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Project Oyster, Gwent Europark, Newport:
Archaeological Field Evaluation, Stage 2b
report

July 2007

A report for RPS Burks Green
by Claudine Gerrard BSc and Richard Lewis BA MIFA



GGAT Projects



*View to southwest of Trench 5 showing the linear stone 'road'
structure (5005) © GGAT*

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Glamorgan-Gwent Archaeological Trust Ltd.
Heathfield House, Heathfield, Swansea SA1 6EL
Tel. 01792 655208; Fax 01792 474469
Registered Charity no. 505609
www.ggat.org.uk contracts@ggat.org.uk



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Summary

Following outline planning consent granted in 1994 for the development of a distribution park at Llandevenny, south of Magor, the submission of a master plan and an associated strategy for archaeological mitigation was required. Based on the strategy submitted to the archaeological advisors to the local planning authority a staged programme of archaeological work was devised, consisting of four stages:

Stage 1a and 1b: - site-wide borehole survey and test-pitting

Stage 2: - plot-by-plot evaluation of areas of high potential as defined by Stage 1

Stage 3a: - excavation of sites identified by Stage 2

Stage 3b: - watching brief

Following archaeological work carried out in 1993 and 1994 a detailed topographical model of the underlying peat surface was developed enabling evaluations to be target on specific areas of sensitivity with more confidence.

The strategy was altered in 1999, to take into account the results from the adjacent Wilkinson site and on the advice of GGAT (Curatorial) to include a phased approach for the stage 2 evaluation of the Lidl site. The revision comprised three stages: Stage 2a a preliminary test-pit survey to establish the archaeological potential of the site and the presence/absence of archaeological features, including c200m of additional random machine trenching to test the validity of the Stage 2a test-pitting technique; Stage 2b up to 300m of intensive machine trenching to follow should the results of Stage 2a be positive; and Stage 2c an allowance of up to c300m further trenching should additional information be required for the determination of the planning application.

The Stage 1a test-pitting programme was completed on the Lidl site in 1999 enabling the topographical model of the underlying peat to be enhanced further and a series of trial trenches (Stage 1b) where excavated across sensitive areas in 2000.

In 2006 RPS Burks Green commissioned GGAT (Projects) to undertake Stage 2 on the Project Oyster development. Stage 2a test-pitting works were carried out in January 2007 and are reported in Sherman and Gerrard (2007). This report sets out the results of the Stage 2b evaluation trenching, which was undertaken during March, April and May 2007.

As well as refining our knowledge of the underlying peat topography across the site the recent evaluation programme has identified a series of archaeologically significant features including the well-preserved remains of a 'road' surface potentially of Roman date. The substantial remains of at least two forms of this 'road' structure were encountered at varying widths; one c10m wide and the other c4m wide. In two trenches the remains of large sandstone paves survived, albeit in a much-denuded state, their presence suggesting a fine finish to the original construction of the linear feature. The 'road' structure, if proven to be Roman is likely to form part of the Roman infrastructure related to the Barlands Farm bridge, quay and coastal boat, discovered immediately to the southwest of the site (Nayling and Mcgrail 2004). However, if proven to be medieval it is equally likely to be related to the quay or slipway stone feature identified at Westway (Tuck forthcoming).

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Chronological conventions

Upper Palaeolithic	up to 8000 BC
Mesolithic	8000 BC to 4500 BC
Neolithic	4500 BC to 2500 BC
Bronze Age	2500 BC to 700 BC
Iron Age	700 BC to AD 43
Roman	AD 43 to AD 411
Early-medieval	AD 411 to AD 1066
Medieval	AD 1066 to AD 1485
Post- medieval	AD 1485 to AD 1901
Modern	AD 1901 to present

1. Introduction

1.1 Project background and commission

The outline planning consent granted in 1994 for the development of a distribution park at Llandevenny, south of Magor, required the submission of a master plan and an associated strategy for archaeological mitigation. The strategy was prepared in 1995 by Alison Borthwick (Archaeological Consultant to Tesco Stores and Gwent Europark) and was approved by GGAT (Curatorial), acting as archaeological advisers to the planning authority. The strategy was drawn up in the light of the knowledge at the time, and in particular on the results of the archaeological evaluation and watching brief undertaken on the construction of the first building on the development, the Tesco distribution centre, and a borehole and test-pit survey of the remainder of the site.

The staged programme set out in the strategy included the following elements:

Stage 1a and 1b: - site-wide borehole survey and test-pitting (completed in 1994: Lawler 1994, Lawler and Allen 1994)

Stage 2: - plot-by-plot evaluation of areas of high potential as defined by Stage 1

Stage 3a: - excavation of sites identified by Stage 2

Stage 3b: - watching brief

As since 1995, the models for the sedimentary history of the Caldicot Levels and the pattern of human activity had become more certain, as new data had emerged, Morrison Developments Ltd commissioned a review of the proposed strategy.

The resulting work concluded that new information on the patterns of past activity in the alluvial landscape of the Levels encouraged greater confidence in the prediction of buried sites.

The previously assembled Stage 1 data was used to construct a detailed model of the developing post-glacial landscape, from which the key horizons of interest were identified as the peat 'islands' preferred for Late Bronze Age/ Iron Age activity (at 2m – 3m below present ground level) and the presumed Roman ground surface at c1m below present ground level.

The strategy was amended in 1999, in the light of results from the adjacent Wilkinson site and on the advice of GGAT (Curatorial) to include a phased approach for the Stage 2 evaluation of the Lidl site. The revision comprised three stages: Stage 2a a preliminary test-pit survey to establish the archaeological potential of the site and the presence/absence of archaeological features, including c200m of additional random machine trenching to test the validity of the Stage 2a test-pitting technique; Stage 2b up to 300m of intensive machine trenching to follow should the results of Stage 2a be positive; and Stage 2c an allowance of up to c300m further trenching should additional information be required for the determination of the planning application.

The Stage 2a report on the test-pitting investigation of the Lidl building footprint refined the topographic model of the underlying peat surface, identifying areas of greatest archaeological potential and confirming and clarifying the topographic model derived from previous work undertaken in 1994. The report identified a concentration of higher peat within the southern quadrant of the building footprint at heights of 2.50m⁺ OD and in particular a small 'island' of peat just outside this area of over 3m OD in height.

The aforementioned Stage 2a report also identified a limited area of peat extraction pits at the south-western corner of the building footprint; these features appear to represent the eastern

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extent of a more extensive area of peat extraction concentrated on the adjacent Wilkinson site (Gerrard 2006).

In 2006 RPS Burks Green commissioned GGAT (Projects) to undertake Stage 2 on the Project Oyster development. An earlier report (Sherman and Gerrard 2007) deals with the Stage 2a test-pitting across the site. This report sets out the results of the Stage 2b evaluation, which was undertaken over the months March, April and May 2007.

1.2 Location

The Gwent Levels comprise the Caldicot Level to the east of the River Usk and the Wentlooge Levels west of the River Usk. Greenmoor Arch is situated on the Caldicot Levels, an extensive area of low-lying land to the east of the mouth of the River Usk where it flows into the Severn Estuary. Inland, the Levels are characterised by artificial reens, fields of pasture and natural watercourses, whilst beyond the active salt marsh in the intertidal areas are natural channels and artificial reens. The Levels are identified as a Site of Special Scientific Interest (SSSI) chiefly for their diversity of flora and fauna associated with the reens and banks; the foreshore areas are also noted for hosting migrant bird populations (Tuck 2005). The site, part of the Gwent Europark development, lies on the northern edge of the Caldicot levels to the south of the village of Magor, between the Llanwern Steelworks and the hamlet of Llandevenny at NGR ST 4036 8667.

1.3 Geology

Geologically the Level has accumulated during the post-glacial period (Holocene) and is largely composed of estuarine alluvium deposited through sea level rise. These soils are of the 'Wentlooge Series', renamed 'Newchurch 2 Series' by the Soil Survey 1983 (Rippon 1996), and generally consist of brownish-grey moderately friable silty clays becoming more grey in colour and heavier in texture with depth (Rippon 1996). The Wentlooge Formation can be subdivided into Upper, Middle (a peat layer) and Lower Wentlooge Formations. Archaeological artefacts and structures dated to the Bronze Age are associated with the Middle Wentlooge peat formation (Bell and Neumann 1995). The Upper Wentlooge formation was laid down from the Iron Age through to the post-medieval period. Underlying these formations is the solid geology of the Mercia Mudstone Group (Trias) of red coloured mudrock and thin sandstone (Tuck 2005).

1.4 Archaeological and historical interests

General interest

The known archaeological resource on the Gwent Levels is varied and of all periods, from prehistoric footprints through Bronze Age timber structures and artefacts, and Roman and medieval artefacts and features, to Second World War defensive structures. The surface landscape of the Levels comprises fields of pasture divided by a series of artificial drainage channels (reens), a reclamation process that was almost certainly begun in the Roman period and which has continued to the present day. The medieval landscape was also dominated by pasture, much of it common; there were also extensive ecclesiastical estates within the Levels area. The post-medieval period saw the gradual enclosure of common land, a process completed only in the 19th century (Tuck 2005).

In 1997 an archaeological evaluation at Nash Water Treatment Works revealed extensive archaeological remains of the Roman period (Yates 1997). The evaluation results were later confirmed by excavation, which revealed a field system of 1st to 3rd century date, where a series of ditches, rubbish pits, probable cattle enclosures, cattle burials and two human inhumations were discovered. Environmental evidence also indicated that this was an area of marginal land subject to periodic estuarine flooding and that during the late 3rd or 4th century more intensive and/ or frequent flooding caused the area to be abandoned. The identified Roman ground surface varied from 5.40m to 4.50m Ordnance Datum (Beasley 1998). At Hill Farm, Goldcliff around 5km southwest of the site, excavation revealed parts of a buried Romano-British drainage system of 2nd to 3rd century date. These excavations located a horizon of blue clay detected in different areas lying between 5.50m to 4.50mOD that was found to correspond to the late Roman topography (Locock 1997). This blue clay, overlain by a thin band of organic material, was thus identified as a marker horizon for Romano-British activity. In 2001 further archaeological works for the Gwent Levels Wetland Reserve were carried out (concentrated mainly around the Goldcliff area) which identified Roman artefacts and drainage ditches between Goldcliff and Uskmouth (Roberts and Locock 2001). In both areas a gleyed horizon, which represents the drowning of an established stabilised soil profile associated with renewed and rapid general flooding, was found at c5.25mOD across the area (Tuck 2005). A summary of the Roman discoveries in the Gwent Levels and the possible landscape in the period can be seen in Marvell (2004).

