

# QUEENSWAY MEADOWS NEWPORT

## PROGRAMME OF ARCHAEOLOGICAL RECORDING

CA PROJECT: 1526  
CA REPORT: 03058

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## SUMMARY

**Site Name:** Queensway Meadows  
**Location:** Newport  
**NGR:** centred on NGR ST 3520 8550  
**Type:** Programme of Archaeological Recording  
**Date:** March 2003  
**Location of Archive:** Newport Museum and Art Gallery  
**Site Code:** QMN 03

A programme of archaeological recording was undertaken by Cotswold Archaeology during preliminary exploratory boreholes and trial pits on land at Queensway Meadows, Newport

The stratigraphic sequences identified during these works provide useful information relating to a general picture of Holocene environmental conditions within the site and allow broad correlation with previous work undertaken within the immediate locality and the Severn estuary region in general. In particular an organically flecked layer, typically identified at 5.00m AOD, is interpreted as a stabilised land surface of possible Roman origin.

## 1. INTRODUCTION

1.1 In March 2003 Cotswold Archaeology (CA) carried out a programme of archaeological recording during preliminary exploratory boreholes and trial pits on land at Queensway Meadows, Newport (Fig.1). The work was undertaken for JacobsGIBB Ltd on behalf of the Welsh Development Agency.

1.2 The archaeological fieldwork was carried out in accordance with a Written Scheme of Investigation (WSI) prepared by CA and approved by GGAT Curatorial, the archaeological advisors to the Local Planning Authority (LPA). The fieldwork also followed the *Standard and Guidance for an Archaeological Watching Brief* issued by the Institute of Field Archaeologists (1999).

### ***The site***

1.3 The site comprises approximately 108.5ha of land (centred on NGR ST 3520 8550) to the south-east of Newport defined by the red-line area in Fig. 2. It is bounded to the west by Meadows Road and Queensway Meadows Industrial Estate, and to the north by facilities associated with Llanwern Steelworks. The eastern site limit is defined by a drainage ree, which also forms the historic parish boundary between Nash and Christchurch; the southern limit is defined by a further field drain and the minor road leading from Pye Corner.

1.4 Lying at approximately 6m AOD, the site is predominately utilised as permanent pasture which, in places, has reverted to rough grassland and scrub. The geology of the area is mapped as Quaternary estuarine alluvium (Geological Survey 1981).

### ***Archaeological background***

1.5 A Cultural Heritage Assessment for the site, undertaken in April 2002 (CAT 2002), is to be included within an Environmental Statement that will accompany a planning application for the proposed development of the site.

1.6 While it is not intended to repeat the information from the preceding assessment in its entirety, this preliminary work indicates that the site lies within an area of archaeological potential. In particular it is situated on the Caldicot Level, an area well-known for its distinctive archaeological and geomorphological sequences (a very



small portion of land at the southern extremity of the study area lies within the Gwent Levels Landscape of Outstanding Historic Interest (ref. HLW (Gt) 2)). Earlier archaeological investigations in the western portion of the site have identified two horizons of prehistoric peat formation separated and sealed by alluvium, although no evidence of human occupation was revealed. Roman occupation is known in the wider vicinity, although again there is no direct evidence from the site itself. The extant historic landscape was created in both the medieval and post-medieval periods and is fossilised in the surviving field patterns and drainage system.

- 1.7 It was concluded that there may be potential for further currently unrecorded peat deposits of palaeoenvironmental significance across the site, and a lower potential for associated prehistoric or Roman settlement features. There may also be some potential for currently unrecorded features associated with medieval settlement at Tatton and Pye Corner.

### **Methodology**

- 1.8 The fieldwork followed the methodology set out within the WSI (CA 2003). An archaeologist was present during intrusive groundworks, comprising the drilling of four exploratory boreholes to depths of between 7m and 14m below the present ground level (bpgl), and the mechanical excavation of five trial pits each measuring 3m in length, 2m in width, and upto 4m in depth.
- 1.9 Written, graphic and photographic records were compiled in accordance with the CA Technical Manual 1: *Excavation Recording Manual* (1996).
- 1.10 Subject to the agreement of the legal landowner the finds and site archive will be deposited with Newport Museum and Art Gallery.

