OLD BARROW HILL, SHIREHAMPTON, BRISTOL.

NGR: ST 52810 77235

GEOLOGICAL AND ARCHAEOLOGICAL EVALUATION

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Author: A. Hood
Date: 19/11/2007

Approved: Tracy Michaels

QA Checked: Diana King

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CONTENTS

Summary

Glossary of Archaeological Terms and Abbreviations

- 1 INTRODUCTION
- 2 PROJECT BACKGROUND
- 3 AIMS
- 4 METHODOLOGY
- 5 ARCHAEOLOGICAL RESULTS
- 6 CONCLUSIONS
- 7 BIBLIOGRAPHY
- 8 ACKNOWLEDGEMENTS

APPENDICES

Appendix 1: Geological and Palaeolithic Archaeological Evaluation

FIGURE LIST

Figure 1: Site Location

Figure 2: Trench Locations

SUMMARY

In September 2007 Foundations Archaeology, in association with Dr Rob Scaife of the University of Southampton and Dr Simon Lewis of Queen Mary, University of London, undertook a programme of geo-archaeological and archaeological evaluation on land at Old Barrow Hill, Shirehampton, Bristol (NGR: ST 52810 77235). The project was commissioned by Bovis Homes (SW) Ltd. in advance of proposed development.

The project comprised the excavation and recording of five archaeological evaluation trenches across the proposed development area. Sondages were excavated in Trenches 1-4 for geo-archaeological assessment.

No archaeological features, deposits or artefacts were present within the archaeological evaluation trenches and no Pleistocene sediments or Palaeolithic artefacts were present within the sondages.

The geo-archaeological report is attached as an appendix to this report.

GLOSSARY OF ARCHAEOLOGICAL TERMS AND ABBREVIATIONS

Archaeology

For the purpose of this project, archaeology is taken to mean the study of past human societies through their material remains from prehistoric times to the modern era. No rigid upper date limit has been set, but AD 1900 is used as a general cut-off point.

Bronze Age

The prehistoric period between c. 2000 BC and c. 700 BC.

CBM

Ceramic Building Material.

Medieval

The period between AD 1066 and AD 1500.

Natural

In archaeological terms this refers to the undisturbed natural geology of a site, in this case Pennant Sandstone overlaid by alluvial clay.

NGR

National Grid Reference from the Ordnance Survey Grid.

OD

Ordnance datum; used to express a given height above sea-level. (AOD Above Ordnance Datum).

OS

Ordnance Survey.

Palaeolithic

The 'Old' Stone Age, traditionally dated c. 500,000 BC to c. 12,000 BC.

Pleistocene

The geological epoch dated c. 1.8 million to c. 11,550 BP.

Post-medieval

The period between AD 1500 and AD 1900.

Roman

The period traditionally dated AD 43 until AD 410.

1 INTRODUCTION

- 1.1 This report presents the findings of a geological and archaeological evaluation undertaken by Foundations Archaeology, in association with Dr Rob Scaife of the University of Southampton and Dr Simon Lewis of Queen Mary, University of London, during September 2007 on land at Old Barrow Hill, Shirehampton, Bristol (NGR: ST 52810 77235). The project was commissioned by Bovis Homes (SW) Ltd. in advance of development.
- 1.2 The project was undertaken in accordance with the Written Scheme of Investigation (WSI) prepared by Foundations Archaeology (2007), based upon a brief issued by the archaeology section of Bristol City Council (BCC, 2007). The fieldwork was undertaken in accordance with IFA *Standards and Guidance on Archaeological Evaluation* (1994, revised 2001) and Archaeological Guidance Paper 4: *Archaeological Evaluation:* (guidelines) issued by English Heritage (London Region).
- 1.3 This report constitutes the results of the project. The code of conduct of the Institute of Field Archaeologists was adhered to throughout.