Specific archaeological interest

Archaeological investigations have been carried out immediately to the east and south of the development area at the Wilkinson site, the Tesco site and the Lidl site.

Prehistoric occupation was discovered on the Wilkinson site and the Lidl site. At Wilkinsons a number of Iron Age peat extraction pits cut from 0.3m above the main peat surface were found over much of the site. The pits, varying in size from 2m to 4m in diameter, were filled with clean blue marine clay and were originally excavated to a depth of over 2m. Furthermore, a rectangular hut with a wall line marked by the surviving points of a series of sharpened alder stakes was discovered on the peat surface and cut by the pits. This prehistoric occupation was found to occur on drier 'islands' on the peat surface at around 2.50m Ordnance Datum (OD). The surface within the building produced two stone querns and a flint flake (Locock 1999b). Similar huts (probably of the Bronze Age period) have been found on the exposed foreshore peatshelf at Goldcliff (Bell 1994) and Redwick (Bell and Neumann 1995). Further evidence for continuation of the peat extraction pits were discovered to the east at the neighbouring Lidl site (Roberts 2000a & b). However, these similar pit features were considered to be of probable Roman date (Tuck 2005).

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Archaeological excavation in advance of the construction of the Tesco warehouse, immediately to the south of the development area, revealed the presence of Roman structures and a well-preserved Romano-British boat. The boat and other structures were located within a silted palaeochannel and discovered after removal of around 2m of overlying clays and silts (Nayling and McGrail 2004).

In the northeastern corner of the development area test-pitting carried out in 1994 (see Lawler and Allen 1994, 17) revealed a spread of sandstone rubble some 0.76m (4.56m OD) below the ground-surface. This feature consisted of an apparently single layer of sub-rectangular slabs up to 0.25m in length and 0.05m in depth. Although no finds were found in association with this feature Lawler and Allen dated it to the Roman period, due to its position within the stratigraphy.

During a watching brief carried out in 2006 on the Westway site (see Tuck forthcoming), directly to the southwest of the Lidl site, a stone structure was recorded approximately 0.40m below the ground-surface. This structure consisted of a platform with one masonry face, four courses high, constructed from angular, sandstone blocks that appeared to be unbonded. Adjacent to this feature was an uneven spread of angular sandstone, which appeared to slope down towards a reën. Both these features are likely to be dated (by the associated pottery) to the medieval period and it has been tentatively suggested that they may represent some form of quay or slipway.

In addition to the above, borehole and trial pit data combined with archaeological work has identified two critical horizons of archaeological potential; the upper peat/clay transition reflecting estuarine inundation of the freshwater peat mire, and stabilised soil surfaces (gleyed soils) within the clay silts reflecting a break in silting during the Roman period (Tuck 2005).

2. Methodology

In accordance with the agreed specification (Gerrard 2006) fifteen evaluation trenches were excavated and recorded (Figure 1). The evaluation trenches were mechanically excavated using a toothless grading bucket and then archaeological deposits excavated by hand. The aim of the work was to establish the presence or potential presence and nature of archaeological evidence within the development area.

The evaluation trenches were excavated to the top of any archaeological horizons and where necessary sufficient of these deposits were investigated to elucidate their nature and form. If no archaeological horizons were encountered then the excavations were taken down to the natural alluvial clays of the Lower Wentlooge Formation. Provided that sufficient information was obtained from the evaluation trenches, the excavation of all archaeological deposits was partial rather than full in order to minimise the destruction to the archaeological resource. The base of the evaluation trenches were reached by means of stepped trenches with steps of >1.50m wide and at depths of 0.75m intervals. All trenches were backfilled with the excavated material immediately on completion of recording.

A written and photographic record was made of all archaeological features and deposits in accordance with the GGAT *Manual of Excavation Recording Techniques*. Contexts were recorded using a single continuous numbering system (indicated in bold e.g **1001**) and are summarised in Appendix IV. All classes of finds have been retained, cleaned, and catalogued and remain in temporary store until arrangements for final deposition are agreed, in line with the requirements of the Institute of Field Archaeologists' *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2001). When substantial quantities of modern material were recovered, an on-site policy of record and discard was implemented.

The principal method of recording was through photography and annotated drawings (plans and sections) and by detailed measurement, supplemented by written notes. All evaluation trenches were photographed using a Konica Minolta Dimage Z5 5.0 megapixel digital camera, resolution 2560/1920 and a Canon T70 SLR using 35mm black and white film. The location of each evaluation trench was recorded using a Lieca 407 model Total Station to published boundaries (OS grid). Levels are to Ordnance Survey Datum and were related to the benchmark (13.30m OD) located on the Llandeenny railway bridge. All remaining levels not to Ordnance Survey Datum were taken from the present ground surface.

The management of environmental recording and sampling followed the principles and tenets laid down in English Heritage's *Guidelines for Environmental Archaeology*, published in 2002. All deposits with a high potential for the preservation of palaeoenvironmental material were sampled, by column, bulk and other methods, for possible subsequent analysis, in accordance with a sampling strategy overseen by a specialist with appropriate expertise.

The project archive will be deposited with an appropriate receiving organisation, in accordance with the UKIC and IFA Guidelines. This archive will comprise the site archive, research archive, artefacts (excepting those that may be subject to the Treasure Act) and ecofacts, subject to the agreement of the site owners. A copy of the archive index will be deposited with the National Monuments Record, Royal Commission on the Archaeological and Historical Monuments of Wales (RCAHMW), Aberystwyth.

3. Results

3.1 Stratigraphical evidence

The fifteen evaluation trenches were positioned on or as close to (as present ground conditions allowed) the trench locations stipulated by the agreed specification (Gerrard 2006). As agreed with CCW the trenches were located at least 12.5m away from any reens to prevent contamination to these watercourses and as an additional measure of protection all spoil was capped to prevent leaching. During the evaluation it was necessary to dewater a small proportion of the excavated trenches of standing ground water, and in-line with CCW guidance all standing water was pumped to the centre of the larger fields to naturally dissipate. Arrangements were made with CCW to allow water testing, however, it was decided by CCW that low ground water levels caused by an exceptionally dry April mitigated the need for on-site sampling.

The results of each evaluation trench are detailed below and contextual information can be found in Appendix I.

Trench 1 (Figure 1; Plate 1)

NGR (ST): East End 340625.721, 186533.398; West End 340605.413, 186529.652

Trench 1 was located in the centre of a small rectangular paddock (Field 4) to the southwest of the site. The evaluation trench was excavated to a maximum depth of 5.6m below the present ground surface, representing 0.122mOD, and 10m in length on an east to west alignment. The trench proved too unstable to work within at depth due to the narrowness of the paddock between the reens, thus providing insufficient width to safely step the trench sides. As a result of this a small (1m x 2m) sondage was mechanically excavated to the maximum depth and those deposits recorded.

The basal layer (**1007**) of the sondage proved to be a very clean blue-grey alluvial clay belonging to the Lower Wentlooge Formation. Overlying the alluvial clay was a band of fibrous woody peat (**1006**) containing a substantial quantity of deciduous timber and brush, including one large horizontal alder (*alnus*) trunk (*004) and at least eight pieces of timber showing evidence of working (w001 to w008). The peat (**1006**) was then sealed by a clean, thin (c0.05m) blue-grey alluvial clay (**1005**), which may represent a possible gleyed layer. This short hiatus in the peat sequence is followed by a substantial (c1.5m thick) and homogeneous phragmites peat bed (**1004**); both peat bands and gleyed layer belong to the Middle Wentlooge Formation. The subsequent peat bed was then overlain by a substantial and very clean blue-grey alluvial clay (**1003**) followed by a light-brown silty-clay (**1002**) (with mineral leaching in the form of orange mottles) belonging to the Upper Wentlooge Formation. The topsoil (**1001**) comprised a silty clay-loam with heavy bioturbation and occasional small sandstone stones.

Trench 2 (Figures 1, 3 and 5; Plates 2, 3 and 4)

NGR (ST): East End 340711.665, 186716.242; West End 340700.273, 186712.219

Trench 2 was located in the north west corner of Field 1 adjacent to the Waundeilad Reen. The evaluation trench was excavated to a maximum depth of 1m below present ground surface, representing 5.4mOD. A number of distinct stone layers were identified within evaluation Trench 2 these were: (**2003**), (**2006**), (**2004**), (**2007**) and (**2008**).

The basal deposit of the trench was a blue-grey silty alluvial clay (**2005**) with patches of iron panning and manganese deposits; this alluvial clay is part of the Upper Wentlooge Formation. The basal deposit (**2005**) was overlain by several stoney layers (**2004** and **2007**) (now believed to be equivalents) and **2009**, a silty-clay.

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Deposit **2007**, a stone layer, located in west end of Trench 2, consisted of at least three irregular courses of stones varying in size from 0.1m x 0.1m x 0.05m to 0.4m x 0.3m x 0.35m sitting on top of the blue-grey layer (**2005**); some of the larger stones from **2007** may have been worked. Twenty fragments of South Wales Greyware were recovered from **2007**. This stone feature was later sectioned whereupon it was seen to be a more substantial continuation of **2004**. Deposit **2004** was composed of a single layer of sandstone pebbles (<0.1m thick) held within fine silt-clay with iron-pan and manganese leaching. The deposit terminates at the west end with a large flat sandstone slab (the beginning of **2007**) at the east end, deposit **2004** appeared more compacted where it was exposed beneath **2006** and **2009**, the latter a silty-clay. Underlying **2006**, **2009** and overlying **2005**, deposit **2008** was seen to be a loosely packed layer of sandstone pebbles within a silt-clay similar in nature to that described above as deposit **2004**.

Deposit **2006**, a substantial stone surface, was located at the east end of Trench 2 and consisted of a single course of large sandstone slabs of fairly regular size (<0.1m – 0.5m) but one exceptionally large stone, however, with dimensions over 0.5m x 0.5m was recorded within the deposit. One sherd of South Wales Greyware was recovered from this deposit (**2006**). The substantial stone surface described above (**2006**) overlies **2009**, a silty clay, and underlies **2002**, a secondary silty clay; it is likely that these two similar deposits **2009** and **2002** represent the same process of build-up over a protracted period of time within which **2006** would have been laid. It is possible that **2006** may be a comparatively denuded continuation of the linear stone feature seen in Trenches 5 and 6.