## **2. RESULTS**

- 2.1 The lithostratigraphy from the boreholes and trial pits is summarised below using distinct and common layers. A table of depths and descriptions can be found in Appendix 1, with palaeotopographic model of the findings presented as Fig 3.

*Topsoil.*

- 2.2. A friable mid brown humic silty clay representing the active A horizon was identified in all of the boreholes and trial pits. The layer is notably thinner where it overlies made ground in trial pits 5 and 7.

*Subsoil.*

- 2.3. A friable light brown silty clay was revealed in trial pits 2 and 6 and in all likelihood is associated with extant ridge and furrow earthworks observed within the immediate vicinity.

*Made ground.*

- 2.4. Modern building debris comprising brick and concrete utilised to raise the ground levels in and around trial pits 5 and 7.

*Alluvial clay.*

- 2.5. Alluvial clay facies, separated by peat and organically flecked layers, were observed in all of the boreholes and trial pits. Generally the upper layers of alluvium comprise a light blue grey silty clay with evidence of orange brown mottling, becoming mid blue to mid blue grey with increasing depth.

*Organically flecked layer.*

- 2.6. A thin, friable blue grey silty clay with abundant flecks of dark organic material. It was recorded as a single horizon in boreholes 6 and 7 and within trial pit 4, and as a double horizon in trial pits 2 and 6 where it was separated by approximately 0.1m of blue grey alluvial clay.

*Peat.*

- 2.7. A single layer of woody peat occurs within the alluvial clay in borehole 1, and trial pits 5 and 7, and underlies an upper alluvial layer in trial pits 2 and 6. Two peat facies, separated by alluvial clay, were observed in boreholes 4 and 7. A third, and noticeably compacted peat layer was recorded at the base of the alluvial clay in borehole 6 overlying sands and gravels.

*Sandy silt and gravels.*

- 2.8. Orange brown sandy silt deposit with rounded igneous gravel and fragmented sandstone observed in borehole 6.

*Keuper Marl.*

- 2.9 A dense red brown Triassic marl deposit representing the solid geology was observed in boreholes 1 and 6.

### 3. DISCUSSION

- 3.1 The limitations of such a small number of boreholes and trial pits to provide information on the local archaeology and palaeoenvironmental conditions within the 100 hectare site must be immediately recognised. Furthermore, the purpose of subsurface investigations was designed to provide environmental data relating to pollutants and soil stability. The nature of the methodology used in sinking the boreholes was not conducive for accurate analysis of the strata due to the cutting action involved. Nevertheless, the basic stratigraphic sequences identified during these works can provide useful information relating to a general picture of Holocene environmental conditions within the site and allow broad correlation with previous work undertaken within the immediate locality and the Severn estuary region in general.
- 3.2 The simplified drift geological sequence for the Severn Estuary produced by Rippon (1997) and reproduced below as Table 1 may be related to the stratigraphy observed at Queensway Meadow.

<b>Unit</b>	<b>Description</b>
I	Topsoil
II	Desiccated layer/ brown clay
III	Upper blue clay (upper part of the Wentlooge Formation)
IV	Intercalated peat/ clay (middle part of the Wentlooge Formation)
V	Lower blue clay (lower part of the Wentlooge Formation)
VI	Basal sands / gravels/ peats
VII	Bedrock

Table 1: Simplified drift geological sequence around the Severn Estuary (Rippon, 1997).