2 PROJECT BACKGROUND

- 2.1 The site is located on the northwest side of Old Barrow Hill, Shirehampton, and west of the Lower High Street.
- 2.2 A planning application has been made for the residential development of the site (Local Authority Reference: 07/01617/F).
- 2.3 Shirehampton is of national archaeological significance for the numerous artefacts of Lower Palaeolithic date which have been found in the gravel terraces associated with the River Avon. Archaeological observations in the 1950s indicate that the proposed development site lies at the south-western edge of the terrace which underlies much of the centre of Shirehampton, identified by the British Geological Survey as the Second Gravel Terrace (Barton et al. 2002, 12). The terrace is known to have some potential for the survival of faunal material. In the early-nineteenth century "elephant" (presumably mammoth) bones are reported to have been found at Shirehampton (Rutter 1829, 315).
- 2.4 Formal archaeological fieldwork was carried out for the first time in Shirehampton only in 2003. Recent evaluations at Shirehampton Health Centre, Pembroke Road (Wessex Archaeology 2004) and Twyford House, Lower High Street has identified some variability in the character of the gravels within the terrace. However, at Twyford House deposits containing both molluscs and mammal remains were recorded. Amino Acid Racemization (AAR) of mollusc shell fragments recovered from the sediments produced a dating correlation with Marine Isotope Stage (MIS) 9 (*c*.340,000 years BP), although Optically-Stimulated Luminescence (OSL) obtained a minimum age estimate of *c*.61,000 years BP (MIS 5). These inconsistencies between the

- different strands of evidence leave the dating of the deposits unresolved (Young 2005). However, it is currently hypothesised that the younger date may represent a partial reworking of the deposits in MIS 4.
- 2.5 Many Palaeolithic artefacts have been recovered from this terrace since the 1920s (Lacaille 1954, 6-7; Wymer 1999, 183-186 & Map 57), though almost all have been chance finds produced by the excavation of services. Also, it is not clear to what extent this assemblage is biased by collecting preferences. However, there is evidence of Levallois prepared-core technology and this may reflect early Neanderthal occupation between 300,000 and 100,000 years ago, toward the end of the Middle Pleistocene (Bates and Wenban-Smith 2005). Sieving of the deposits during recent fieldwork at St. Mary's Primary School and at Shirehampton Health Centre, Pembroke Road suggests a relatively high concentration of artefacts (Payne 2006).
- 2.6 Part of a Bronze Age circular timber structure approximately 7 metres in diameter was recorded during an archaeological evaluation around 300 metres to the west of the present site in 1993 (Burchill 1993). Four postholes cut into the underlying red sandy clay subsoil, each 0.33 metres in diameter and 0.25 metres deep, were excavated on the south-west quadrant of the circle. The function of the monument was not established but the excavator suggested that it might be interpreted as a simple roundhouse.
- 2.7 There is also evidence for Roman occupation at Shirehampton. A ditch was recorded during excavation at The Ridge to the north of High Street in 2003 (Young 2003). The nature of Roman settlement of the Shirehampton area is unclear, however.
- 2.8 The village of Shirehampton has a Medieval origin and there are extant seventeenth-century buildings on the northern side of High Street. Very little is currently known in detail about the nature of the Medieval and later occupation of the village but the present site probably lies outside core of the original village.
- 2.9 The study area therefore contained the potential for significant archaeological features and deposits, predominantly associated with the Palaeolithic, Bronze Age and Roman periods. This will not prejudice the evaluation against the recovery of data relating to other periods.

3 AIMS

3.1 The aims of the archaeological evaluation were to gather high quality data from the direct observation of archaeological deposits, in order to provide sufficient information to establish the nature, extent, preservation and potential of any surviving archaeological remains. It also sought to elucidate the nature, date of formation and development of the sedimentary deposits above the rock head and to establish the full date range of human activity and occupation within the site.