Deposit **2003** consisted of a loose layer of large stones, on average measuring 0.40m x 0.30m x 0.08m, that were seen within the trench section below the topsoil (**2001**) on top of a light brown silty clay deposit (**2002**). Deposit **2003** did not appear to be a laid surface unlike those stone deposits identified elsewhere but rather a dumped layer of stones sitting haphazardly on top of **2002**, indicating a later activity than that for the deposition of other stone deposits seen within this trench. It might be postulated that these stones (**2003**) may be the upcast from a continuation of the lower stone deposits **2006** where it may have been truncated by medieval and later re-cutting.

The uppermost deposit of this trench was **2001** a silty clay topsoil (<0.30m thick) with moderate occurrence of coarse components that included sandstone fragments, one fragment of blue transfer ware was found within this deposit.

Trench 3 (Figure 1; Plate 5)

NGR (ST): East End 340575.824, 186602.049; West End 340563.375, 186593.716

Trench 3 was located in the southwest corner of Field 3. It was placed to locate stone features found in adjacent test pits, and was aligned east to west, 15m in length. This trench proved negative, and was terminated and backfilled upon reaching a depth of 1.23m below the present ground surface, representing 4.717mOD.

The basal layer of this trench (**3003**) was a grey-brown silty-clay, with orange mottling caused by mineral leaching. This was overlain by a light-brown silty-clay (**3002**), which also contained orange mottling due to leached minerals. Overlying this was the silty-clay-loam topsoil (**3001**), mid-brown in colour, with orange mineral leaching and extensive bioturbation.

Trench 4 (Figure 1; Plate 6)

NGR (ST): East End 340622.249, 186638.285; West End 340612.361, 186627.074

Trench 4 was located in the southwest corner of Field 3 adjacent to Trench 3. This evaluation trench was placed to locate stone features found in adjacent test pits, and was positioned on an

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east to west alignment, 15m in length. However this trench proved negative and was backfilled upon reaching a depth of 0.9m below the present ground surface, representing 4.920mOD.

The basal fill (**4003**) was a grey-brown silty-clay with orange mottling from mineral leaching. This was overlain by a light-brown silty-clay (**4002**), also with orange mineral leaching. Overlying this was the topsoil (**4001**), a mid-brown silty-clay-loam. Although the stone features located in adjacent test pits were not located in this trench, one conglomerate stone, roughly triangular in shape and 0.28m in length by 0.28m wide, was found in **4003**, 4.62m from the western end of the trench.

Trench 5 (Figures 1, 6 and 7; Plates 7 and 8)

NGR (ST): East End 340609.537, 186585.970; West End 340597.749, 186571.886

Trench 5 was located in the southwest corner of Field 3. The evaluation trench was placed to locate stone features found in adjacent test pits. It was aligned northeast to southwest and was initially excavated to a depth of 0.6m below present ground level, representing 5.043mOD.

The basal layer of the trench (**5006**) consisted of a natural silty-clay, greyish brown in colour, flecked with orange with iron panning and manganese mottling throughout, as well as isolated root activity. This was abutted by a linear stone feature (**5005**) thought to be a road structure, 2.9m wide, on a northeast to southwest alignment. The structure is composed of one to three courses of relatively flat sandstone and conglomerate stones. The stone feature had a clear edge formed by large sandstone blocks up to 0.5m in width with flat sides creating a straight edge; a pronounced camber was recorded in section but no flanking ditches were evident. This structure is equivalent to the stone feature in Trench 6 (**6004**) and is overlain by **5004** the subsoil, which proved identical to **5008**, a mid brown silty clay with isolated roots and orange iron panning, which becomes more frequent towards the bottom of the deposit. It also contains isolated manganese flecks up to 3mm in size, which increase in abundance towards the bottom of this layer. The subsoil (**5004**) was cut by context **5003**, a pit of unknown function, possibly a field grip, with near vertical sides and a generally flat base, 0.4m wide on its northwest to southeast alignment, and with an average depth of 0.13m. The fill of this cut (**5002**) was a dark greyish-brown silty-clay with isolated roots. This was overlain by the silty-clay-loam topsoil (**5001**) (identical to **5007**, which overlies subsoil **5008**). This topsoil (**5001** and **5007**) was found to be mid brown in colour with heavy bioturbation in the form of frequent grass roots.

Following the discovery of significant underlying features in Trench 11 (**11003** and **11007**) (see below) to the northeast of the site, this trench was extended down to a depth of 1.5m, representing 4.143mOD, in order to check for any similar such features in Trench 5. Upon the further excavation, it was ascertained that the grey brown natural silty-clay (**5006**) continued to this depth and no such features were found.

Trench 6 (Figures 1, 8 and 9; Plates 9 and 10)

NGR (ST): East End 340631.430, 186613.162; West End 340622.446, 186600.786

Trench 6 was located in the southwest corner of Field 3 and was positioned immediately to the northeast of Trench 5. The evaluation trench was excavated to a maximum depth of 0.7m below the present ground surface, representing 4.918mOD, and 10m in length on a northeast to southwest alignment.

The basal deposit (**6003**) proved to be a grey-brown silty-clay with heavy mineral leaching, represented by orange (iron) and black (manganese) mottling. Overlying and partially contained within this deposit (**6003**) was a substantial linear stone structure (**6004**). The structure (**6004**) comprised three to four courses of sandstone and conglomerate slabs. The western edge of the feature was positioned on a slight angle through the centre of the trench

and was clearly visible as a finely laid stone kerb and sandstone slabs. The kerb was composed of substantial (c0.5m in width) sandstone blocks positioned with their greater flat sides forming a straight edge; smaller stones of sandstone were packed around the larger blocks creating the foundations of the structure. It would appear that these stones form the foundation of a substantial road surface and that the overlying courses have been partially robbed to a lesser and greater degree along its length. How high the road surface was originally is difficult to determine, however, the presence of at least four courses in places and the presence of packing stones indicates that it may have been several courses higher. Much of the stone surface has buckled, many stones slumping at shallow angles, which may have been caused by natural processes; for example the regular saturation and desiccation of the ground surface.

The deposit (6003) underlying the stone feature (6004) also abuts and partially overlies it and with its alluvial character this would indicate that a short period of inundation occurred after abandonment. Overlying both the stone feature (6004) and deposit 6003 was a mid-brown silty-clay with orange (iron) and black (manganese) mineral mottling (6002). The uppermost deposit was a homogenous silty-clay loam topsoil with frequent bioturbation and some small sandstone pebbles (6001).

Trench 7 (Figure 1; Plate 11)

NGR (ST): East End 340766.190, 186562.630; West End 340750.610, 186560.440

Trench 7 was located in the centre of a small rectangular paddock (Field 5) in the south of the site. The evaluation trench was excavated to a depth of 5m below present ground surface, representing 0.361mOD. The basal fill of Trench 7 consisted of a deciduous wood rich peat (7004) that was overlain by a phragmites rich peat (7003). Woods identified within these peats included entire tree stumps that were investigated *in situ*, and identified as a mixture of Alder and Birch varieties. These peats forming part of the Middle Wentlooge Formation underlie deposit 7002, a greyish blue alluvial clay that has been identified as part of the Upper Wentlooge Formation. Deposit 7001 consisted of a mid brown silty clay and was seen to overlie 7002 and underlie 7000, a silty clay topsoil.

Trench 8 (Figure 1; Plate 12)

NGR (ST): East End 340869.250 186636.982; West End 340851.660, 186635.312

Trench 8 was located on the east edge of Field 1 on an east to west alignment. The evaluation trench was excavated to a maximum depth of 5.5m, representing -0.507mOD. The sides of the trench were stepped according to the methodology stated above in order for the basal layer to be safely accessible for investigation.

The basal fill (8004) of the trench was red-brown peat with frequent alder and birch, which included a complete tree bole and root system 2.45m from the eastern end of the trench. This was overlaid by a substantial phragmites rich peat bed (8003), brown in colour, which was overlain by (8002) a blue grey alluvial clay with iron staining, which belongs to the Upper Wentlooge Formation. This in turn was overlain by a silty-clay (8001), orange brown in colour with orange iron staining and frequent small roots. Overlying 8001 was the mid brown silty-clay-loam topsoil (8000).

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Trench 9 (Figures 1, 10; Plates 13 and 14)

NGR (ST): East End 340747.787, 186771.049; West End 340728.188, 186781.512

Trench 9 was located in the southwest corner of Field 2 adjacent to the Waundeilad Reen. The trench was positioned over Test Pit 49 (Sherman and Gerrard 2007), which shows clearly the presence of this earlier investigation. The evaluation trench was excavated to 20m in length and with a maximum depth of 0.45m, representing 4.643mOD, where a substantial stone surface was encountered.

The substantial stone surface (**9004**) encountered in the base of the trench was comprised of large, but intermittent, sandstone slabs over a compacted rubble layer of smaller sandstone cobbles and pebbles. The structure is believed to be the foundation of a substantial road, considerably wider here (c10m) than found elsewhere in Trenches 5 and 6. In the northwestern end of the trench several large (c0.4m x 0.3) pavestones were noted positioned on the sandstone rubble foundation, although these were found to be intermittent and the missing paves probably the result of robbing. The southeastern end of the structure had no surviving paving at all, indicating that much of this surface had been removed. However, despite the extensive robbing of the stonework the camber of the structure was still visible in the section of the trench.

A fine, light blue-grey alluvial clay (**9003**) with orange (iron) panning sealed the stone structure, indicating that a short period of inundation occurred before more colluvial type light-brown silty-clays (**9002**) began deposition. The uppermost deposit proved to be a mid-brown silty-clay-loam (**9001**) topsoil with heavy bioturbation.

Trench 10 (Figure 1; Plates 15, 16, 17 and 18)

NGR (ST): South End 340737, 186798; North End 340746, 186811

Trench 10 was located in the southeast corner of Field 2. The evaluation trench was excavated to a depth of 3.8m below the present ground surface, representing 1.21mOD. The sides were stepped to allow safe access to the basal deposit.

The basal layer (**10004**) consisted of black brown fibrous phragmites rich peat containing some natural timber roots in the first 0.3m of the deposit. A tree bole (sampled for dendrochronological analysis, number *003) with a diameter of 0.28m and its associated root system spreading to a diameter of 0.45m were uncovered in the northern end of the trench. The tree stump had remained upright long enough for a significant phragmites bed to accumulate. The peat was overlain by a substantial blue-grey alluvial clay layer (**10003**) belonging to the Upper Wentlooge Formation.