- 3.3 Comparison of the generalised sequence highlighted in table 1 with the stratigraphy identified within the boreholes shows a broad correlation. Borehole 6 has the most complete representation of this sequence with only unit II being unrecorded. It remains undetermined whether unit II is not well developed within this area, or whether the limitations of the boreholes prevents it being easily distinguished from unit III (the upper blue clay).
- 3.4 Major episodes of marine transgression and regression linked to changing climatic conditions are indicated throughout the site by the identified sequence of alluvial clays and peats. The sand, gravel, and peat within borehole 6 (representative of unit VI in table 1) overlying the solid Triassic Keuper Marl geology, are likely to have been formed in the late Devensian to early Holocene. With rapid marine transgression in the early Holocene unit V, part of the Lower Wentlooge Formation, is represented in boreholes 1 and 6, and possibly also in Boreholes 4 and 7. Intercalated peat with clay observed in all boreholes and trial pits, with the exception of trial pit 4, relate to unit IV of the Middle Wentlooge, with the upper alluvial clay layer representing unit III, the Upper Wentlooge Formation.
- 3.5 The stratigraphic detail identified within the trial pits presents more accurate information for the uppermost stratigraphic units as they were directly observed in section. In particular, the organically flecked layers were clearly distinguishable as two separate horizons in trial pits 2 and 6, with a single horizon noted in trial pits 4. Similar horizons are recorded from boreholes 6 and 7, but it must be noted that the accuracy of their recorded position is likely to be poor due to the drilling methodology. Although no archaeological features or artefacts were noted within this layer some association to previous observations of such deposits may be offered.
- 3.6 Previous evaluation trenching in the south-west corner of Queensway Meadows also identified a thin organically flecked horizon that was interpreted as a stabilised land surface of possible Roman origin (BUFAU 2002). Excavations at the Nash Water Treatment Works in 1998 (PreConstruct Archaeology 1998; Meddens and Beasley 2001) provide an important indicator of the nature of Roman exploitation of the Levels within the immediate vicinity of the current site. The excavation identified major Roman field system with associated drainage dating to the late first to second centuries AD. Following a period of disuse, a second agricultural system was established at the beginning of the third century. With an average of 0.8m of post-Roman alluvium deposited at the Nash Water Treatment Works there is a strong



correlation with the depth of alluvial clay overlying the organically flecked layers identified during the current works. Consequently, these layers may be representative of a period of marine regression allowing the formation of a land surface. The twin horizons visible in trial pits 2 and 6 may indicate a period of transgression followed by a second regression possibly related to a break down in the Roman drainage system in this area.

- 3.7 Should the stratigraphic sequence identified within borehole 6 be representative of the site in general then the potential of these deposits for palaeoenvironmental reconstruction for the region through the Holocene is high. Furthermore the organically flecked horizons within the upper alluvial layers offer an insight into the Romano-British land use and management of the levels.

#### 4. CA PROJECT TEAM

Fieldwork was undertaken by David Sabin, who also compiled this report. The illustrations were prepared by Lorna Gray. The archive has been compiled by David Sabin, and prepared for deposition by Ed McSloy. The project was managed for CA by Clifford Bateman.

#### 5. REFERENCES

- BUFAU 2002 *Queensway Meadows, Newport, Gwent: Archaeological Evaluation*
- CA 2003 *Queenway Meadows, Newport: Written Scheme of Investigation for a Programme of Archaeological Recording*
- CAT 2002 *Queensway Meadows, Newport. Cultural Heritage Assessment*. Typescript report 02037
- Meddens, FM and Beasley, M 2001 Roman Seasonal Wetland Pasture Exploitation near Nash, on the Gwent Levels, Wales. *Brittania XXXII*
- Pre-Construct Archaeology 1998 *An Assessment of the Archaeological Excavations at the Nash Water Treatment Works, Newport, South Wales*. Unpublished Typescript Report 98/04

Rippon, S. 1997 *The Severn Estuary: Landscape Evolution and Wetland Reclamation*

## APPENDIX 1: CONTEXT DESCRIPTIONS

### BOREHOLE 1 centred on NGR ST 35602 86343. Maximum depth 11.60m bpgl

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00 to 0.20m	5.58m
Alluvial clay	Light blue grey silty clay	0.20 to 2.40m	5.38m
Peat	Woody peat with plant macrofossils	2.40m to 4.00m	3.18m
Alluvial clay	Mid blue grey clay	4.00m to 11.00m	1.58m
Keuper Marl	Red brown dense marl	11.00m +	-5.42m

### BOREHOLE 4 centred on NGR ST 34773 85929. Maximum depth 9.80m bpgl

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.20m	5.77m
Alluvial clay	Light blue grey silty clay	0.20m to 3.60m	5.57m
Peat	Woody peat with plant macrofossils	3.60m to 6.00m	2.17m
Alluvial clay	Mid blue grey clay	6.00m to 8.00m	-0.23m
Peat	Woody peat with plant macrofossils	8.00m to 8.20	-2.23m
Alluvial clay	Mid blue grey clay	8.20m to 9.60m +	-2.43m