- 3.2 Cultural material of Palaeolithic date is particularly significant. If it was encountered in a primary context, the material was examined and recorded in detail. Material of a secondary context can also provide valuable data and its potential was suitably assessed. The preservation quality of the sedimentary horizons and their potential for establishing a greater understanding of the nature and development of the gravel terrace was also assessed.
- 3.3 The evaluation also sought to make recommendations for the management of the resource, including further archaeological works if necessary. In turn this will allow reasonable planning decisions to be taken regarding the archaeological provision for the areas affected by the proposed development.
- 3.4 These aims were achieved through pursuit of the following specific objectives:
 - i) To define and identify the nature of archaeological deposits on site, and date these where possible;
 - ii) To attempt to characterise the nature of the archaeological sequence and recover as much information as possible about the spatial patterning of features present on the site;
 - iii) To recover a well dated stratigraphic sequence which will attempt to determine the complexity of the horizontal and vertical stratigraphy present, and recover coherent artefact, ecofact and environmental samples;
 - iv) To determine the potential of the site to provide palaeoenvironmental and/or economic evidence and the forms in which such evidence may be present.

4 METHODOLOGY

- 4.1 The WSI required the excavation of four trenches, measuring 12m x 4m, which comprised an approximate 3.4% sample of the site. Each of the archaeological evaluation trenches was to contain a test pit to assess the underlying geology. Due to on-site constraints it was necessary to amend the size and location of Trenches 1 and 2 and the location of Trench 4. An extra trench, Trench 5, was excavated in order to bring the final sample size to approximately 3.2%. Trench 5 did not contain a geological test pit. The final trench locations are shown in Figure 2.
- 4.2 Non-significant overburden was removed, under constant archaeological supervision, to the top of the archaeological deposits or the underlying natural deposits, whichever were encountered first. This was achieved through the use of a JCB type mechanical excavator equipped with a toothless grading bucket. Thereafter cleaning and excavation was conducted by hand. Spoil tips were scanned for finds.

- 4.3 All archaeological excavation and recording work was undertaken in accordance with the WSI and the Foundations Archaeology Technical Manual 3: Excavation Manual.
- 4.4 Geo-archaeological sondages were excavated in Trenches 1-4, under constant supervision, by use of a JCB type mechanical excavator equipped with a toothless grading bucket. Thereafter cleaning and excavation was conducted by hand.
- 4.5 All geo-archaeological excavation, recording and sampling was undertaken in accordance with the WSI. In the event, no Pleistocene sediments were present within the study area and therefore no geo-archaeological samples were taken. The geo-archaeological report is attached as Appendix 1.

5 ARCHAEOLOGICAL RESULTS

- 5.1 **Trench 1** was 17m long by 2m wide and was excavated to the top of the natural deposits, which consisted of a compact, pink-brown clay with occasional gravel. Trench 1 had a sloping profile and therefore the stratigraphic sequence at the northeast and southwest ends of the trench are described separately.
- 5.2 The southwest end of Trench 1 was excavated down to the top of the natural deposits at a depth of 0.79m (27.40m OD) below the modern ground surface. The natural was overlaid by a dark brown clay silt (101), up to 0.23m thick, which extended for a distance of 11m along the length of the trench. Context (101) contained occasional brick and CBM fragments. Layer (101) was overlaid by context (102), up to 0.21m thick, which comprised a brick and stone rubble layer. Context (102) extended for a distance of 5m along the length of the trench. Layer (102) was overlaid by context (103), up to 0.35m thick, which consisted of a mid brown clay silt topsoil.
- 5.3 The northeast end of Trench 1 was excavated down to the top of the natural deposits at a depth of 0.38m (26.89m OD) below modern ground surface. The natural was directly overlaid by topsoil (103). No archaeological features, deposits or artefacts were present within the trench.
- Trench 2 was 4m long by 4m wide and was excavated down to the top of the natural deposits, which comprised a compact, pink-brown clay, at an average depth of 0.71m (28.40m OD) below modern ground surface. The natural was overlaid by (201), up to 0.14m thick, which comprised a mid brown clay silt. Context (201) was overlaid by (202), up to 0.44m thick, which consisted of a layer of cinder and brick rubble. Layer (202) was overlaid by topsoil (201), up to 0.13m thick, which comprised a mid brown clay silt. No archaeological features, deposits or artefacts were present within the trench.
- 5.5 **Trench 3** was 12m long by 4m wide and was excavated down to the top of the natural deposits, which comprised a compact, pink-brown clay with occasional gravel, at an average depth of 0.31m (24.93m OD) below modern ground