A linear stone feature (**10005**) was partially contained by the alluvial clay (**10003**), possibly part of the road surface exposed in Trenches 2, 5, 6, 9 and 11. This feature was not fully exposed but was shown to run on an east to west alignment. The excavated area of this stone feature was 2.5m from east to west and 1.40m north to south. It was composed of one to three layers of large flat sandstone and conglomerate slabs, varying in size between 0.15m and 0.60m, and appears to have a straight edge to its southern side, running from east to west. It is not clear if there is a terminus to this feature or whether it originally continued beyond the step of this trench, but no trace of **10005** was identified during the machine excavation of the deeper parts of this trench. As well as being contained by **10003**, this stone feature was also partially overlain by a light brown clay (**10002**) with occasional small sandstone fragments. This light brown clay (**10002**) contained an additional linear stone feature (**10006**) on the western side of the trench (where steps were added for safety) on a north to south alignment, only the eastern edge of which was exposed; an area of 4m from north to south and 0.3m from east to west,

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along with three sherds of Roman pottery. This stone feature, possibly a continuation of the potential road surface, was composed of between one and three layers of sandstone and conglomerate slabs. These slabs are flat and appear to have been roughly shaped, varying in size between 0.15m and 0.60m. This feature appears to continue from the exposed area both to the west and to the north and south, running along the north to south alignment established by the exposed eastern edge. The light brown clay (**10002**), which contains this stone structure (**10006**), was overlain by the topsoil (**10001**), a friable mid-brown silty-clay-loam.

Trench 11 (Figures 1, 12 and 13; Plates 19, 20, 21, and 22)

NGR (ST): East End 340789.888, 186850.015; West End 340775.500, 186845.690

Trench 11 was located in the northeast corner of Field 2. The evaluation trench was 15m in length and positioned on an east to west alignment. The trench was excavated to a maximum depth of 3.2m, representing 1.945mOD, where the phragmites peat bed (**11010**) of the Middle Wentlooge Formation was encountered. Overlying the peat bed was a substantial blue-grey alluvial clay (**11008**) deposit belonging to the Upper Wentlooge Formation. Cut into the lower part of, and then later sealed by, this deposit was a large (1.5m wide x 1m in depth) palaeochannel (**11009**). The palaeochannel had moderately steep sloping sides and a bowl shaped base. The fill of the palaeochannel was comprised a black organic silty-clay with grey-blue alluvial lenses; a substantial quantity of sandstone boulders and pebbles appear to have been dumped into the top of the channel, presumably to shore-up the foundations of stone structure **11007** (see below). The palaeochannel then appears to have been inundated and subsequently subjected to the continuing depositional processes of the Upper Wentlooge Formation.

Roundwoods belonging to an alder (*Alnus glutinosa*), willow/poplar (*Salicaceae*), oak (*Quercus*) and hawthorn (*Pomoideae*) brushwood surface (**11003**) were recorded lying within and over a heavily organic light-brown silty-clay (**11004**), with grey alluvial mottling. The brushwood surface consisted of laid lengths of short roundwoods (30mm - 70mm in length x 7mm - 40mm in diameter) apparently laid parallel to each other but positioned both under and over the foundations of stone structure **11007**, presumably to act as a secure footing in an area where soil saturation was known to occur. The substantial stone structure (**11007**) has four to five courses of large sandstone pavestones, with smaller sandstone rubble packed over the upper surface. This feature is thought to be an earlier road surface possibly related to the overlying stone structure **11005**, which is thought to be a later road surface. However, it is apparent from the accumulation of natural silty-clay from deposit **11006** that a short hiatus occurred after the stone structure **11007** was presumably abandoned. Context **11006** demonstrated mineral leaching in the form of orange (iron) mottles and periods of inundation represented by grey alluvial lenses. A possible saddle quern was identified, based on its smooth concave surface, from the coursed structure but given the lack wear on this surface it is more likely to be natural.

The later stone structure **11005** was found to overlie context **11006** and was composed of compacted sandstone rubble overlaid by large flat sandstone pavestones. The eastern edge of the structure was located in the west end of the trench positioned diagonally across it on a northeast to southwest alignment. A clear edge to the structure is discernable to the west of the trench before an area of sandstone tumble and rubble, which diminishes progressively eastwards. The haphazard and disjointed nature of the sandstone tumble would appear to represent a period of demolition to the stone structure (**11005**) before abandonment. The construction method of the stone structure is identical to the other lengths of road exposed in Trenches 2, 5, 6 and 9. However this length of road is presumed to be twice the width as those

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in trenches 5 and 6. A section through west end of trench exposed four courses of sandstone rubble, resembling those courses found in Trench 6.

The overlying silty-clay subsoil (11002) is consistent with natural colluvial deposition and would indicate a substantial period of abandonment. The topsoil (11001) was found to be a uniform silty-clay-loam with heavy bioturbation.

Trench 12 (Figure 1; Plates 23 and 24)

NGR (ST): East End 340837.371, 186717.373; West End 340819.814, 186713.540

Trench 12 was located in the northeast corner of Field 1. The evaluation trench was positioned to test an area of high peat initially located in Stage 2b test pitting and excavated to a depth of 3.8m below present ground surface, representing 1.123m OD. The basal fill consisted of a deciduous wood rich peat (12005), a mix of alder and birch varieties were identified within this deposit, overlain by (12004), a phragmites rich peat; both peats are part of the Middle Wentlooge Formation. A blue grey alluvial clay deposit (12003) of the Upper Wentlooge Formation was seen to overlie 12004. An orange brown silty clay (12002) was found to overlie 12003 followed by a mid brown silty clay loam (12001) topsoil. Within context 12002 a complete cow skeleton and fragment of pale green bottle glass was identified; no cut was discernable in association with the faunal remains and it would appear likely that the animal was deposited by natural processes. The presence of the post-medieval glass bottle sherd would indicate a fairly recent post-medieval date for the deposition of the animal. However, it is not incontrovertible for the bottle glass could have percolated through the overlying deposits, possibly arising from shrinkage of the surrounding clay.

Trench 13 (Figure 1)

NGR (ST): East end 340600.179, 186713.187; West end 340589.660, 186724.069

Trench 13 was located in the north of Field 3 and was noted to be particularly wet and unstable during excavation. The evaluation trench was excavated to a depth of 4.17m below present ground surface, representing 1.306mOD. The basal fill of this trench was a dark-brown phragmites peat bed (13003) belonging to the Middle Wentlooge Formation. The deposit was then overlain by a blue alluvial clay (13002) belonging to the Upper Wentlooge Formation. The subsoil (13001) consisted of an orange brown silty-clay, which was followed by a mid-brown silty-clay-loam topsoil (13000).

Trench 14 (Figure 1)

NGR (ST): East end 340622.249, 186638.285; West end 340612.361, 186627.074

Trench 14 was located in the centre of Field 1. The evaluation trench was excavated to a depth of 5.10m below present ground surface, representing 0.448m OD. The basal fill of the trench (14004) consisted of a brown to black peat with moderate occurrence of woods mostly alder and birch that on site were estimated at up to 0.20m in thickness. This was in turn overlain by (14003) a phragmites rich peat that underlies (14002) a blue alluvial clay with noted frequent black organic staining. The peats identified as 14004 and 14003 are believed to belong to the Middle Wentlooge Formation and the overlying alluvial clay (14002) to the Upper Wentlooge Formation. The upper fills of this trench included 14001 a greyish brown silty clay (that overlies 14002) and 14000 a mid brown silty turf and topsoil.

Trench 15 (Figure 1; Plate 25)

NGR (ST): East End 340570.602, 186856.313; West End 340552.548, 186856.622

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Trench 15 was located in the south of Field 6. This was the only evaluation trench located in Field 6. The trench was excavated to a depth of 4.10m, representing 1.254mOD, and ran on an east to west alignment for a length of 15m.

The basal fill of the trench (15005) consisted of mid brown peat with a substantial quantity of wood. Samples of this wood (*005 and *006) were taken for dendrochronological analysis and species identification. Although the samples proved unsuitable for dendrochronological analysis they were identified as *Betula* (Birch *005) and *Fraxinus excelsior* (Ash *006) (see below). This peat (15005) was overlain by a second layer of phragmites peat (15004), which was black-brown in colour. This subsequent peat was overlain by a substantial blue-grey alluvial clay layer (15003) with frequent black organic staining, which belongs to the Upper Wentlooge Formation. This was in turn overlain by a greenish blue silty clay (15002) with moderate iron staining. This was then overlaid by a mid brown silty clay (15001) with isolated small rounded pebbles and roots. This subsoil (15001) was overlain by the turf and topsoil (15000), a dark brown silty clay loam.

3.2 Plates



Plate 1: Trench 1 showing stratigraphical sequence (1007, 1006, 1005, 1004, 1003 and 1002)

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Plate 2: Trench 2 showing the north facing section



Plate 3: Trench 2 showing stone feature (2007) at west end

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Plate 4: Trench 2 showing stone feature (2006) in east end



Plate 5: Trench 3, southeast facing section showing stratigraphical sequence (3001, 3002, and 3003)

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Plate 6: Trench 4, southeast facing section showing stratigraphical sequence (4001, 4002, and 4003)



Plate 7: Trench 5 to southwest showing maximum extent of linear stone feature 5005

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Plate 8: Trench 5 to northeast facing section through linear stone feature 5005



Plate 9: Trench 6 to the northeast showing the alignment and western edge of linear stone feature 6004

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Plate 10: Northeast facing section of Trench 6 showing linear stone feature 6004



Plate 11: View to east of Trench 7 showing stratigraphical sequence (7000, 7001, 7002, 7003, and 7004)

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Plate 12: View to west of Trench 8 showing stratigraphical sequence (8000, 8001, 8002, 8003, and 8004)



Plate 13: View to northwest of Trench 9 showing road structure (9004) and Test Pit 49

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Plate 14: View to southwest of Trench 9 showing surviving pavestones (centre) (9004)



Plate 15: View to northeast of Trench 10 fully excavated

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Plate 16: View to southeast of tree bole (*003) within phragmites peat bed (10004)



Plate 17: View to northeast of stone structure 10005 on east side of Trench 10

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Plate 18: View to southwest of linear stone feature 10006 on west side of Trench 10



Plate 19: View to west showing palaeochannel in base of Trench 11

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Plate 20: View to south of brushwood structure (11003) in Trench 11