### BOREHOLE 6 centred on NGR ST 35888 85583. Maximum depth 14.00m bpgl

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.09m	5.50m
Alluvial clay	Light blue grey silty clay	0.09m to 2.60m	5.41m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	2.60m to 2.62m	2.90m
Alluvial clay	Mid blue grey clay	2.62m to 3.15	2.88m
Peat	Woody peat with plant macrofossils	3.15m to 5.00m	2.35m
Alluvial clay	Mid blue grey clay	5.00m to 7.50m	0.50m
Peat	Woody peat with plant macrofossils	7.50m to 8.00m	-2.00m
Alluvial clay	Mid blue grey clay	8.00m to 11.20m	-2.5m
Peat	Compacted peat with plant macrofossils	11.20m to 11.40m	-5.70m
Sandy silt and gravel	Orange brown sandy silt with rounded and sub angular gravel	11.40m to 11.60m	-5.90m
Keuper Marl	Red brown dense marl	11.60m to 14.00m +	-6.10m

### BOREHOLE 7 centred on NGR ST 35178 85119. Maximum depth 7.00m bpgl

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.20m	6.04m
Alluvial clay	Light blue grey silty clay	0.20m to 0.80m	5.84m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	0.80m to 0.83m	5.24m
Alluvial clay	Mid blue grey clay	0.83m to 4.40m	5.21m
Peat	Woody peat with plant macrofossils	4.40m to 5.10m	1.64m
Alluvial clay	Mid blue grey clay	5.10m to 6.20m	0.94m
Peat	Woody peat with plant macrofossils	6.20m to 6.50m	-0.16m
Alluvial clay	Mid blue grey clay	6.50m to 7.00m +	-0.46m



**TRIAL PIT 2 centred on NGR ST 35366 85823. Maximum depth 3.90m bpgl**

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.20m	5.97m
Subsoil	Light brown silty clay	0.20m to 0.48m	5.77m
Alluvial clay	Light blue grey silty clay	0.48m to 1.00m	5.49m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	1.00m to 1.04m	4.97m
Alluvial clay	Mid blue grey clay	1.04m to 1.10m	4.93m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	1.10m to 1.14m	4.87m
Alluvial clay	Mid blue grey clay	1.14m to 2.20m	4.83m
Peat	Woody peat with plant macrofossils	2.20m to 3.9m +	3.77m

**TRIAL PIT 4 centred on NGR ST 34843 85706. Maximum depth 3.30m bpgl**

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.20m	5.88m
Alluvial clay	Light blue grey silty clay	0.20m to 0.65m	5.68m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	0.65m to 0.71m	5.23m
Alluvial clay	Mid blue grey clay	0.71m to 3.30m +	5.17m

**TRIAL PIT 5 centred on NGR ST 34718 85422. Maximum depth 3.60m bpgl**

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.07m	6.37m
Made ground	Modern building debris	0.07m to 0.54m	6.30m
Alluvial clay	Light blue grey silty clay	0.54m to 2.50m	5.83m
Peat	Woody peat with plant macrofossils	2.50m to 3.00m	3.87m
Alluvial clay	Mid blue grey clay	3.00m to 3.60m +	3.37m

**TRIAL PIT 6 centred on NGR ST 34921 85388. Maximum depth 4.00m bpgl**

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.18m	5.84m
Subsoil	Light brown silty clay	0.18m to 0.82m	5.66m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	0.82m to 0.86m	5.02m
Alluvial clay	Light blue grey silty clay	0.86m to 0.97m	4.98m
Organically flecked layer	Blue grey silty clay with abundant flecks of dark organic material	0.97m to 1.01m	4.97m
Alluvial clay	Light blue grey silty clay	1.01m to 3.30m	4.83m
Peat	Woody peat with plant macrofossils	3.30m to 4.00m +	2.54m