- surface. The natural was overlaid by (301), up to 0.32m thick, which comprised a mid brown clay silt topsoil. A single sherd of china-ware pottery was recovered from context (301). No archaeological features, deposits or artefacts were present within the trench.
- 5.6 **Trench 4** was 12m long by 4m wide and was excavated down to the top of the natural deposits, which comprised a compact, pink-brown clay, at an average depth of 0.26m (25.65m OD) below modern ground surface. The natural was overlaid by (401), up to 0.26m thick, which comprised a mid brown clay silt topsoil. Context (401) contained frequent modern artefacts and building materials. No archaeological features, deposits or artefacts were present within the trench.
- 5.7 **Trench 5** was 8m long by 4m wide and was excavated down to the top of the natural deposits, which comprised a compact, pink-brown clay, at an average depth of 0.57m (26.48m OD) below modern ground surface. The natural was overlaid by (501), up to 0.16m thick, which comprised a mid brown clay silt. Layer(501) was overlaid by context (502), up to 0.30m thick, which comprised a layer of re-deposited natural clay. Context (502) was overlaid by topsoil (503), up to 0.44m thick. No archaeological features, deposits or artefacts were present within the trench.

6 CONCLUSIONS

- On the whole, visibility conditions were good. The lack of intact subsoils across the study area suggests that the site had previously been stripped down to the natural deposits. It is probable that this activity was associated with the construction of the post-war pre-fab buildings.
- 6.2 The archaeological evaluation has indicated that the site has a low potential for the presence of archaeological remains. The geo-archaeological evaluation has indicated that Pleistocene fluvial sediments are not present within the site.
- 6.3 The archive has been prepared in accordance with *MAP2* (English Heritage 1990) and *Guidelines for the preparation of archaeological archives for long-term storage* (UKIC 1990). It will be deposited with Bristol City Musuem, under accession code 2007\99, within 6 months.
- 6.4 The results of the work will be published in the appropriate journal(s) and an OASIS report will be completed and submitted.

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Old Barrow Hill, Shirehampton, Bristol: Geological and Archaeological Evaluation

APPENDIX 1: Geological and Palaeolithic Archaeological Evaluation

LAND AT OLD BARROW HILL, SHIREHAMPTON, BRISTOL (NGR 5285 7725)

GEOLOGICAL AND PALAEOLITHIC ARCHAEOLOGICAL EVALUATION

October 2007

Dr Simon G. Lewis

Department of Geography, Queen Mary, University of London, Mile End Road, London, E1 4NS email: s.lewis@qmul.ac.uk

1. Summary

1.1 This geological evaluation at Old Barrow Hill, Shirehampton indicates that there are no Pleistocene sediments present at the site. Specifically there are no deposits associated with the Ham Green Member (100ft terrace) of the Avon Formation, which underlies part of the Shirehampton area. Palaeolithic artefacts have been recovered from these river deposits at various locations around Shirehampton, including within a few hundred metres of the site under consideration at Old Barrow Hill. Therefore a geological and archaeological assessment of the site prior to its redevelopment may have yielded important information. However these results indicate that the terrace does not extend across this site and the geological succession consists of disturbed soils, made ground and slope deposits resting directly on Triassic bedrock. In the light of these results no further geoarchaeological work can be warranted at this stage.

2. Introduction

- 2.1 The Pleistocene deposits that underlie part of the village of Shirehampton form part of the 100ft terrace of the River Avon. The area is now covered by the built up area of Shirehampton and much of the available information relates to work done in the first half of the 20th century, when Palaeolithic artefacts were collected and a number of exposures of sediments were described. Recent work has mostly been limited to investigation of exposures as part of the redevelopment of the area.
- 2.2 Prior to redevelopment of land at Old Barrow Hill, Shirehampton, an assessment of the archaeological potential of the locality was undertaken. This report considers the geological succession revealed by the excavations and its palaeoenvironmental and archaeological significance.