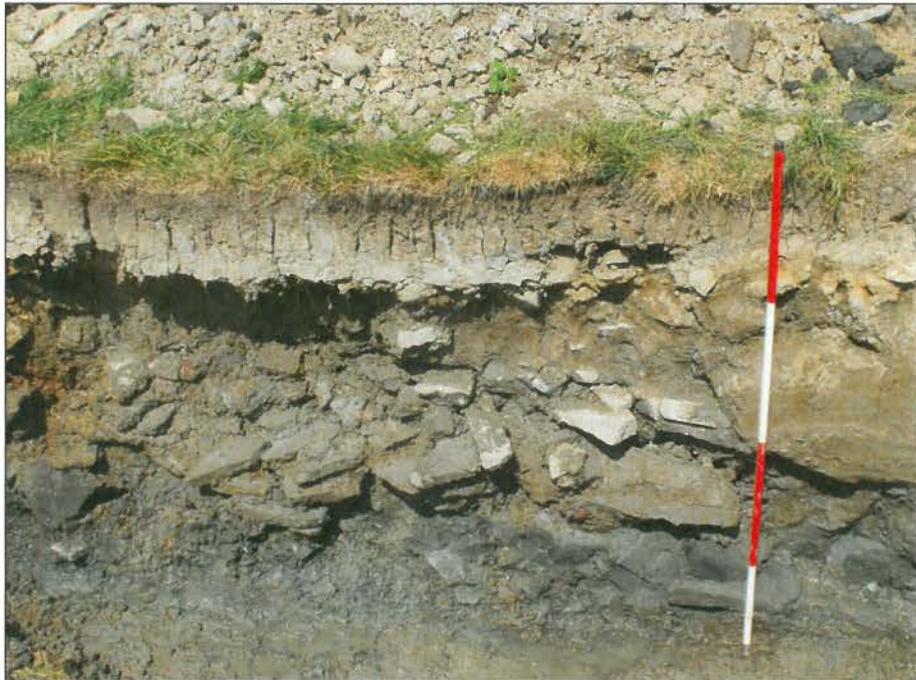


Plate 21: South facing section of Trench 11 showing both road structures (11005 and 11007) and brushwood structure (11003)

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Plate 22: View to east of Trench 11 showing exposed surface of road structure 11005



Plate 23: View to east of Trench 12 showing peat bed (12004 and 12005) and overlying deposits (12001, 12002, and 12003)

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Plate 24: View to south of faunal remains on north side of Trench 12



Plate 25: View to west of Trench 15 showing stratigraphical sequence (15000 to 15005)