**TRIAL PIT 7 centred on NGR ST 34728 85188. Maximum depth 3.50mm bpgl**

Layer	Description	Depth bpgl	Top AOD
Topsoil	Mid brown silty clay A horizon	0.00m to 0.10m	6.73m
Made ground	Modern building debris	0.10m to 0.61m	6.63m
Alluvial clay	Light blue grey silty clay	0.61m to 2.90m	6.12m
Peat	Woody peat with plant macrofossils	2.90m to 3.30m	3.83m
Alluvial clay	Mid blue grey clay	3.30m to 3.5m +	3.43m



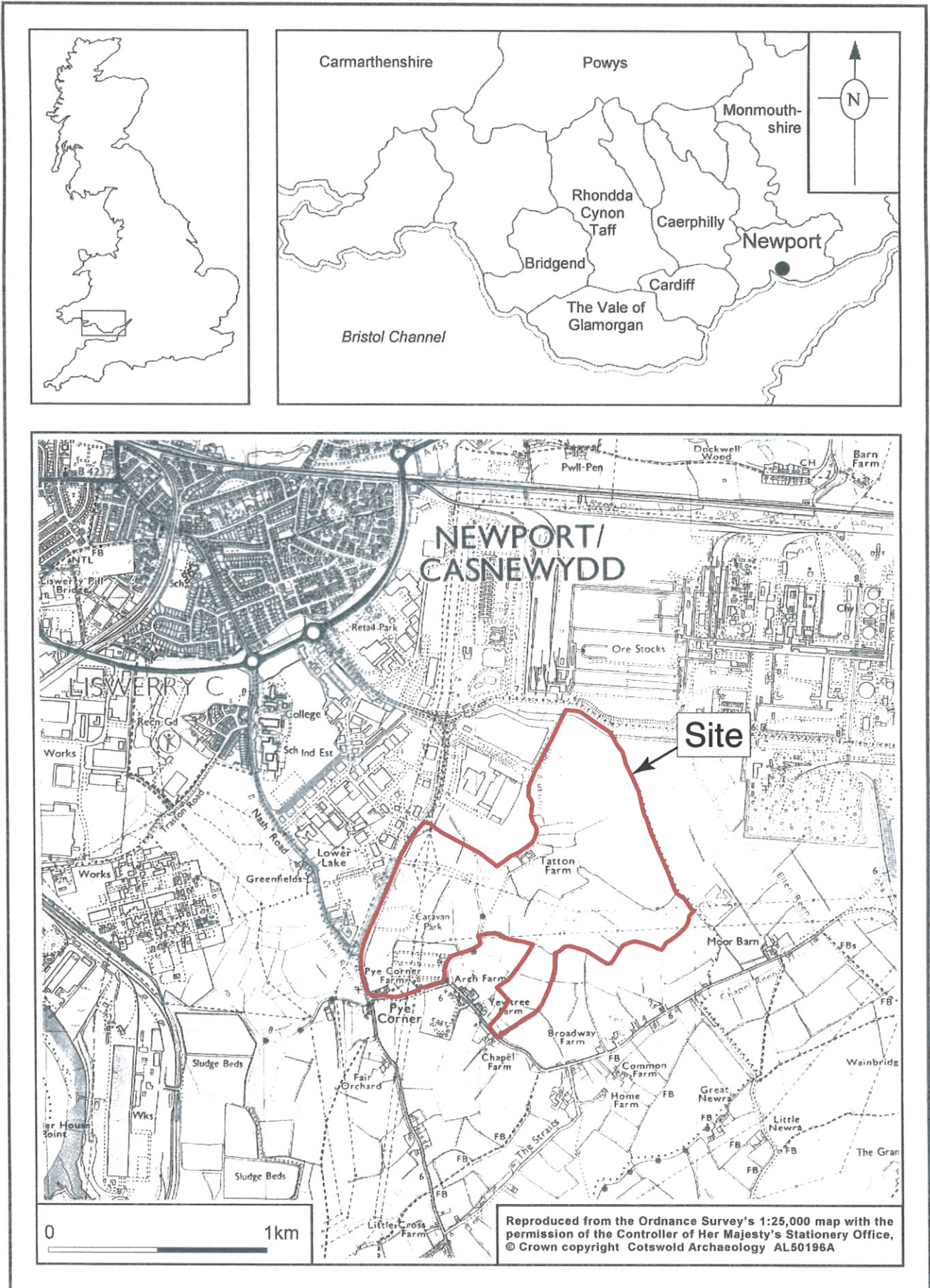


Fig. 1 Site location plan



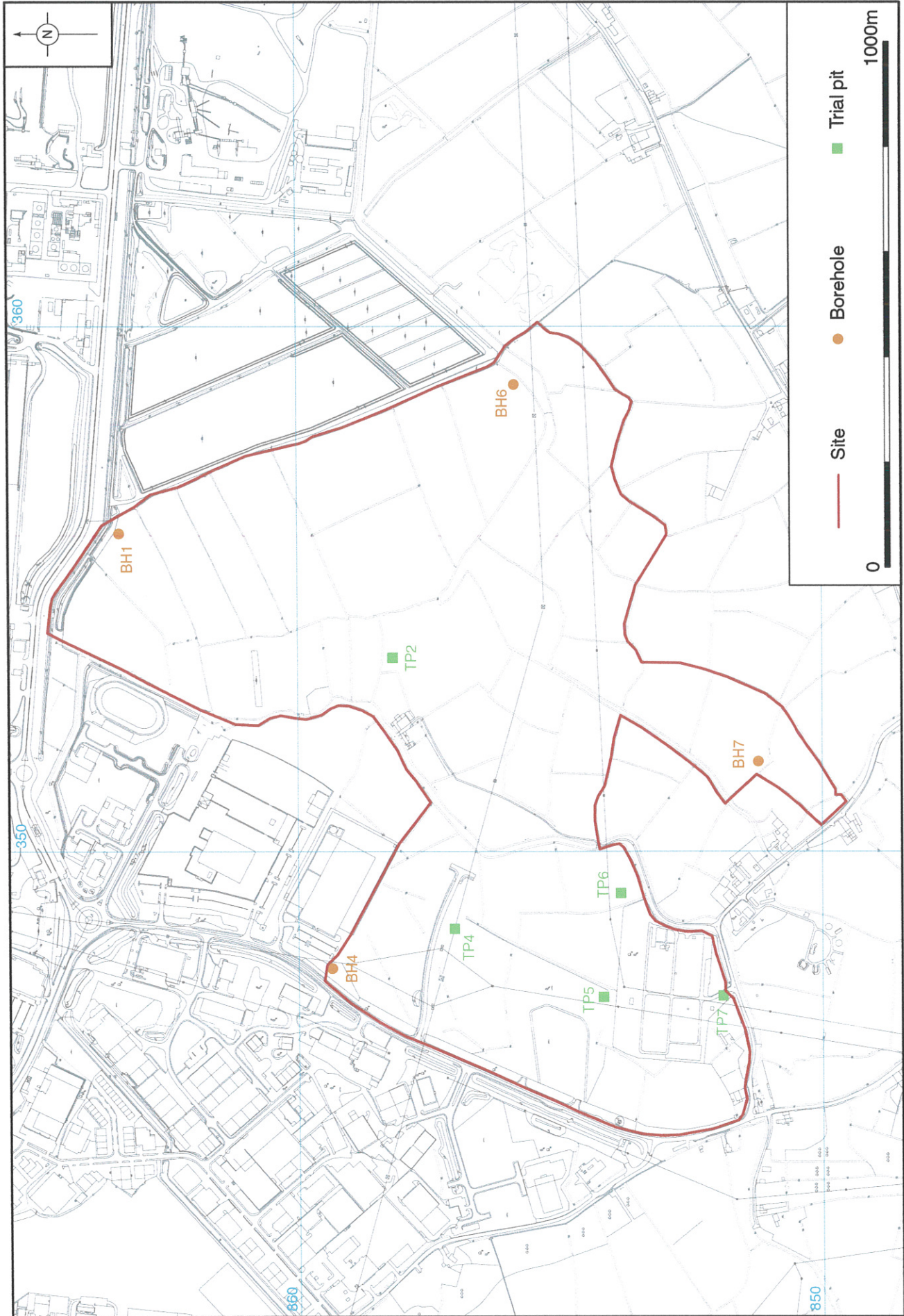


Fig.2 The site, showing location of groundworks (1:10,000)