3. Geological, geomorphological and archaeological context

- 3.1 The gravels of the River Avon form a series of three terraces (Table 1). These can be identified over much of the river's length, though tracing them continuously downstream is problematic due to the presence of gorges at Clifton and Hanham, where there is no preservation of terraces. Formal lithostratigraphic nomenclature has also been applied to the basin.
- 3.2 The gravels at Shirehampton lie beneath a terrace remnant approximately 30m (c.100ft) above the river. It has been referred to as the 100ft terrace and also as Terrace 2. A geological cross section figured by ApSimon and Boon (1959) depicts a degraded terrace, with a marked slope down towards the river at the front edge, though much of the terrace surface lies between c.30-35m (100-110ft) OD.

Table 1. Terrace and formal lithostratigraphical nomenclature for the River Avon (after Bates and Wenban-Smith, 2005).

West of Avon Gorge (Kellaway & Welch, 1993)	Formal lithostratigraphy (Campbell <i>et al.</i> , 1999)		
10 ft terrace	Bathampton Member		
50 ft terrace	Stidham Member	Avon Formation	
100 ft terrace	Ham Green Member		

- 3.3 Previous workers have described sections and/or archaeological finds in the area at a number of localities close to Walton Road. These are summarised in Table 2. Considering the small size of the mapped terrace remnant (c. 0.25km²) this represents a remarkable density of find spots.
- 3.4 The Pleistocene and Palaeolithic archaeological record in the Shirehampton area has recently been evaluated as part of the regional Palaeolithic Research Framework (Bates and Wenban-Smith, 2005) and a number of key localities have been identified, including those listed in Table 2 in the Shirehampton area.
- 3.5 The geological maps depict a spread of terrace gravels extending over much of Shirehampton, and extending in a northerly direction as far as and a little beyond Old Barrow Hill, suggesting that the site under consideration is underlain by fluvial gravels.
- 3.6. Also mapped further north is an area of "Head" deposits, these are periglacial slope deposits and they occur at the foot of the slope that extends from the edge of the terrace and descends in a northerly direction towards Avonmouth. Two artefact find spots are recorded by the Southern Rivers Palaeolithic Project (Wessex Archaeology, 1994) and it is possible that these are reworked from the terrace gravels upslope.
- 3.7 The site itself is located on ground that slopes down to the north, the south eastern perimeter of the site is at around 29m OD and the northern corner is around 24m OD.

Table 2. Important archaeological and geological sites in the Shirehampton area (after Bates and Wenban-Smith, 2005).

Site	Grid ref	Comment
Station Hill	529 768	Surface archaeological find
Station Road	532 766	Surface archaeological find
Walton Road	530 768	Sandy loam with flint and chert, above clayey loam
		with chert, flint and quartzite (Lacaille, 1954)
Cemetery	529 769	Limestone gravels, overlain by sand and sandy clay
		(Lacaille, 1954)
Old Barrow Hill	529 772	Remnant patches of gravel (Brown, 1956)
West Camp	530 770	Gravel overlain by sands and 'earthy' sands
		(ApSimon and Boon, 1959)
Health Centre	531 769	Bedded gravels beneath solifluction deposits
Twyford House	529 770	Bedded sands and gravels beneath solifluction
		deposits, molluscs present