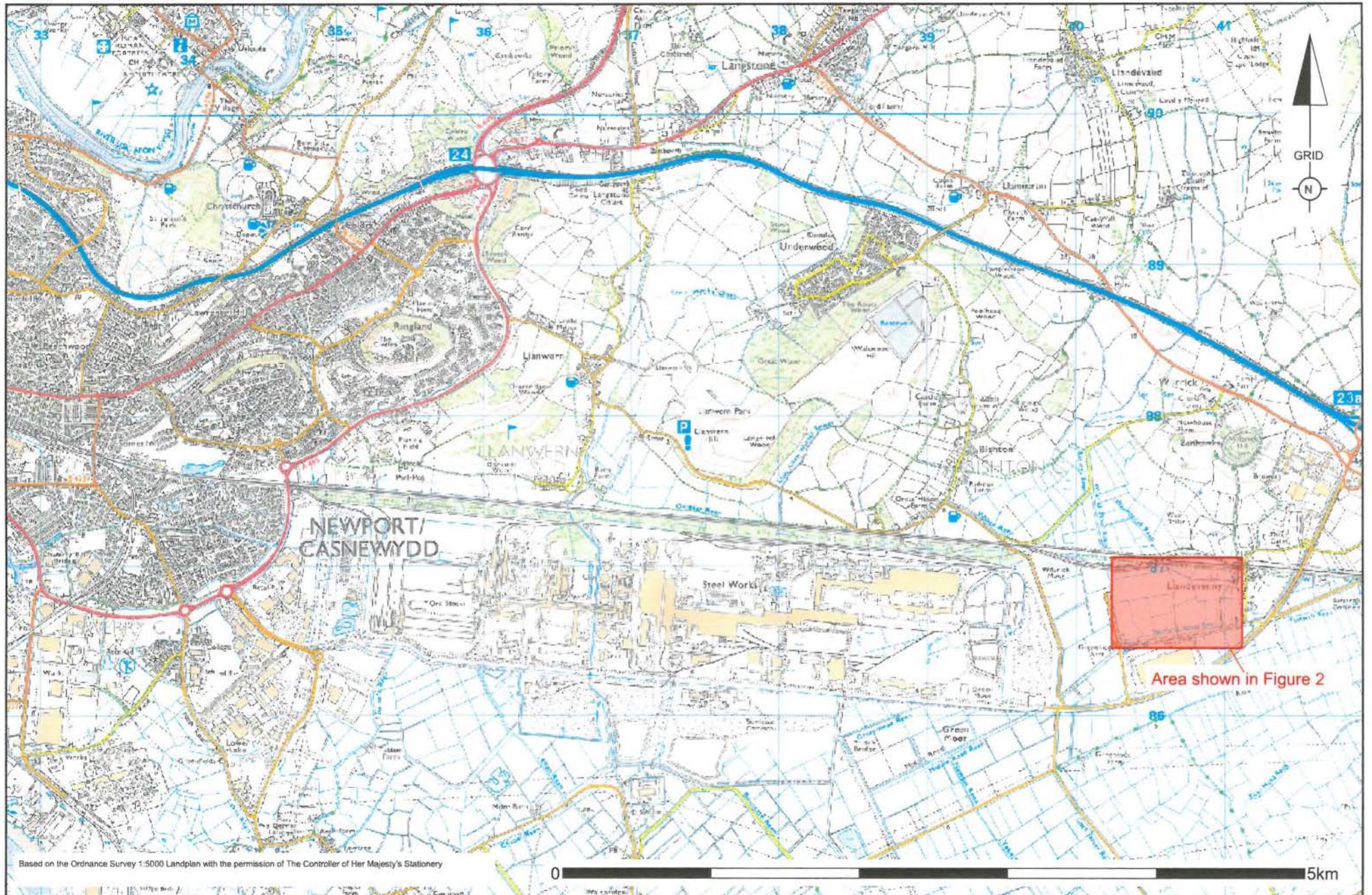


Figure 1. Site location



Figure 2. Plan showing location of evaluation trenches

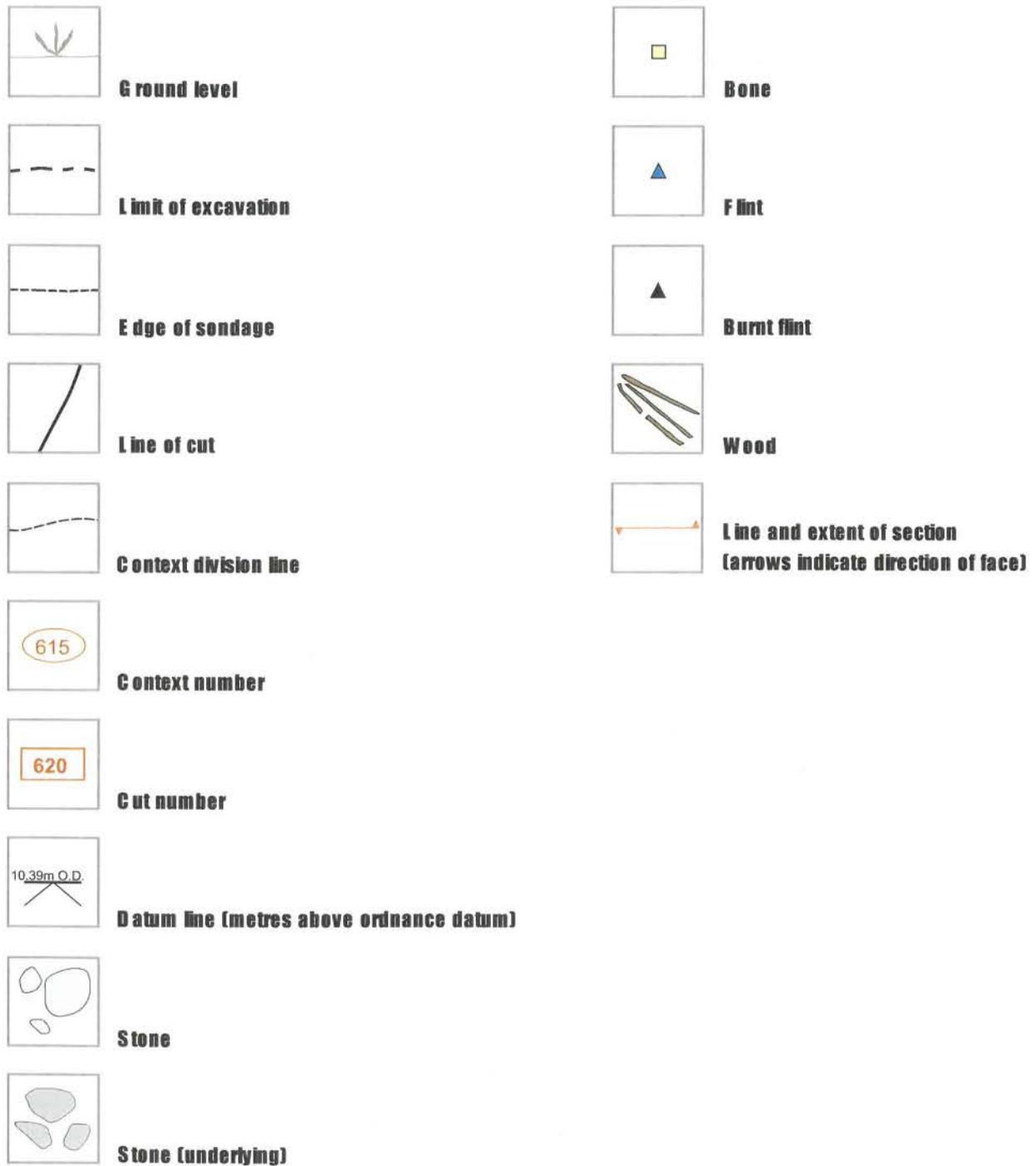


Figure 3. List of conventions used in plans and sections

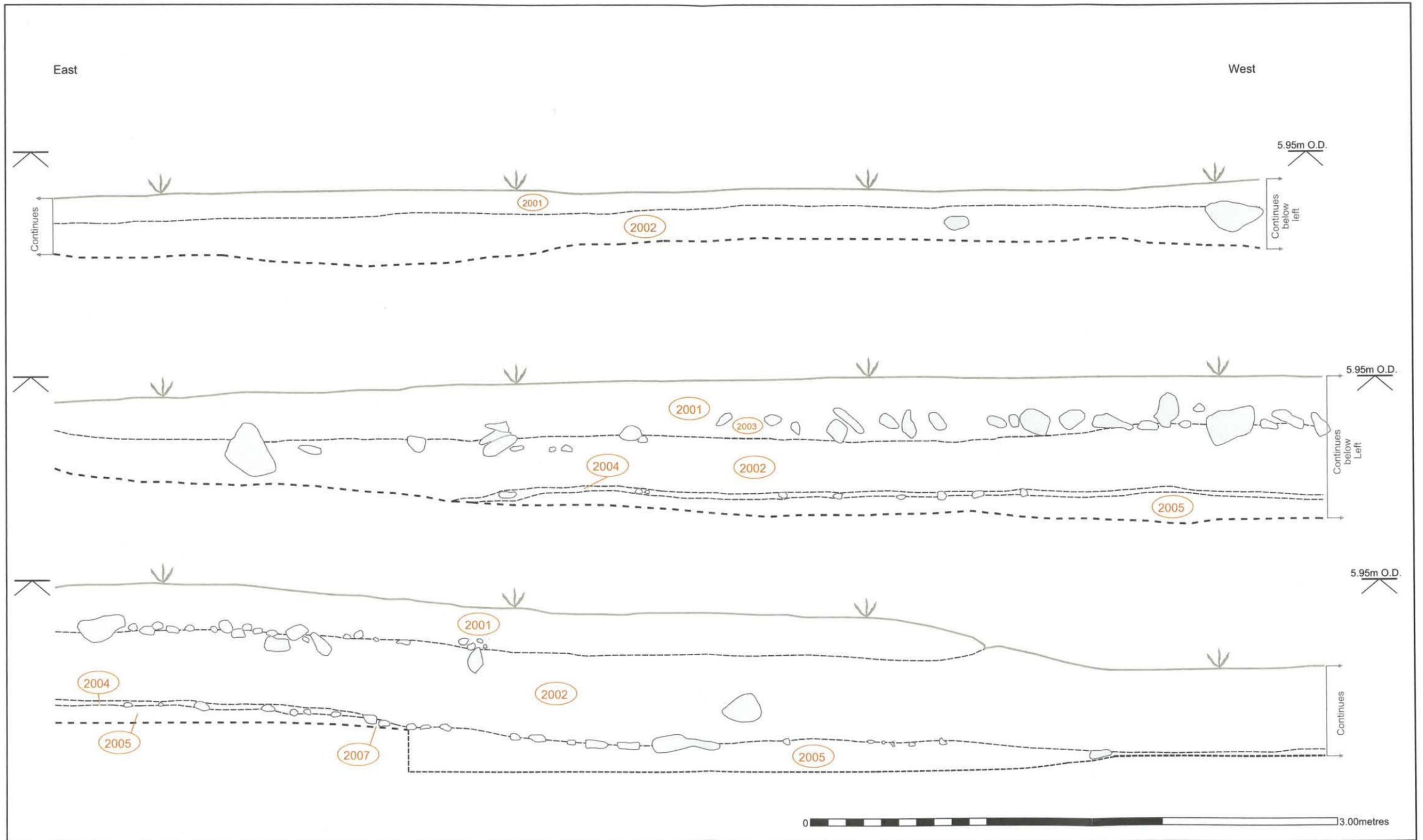


Figure 4. North facing section, Trench 2