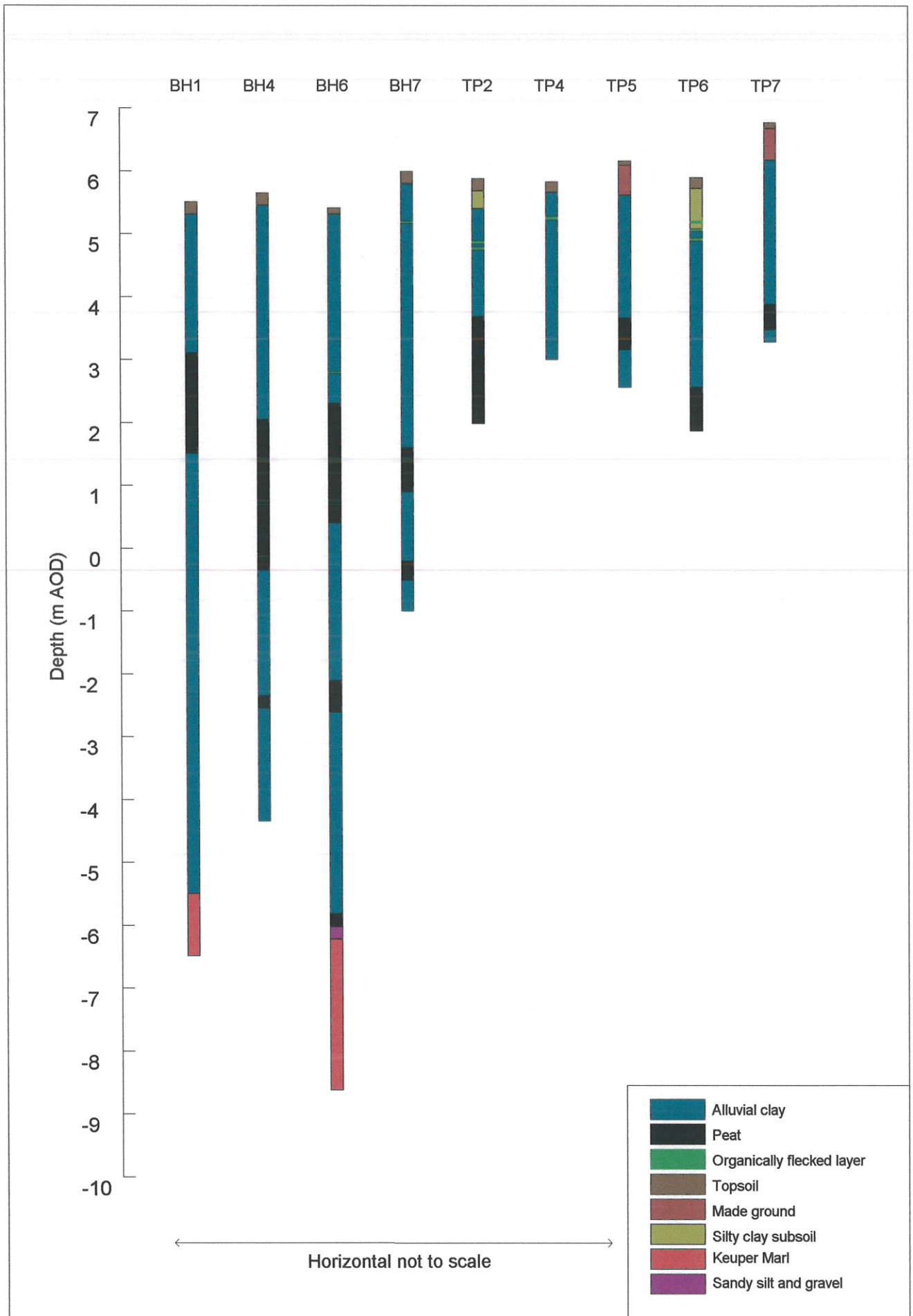


Fig.3: Palaeotopographic model of the site