4. Results of the evaluation: geology

- 4.1 A total of four trenches (1-4) were excavated for archaeological assessment purposes on 17th September 2007 (Fig. 1). Within each of these trenches, which were excavated to below sub-soil level deep test pits were dug using a mechanical excavator to assess the underlying geology. The sections were recorded using standard sedimentological procedures. The location of the trenches is shown in Fig. 1.
- 4.2 The logged sections recorded in each of the test pits are shown in Figure 2. The general character of the site during excavation is shown in Fig. 3 and views of the exposed sections are shown in Figures 4-7.
- 4.3 None of the test pits revealed any Pleistocene fluvial sediments. A thin veneer of disturbed slope deposits is present in test pits 1 and 3; the latter is the at the lowest elevation of the four trenches. All four test pits exposed Triassic Mercia Mudstone bedrock at their bases. This is characterised by its brown colour and also the presence of calcite veins running through the rock in places, most notably in trench 2.
- 4.4 Test pit 1 revealed a sheared contact between the slope deposits and the underlying Triassic bedrock, marked by a sheared surface showing lineations aligned parallel to the present slope direction. This also acted as a parting lineation with the overlying sediment pealing easily off this contact under the excavator's bucket.

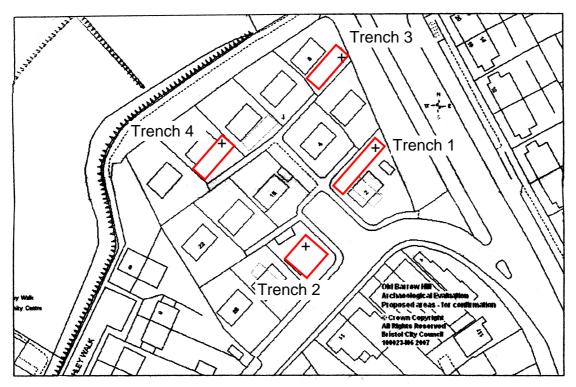


Fig. 1 Location of trenches 1-4 at Old Barrow Hill, Shirehampton. The crosses mark the location of the test pits within the larger assessment trenches.

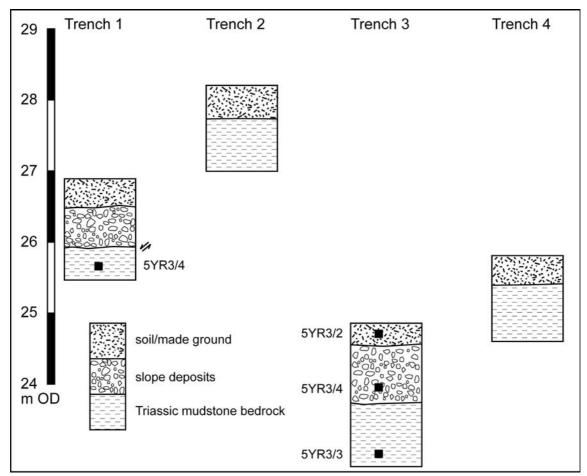


Fig. 2. Sections recorded in geological test pits 1-4 located within archaeological assessment trenches 1-4, for location details see Fig. 1.



Fig. 3. Land at Old Barrow Hill, Shirehampton. The excavator is at the location of trench 2.



Fig 4. (a) Section in Trench 1; (b) sheared contact between Triassic mudstones and Quaternary slope deposits showing prominent shear structure and slickenside features.



Fig. 5 Trench 2, showing made ground directly overlying Triassic bedrock.



Fig. 6. Trench 3, showing calcite formations within the Triassic mudstones overlain by slope deposits consisting of gravelly clay.



Fig. 7. Trench 4.

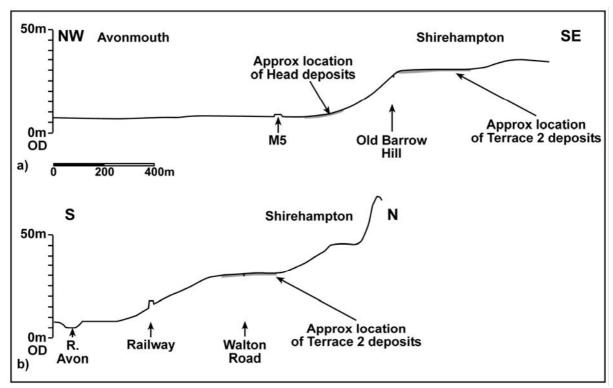


Fig. 8. Cross sections through the Shirehampton area, showing the location of the Old Barrow Hill locality and the terrace remnant. (a) NW-SE section from Shirehampton to Avonmouth, (b) N-S section from Penpole Point to the River Avon.

