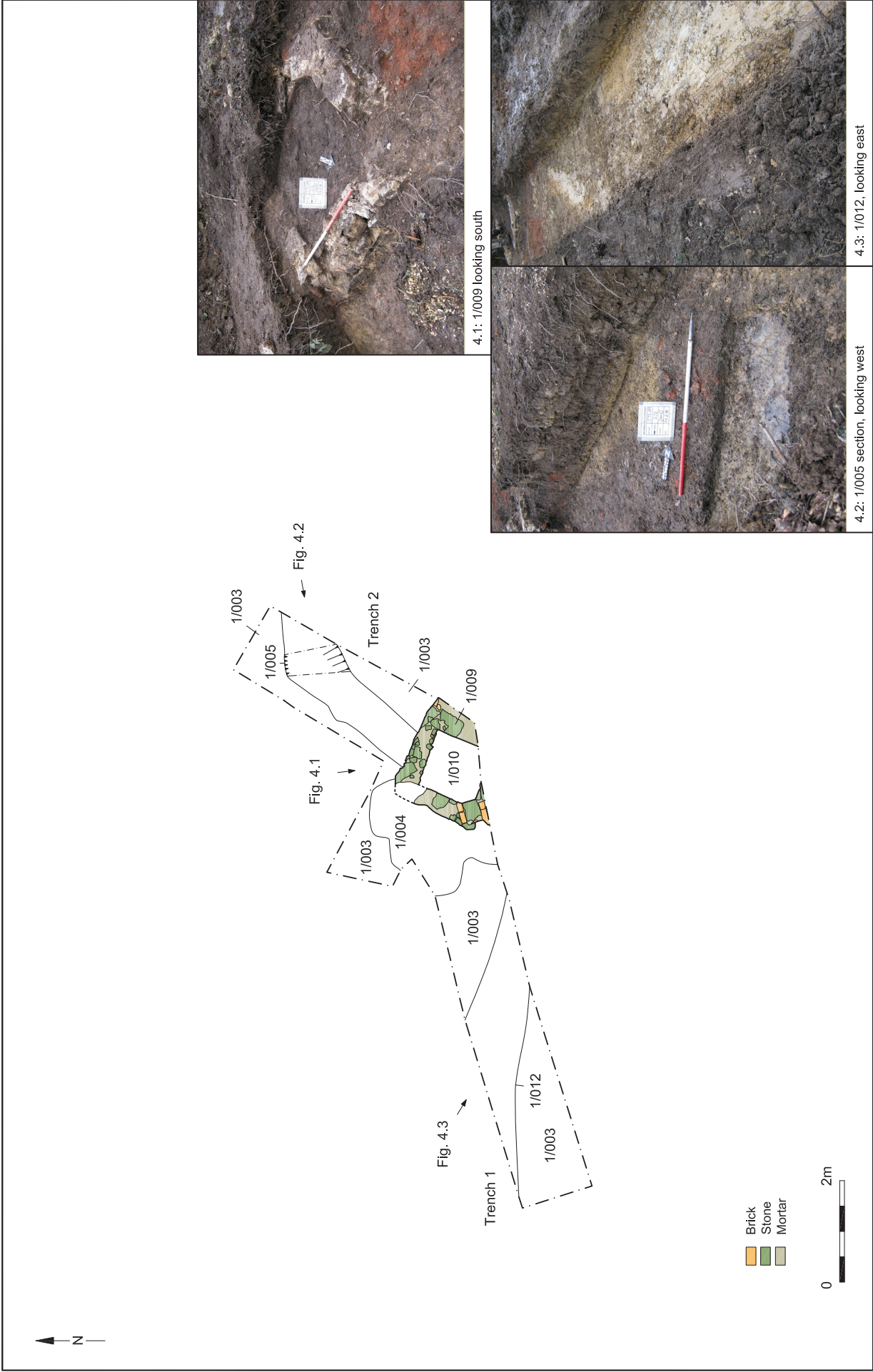




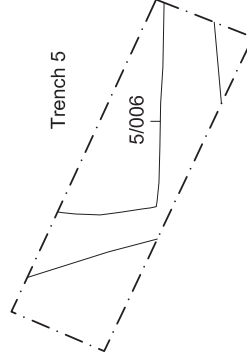
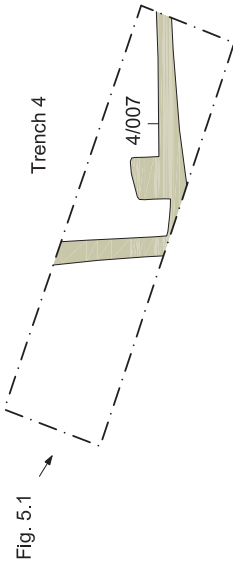
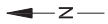
Reproduced by permission of Ordnance Survey on behalf of HMSO.  
 © Crown copyright and database right (2010). All rights reserved.  
 Ordnance Survey Licence no. AT 505 10/A

|                          |              |   |  |
|--------------------------|--------------|---|--|
| © Archaeology South-East |              | Tilgate, Crawley  |  |
| Project Ref: 4175        | March 2010   | Trench location overlain onto 1st edition Ordnance Survey |  |
| Report Ref: 2010028      | Drawn by: JR |   |  |

Fig. 3



|                          |                 |  |  |
|--------------------------|-----------------|--|--|
| © Archaeology South-East |                 | Tilgate, Crawley                       |  |
| Project Ref: 4175        | March 2010      | Trenches 1 and 2 plans and photographs |  |
| Report Ref: 2010028      | Drawn by: LD/JR | Fig. 4                                 |  |



5.1: 1/009 looking south

|                          |                 |
|--------------------------|-----------------|
| © Archaeology South-East |                 |
| Project Ref: 4175        | March 2010      |
| Report Ref: 2010028      | Drawn by: LD/JR |

Tilgate, Crawley

Trenches 4 and 5 plans and photographs

Fig. 5

Head Office  
Units 1 & 2  
2 Chapel Place  
Portslade  
East Sussex BN41 1DR  
Tel: +44(0)1273 426830 Fax: +44(0)1273 420866  
email: [fau@ucl.ac.uk](mailto:fau@ucl.ac.uk)  
Web: [www.archaeologyse.co.uk](http://www.archaeologyse.co.uk)



London Office  
Centre for Applied Archaeology  
Institute of Archaeology  
University College London  
31-34 Gordon Square, London, WC1 0PY  
Tel: +44(0)20 7679 4778 Fax: +44(0)20 7383 2572  
Web: [www.ucl.ac.uk/caa](http://www.ucl.ac.uk/caa)

The contracts division of the Centre for Applied Archaeology, University College London 

©Archaeology South-East