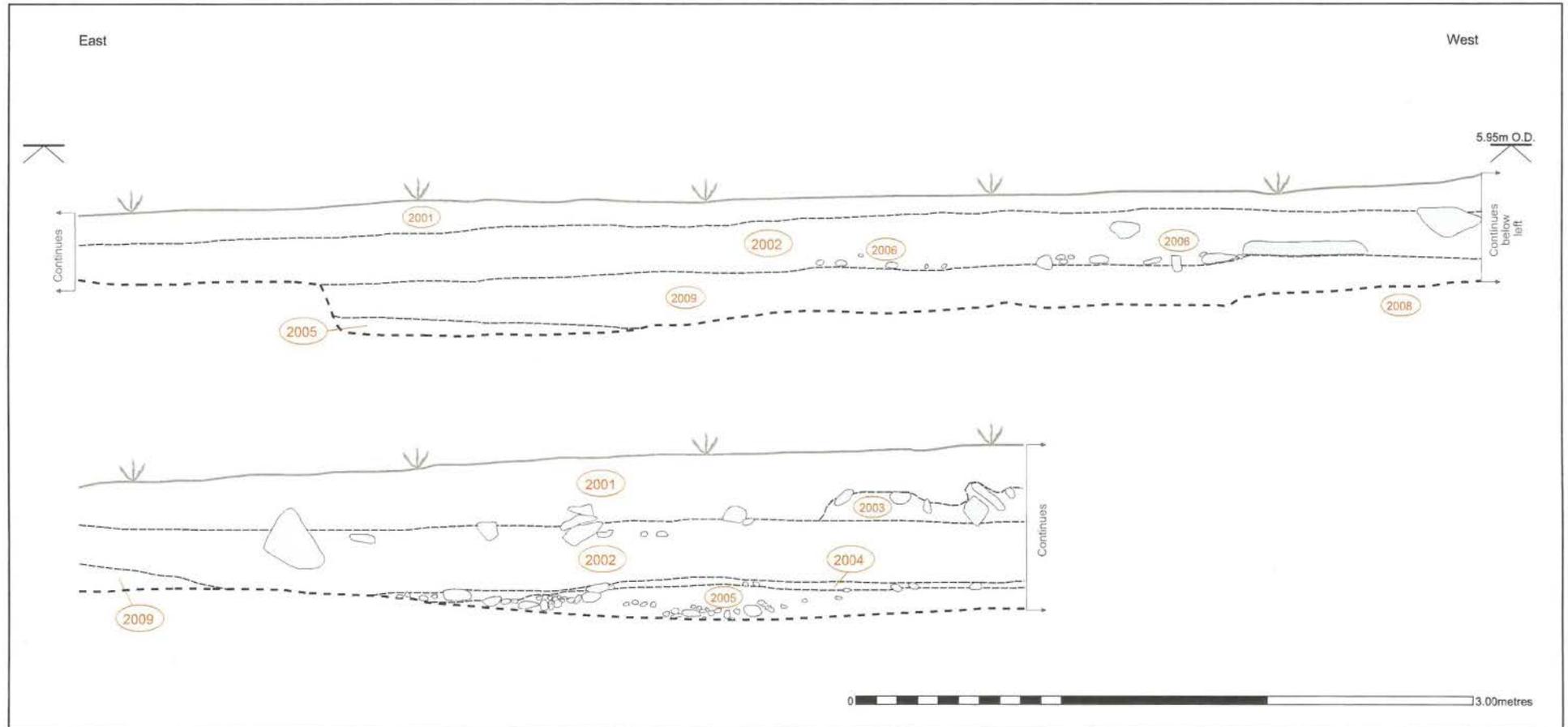


Figure 5: North facing section, Trench 2, after further excavation

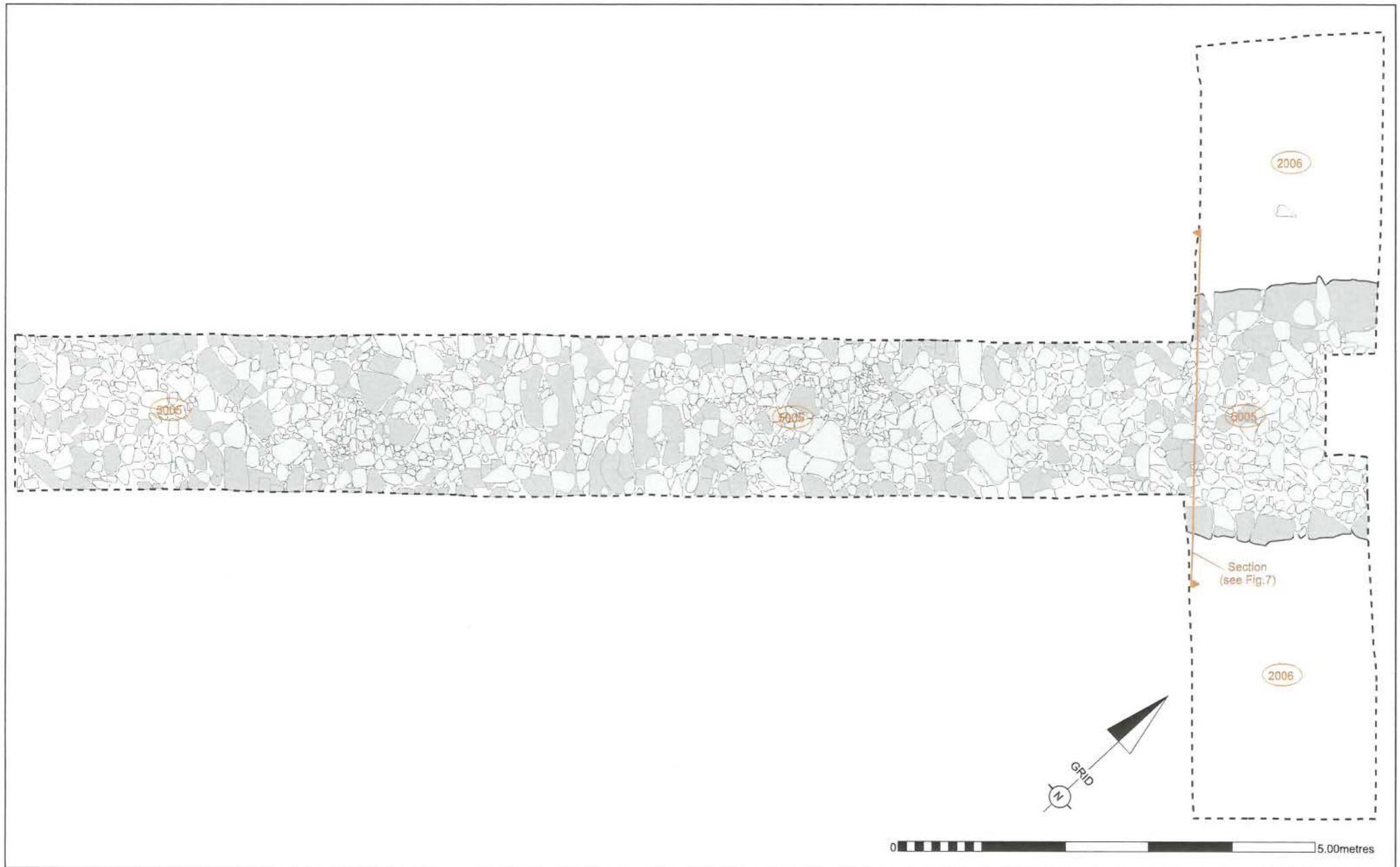


Figure 6. Plan of Trench 5

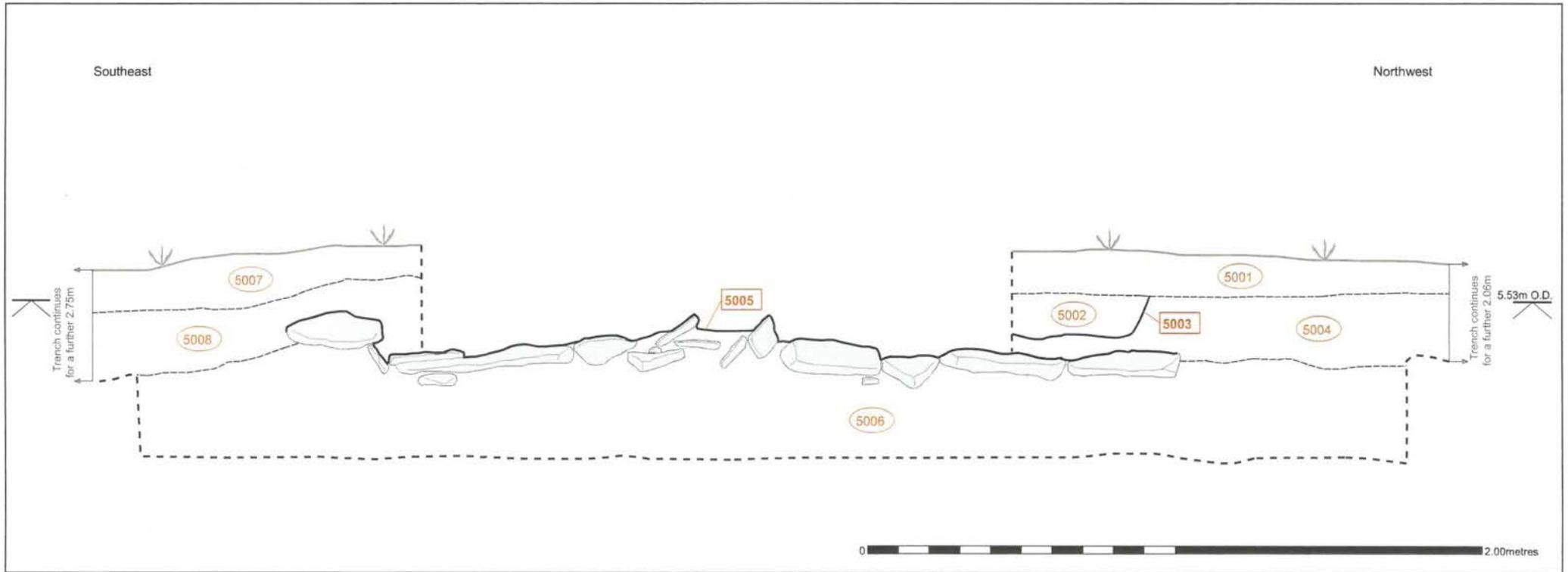


Figure 7. Northeast facing section, Trench 5

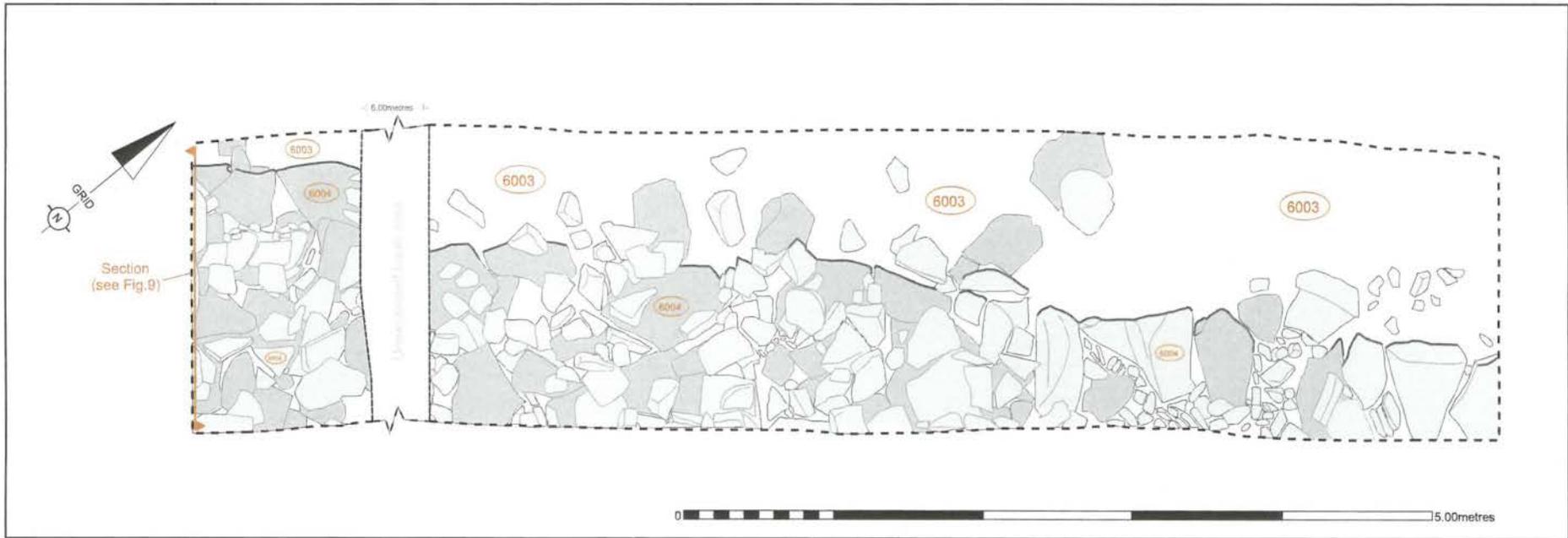


Figure 8. Plan of Trench 6