- 4.5 These excavations suggest that the mapped limit of the terrace deposits in this part of its distribution is in need of revision. The terrace is less extensive than is mapped and does not extend down the sloping ground north of Old Barrow Hill.
- 4.6 The topographical cross sections shown in Figure 8 clearly show that this site lies on sloping ground, below the level of the terrace surface (Fig. 8a). It is therefore unlikely that any terrace sediments would be preserved at this locality as the sediments would be affected by downslope movement. The presence of head deposits at the foot of the slope also indicates the effectiveness of periglacial mass movement. It is interesting to note that there are two artefact find spots recorded on these head deposits (Wessex Archaeology, 1994), these may well be derived from the terrace gravels which have been reworked downslope.
- 4.7 The cross sections also show the elevation of the main part of the terrace surface to be around 30-35m (the 100ft Terrace). The locality at Old Barrow Hill is several metres lower than the main part of the terrace outcrop.

5. Results of the evaluation: archaeology

5.1 No lithic artefacts were recovered during the excavation.

6. Results of the evaluation: palaeoenvironmental investigations

As no Pleistocene sediments were exposed at the site no palaeoenvironmental investigations could be undertaken

7. Results of the evaluation: scientific dating

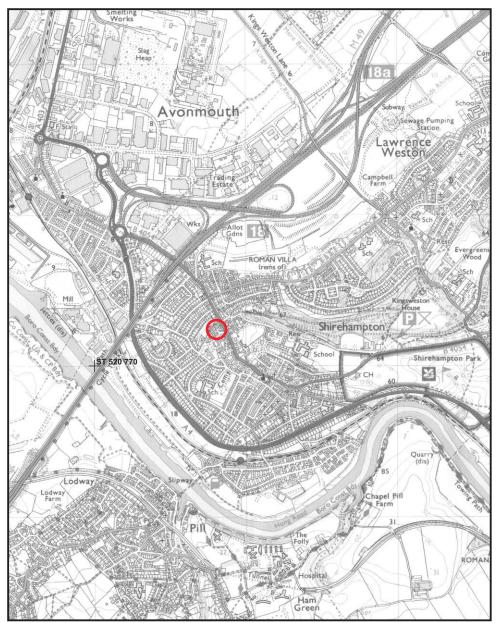
7.1 No material suitable for scientific dating was present at the site.

8. Significance

- 8.1 The assessment trenches and test pits at Old Barrow Hill, Shirehampton indicate that no Pleistocene fluvial sediments are present at the site. Therefore there is little that can be said about its archaeological significance.
- 8.2 However the information does help to refine the mapping of the terrace outcrop in this area and suggests that, as might be expected, the terrace is confined to the higher ground, around 30m OD, and that where the ground starts to slope down to the NW the terrace deposits have been removed, probably by periglacial mass movement processes.
- 8.3 In the light of these findings there is little justification for further detailed geoarchaeological work at this locality.

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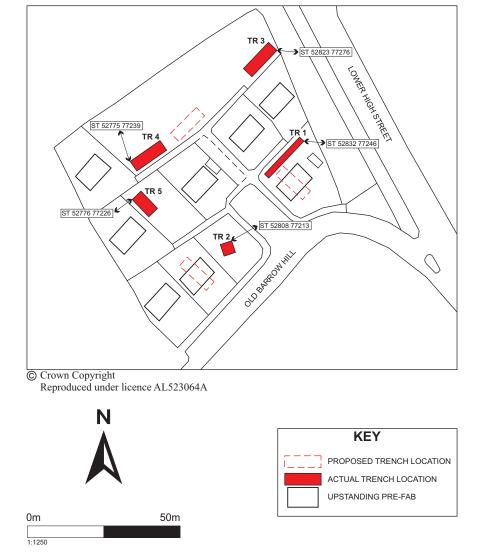


FIGURE 2: Trench Locations