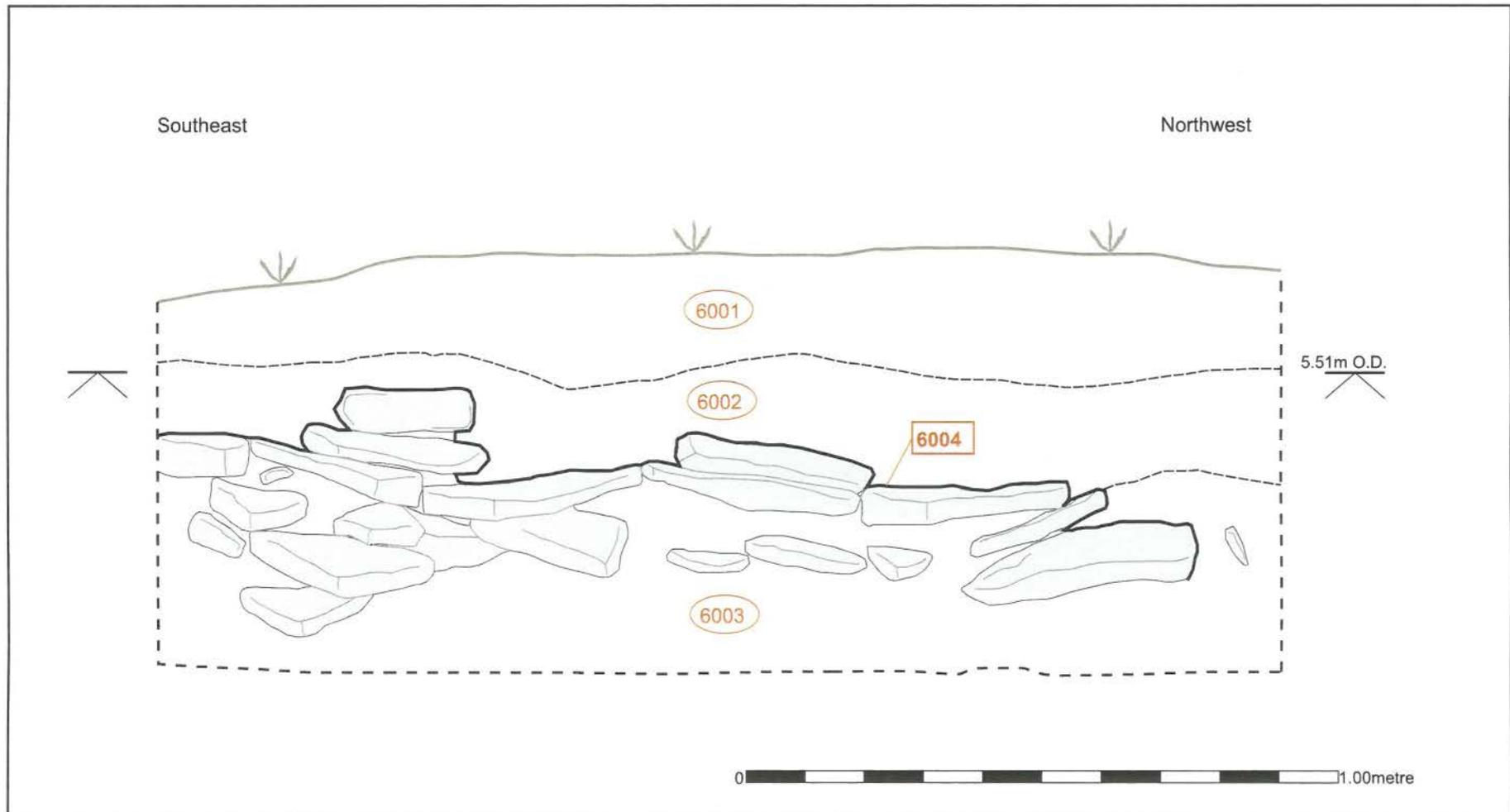


Figure 9. Northeast facing section, Trench 6

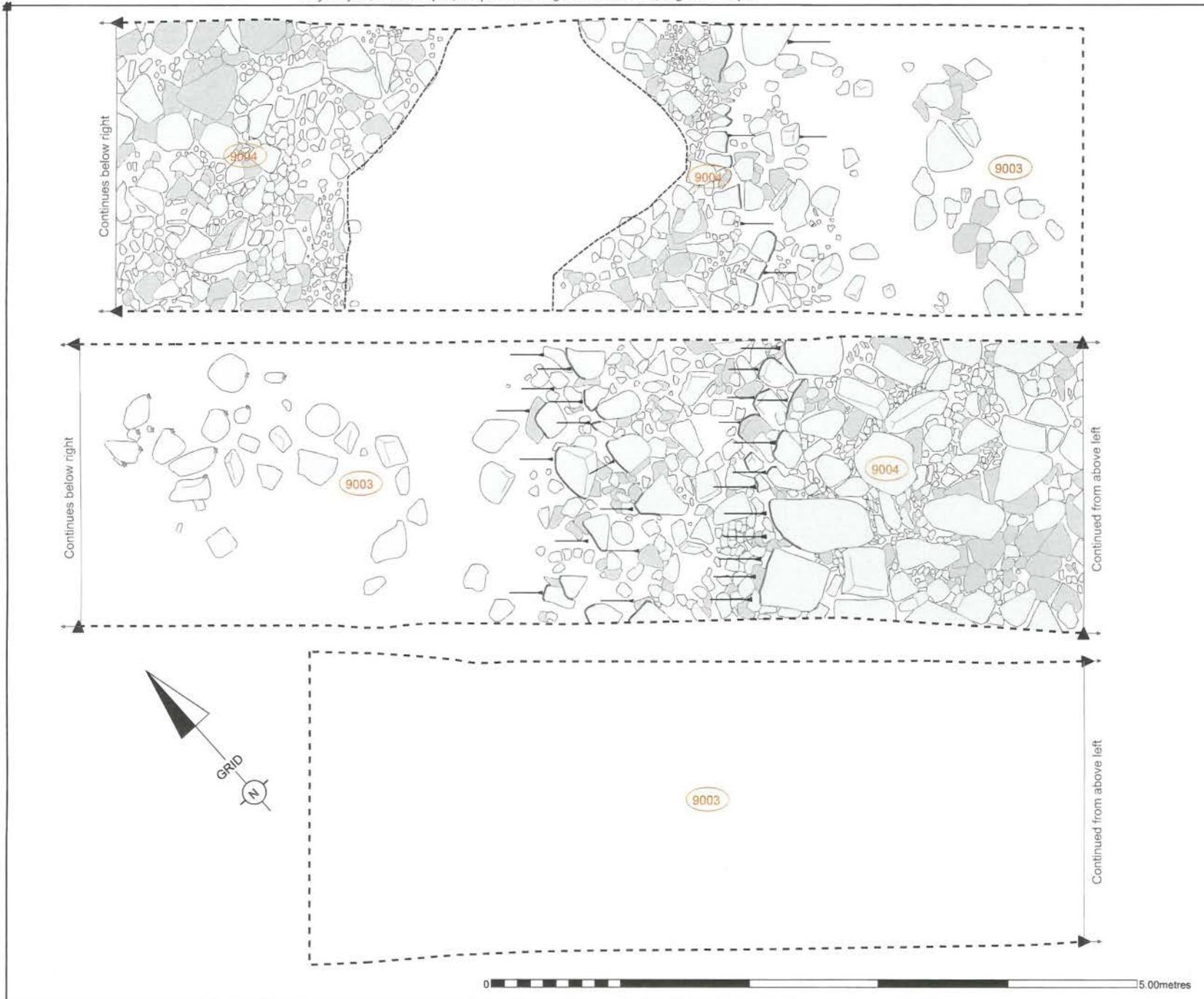


Figure 10. Plan of Trench 9

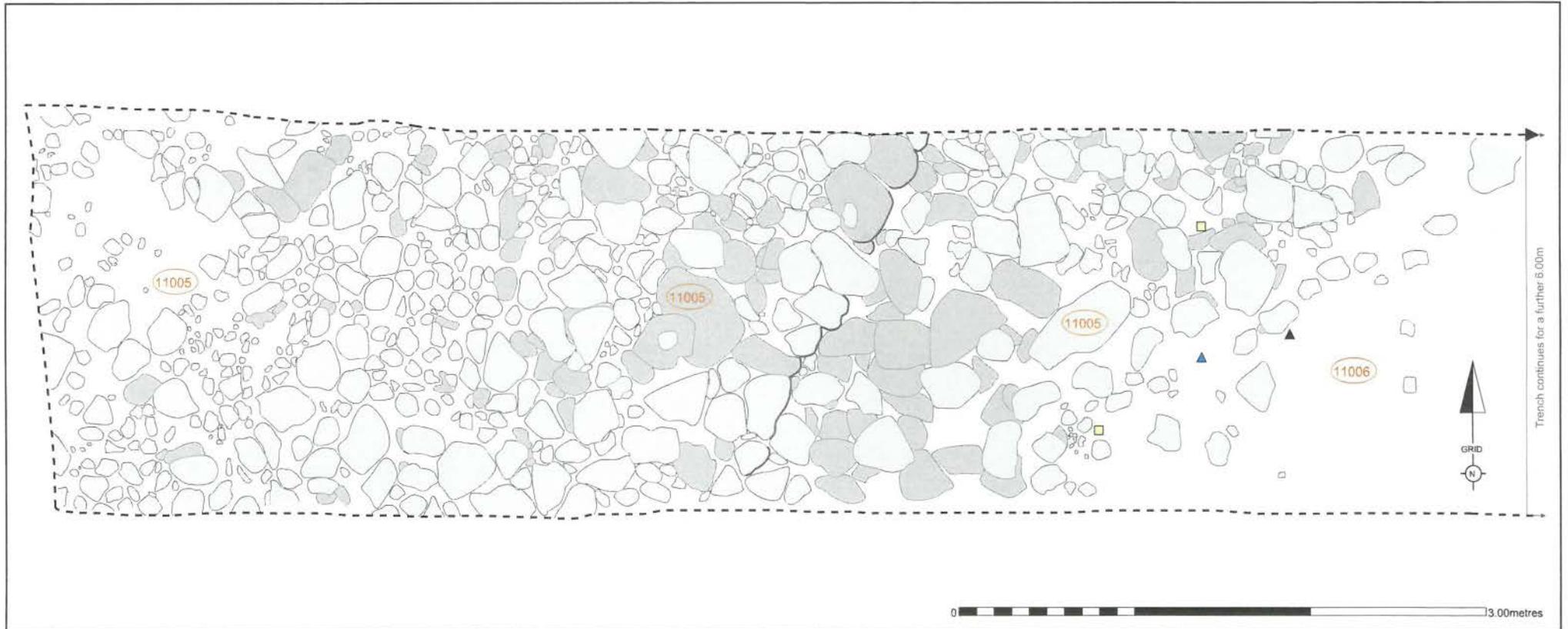


Figure 11. Plan of Trench 11

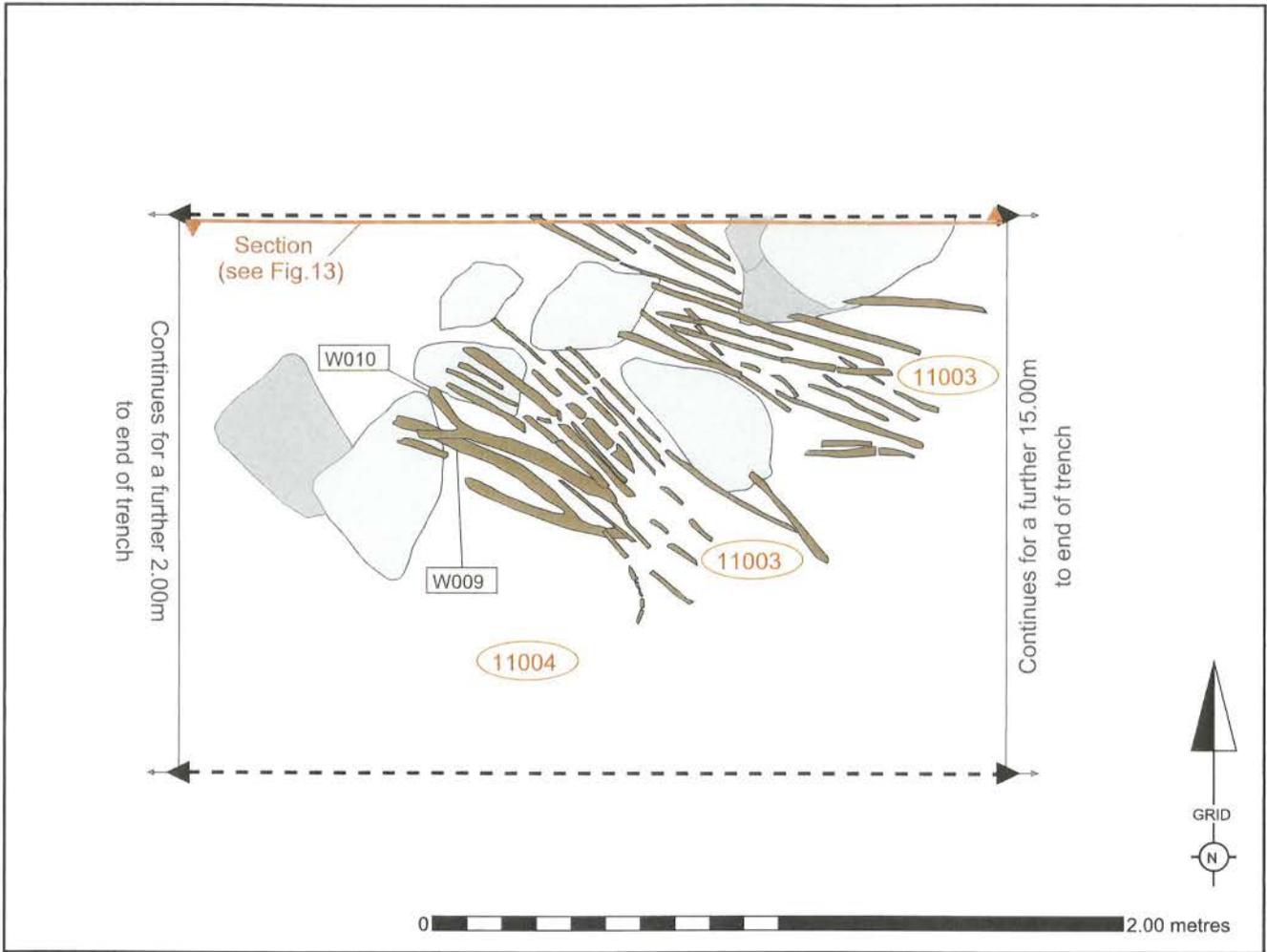


Figure 12. Plan of brushwood surface (11003) in Trench 11

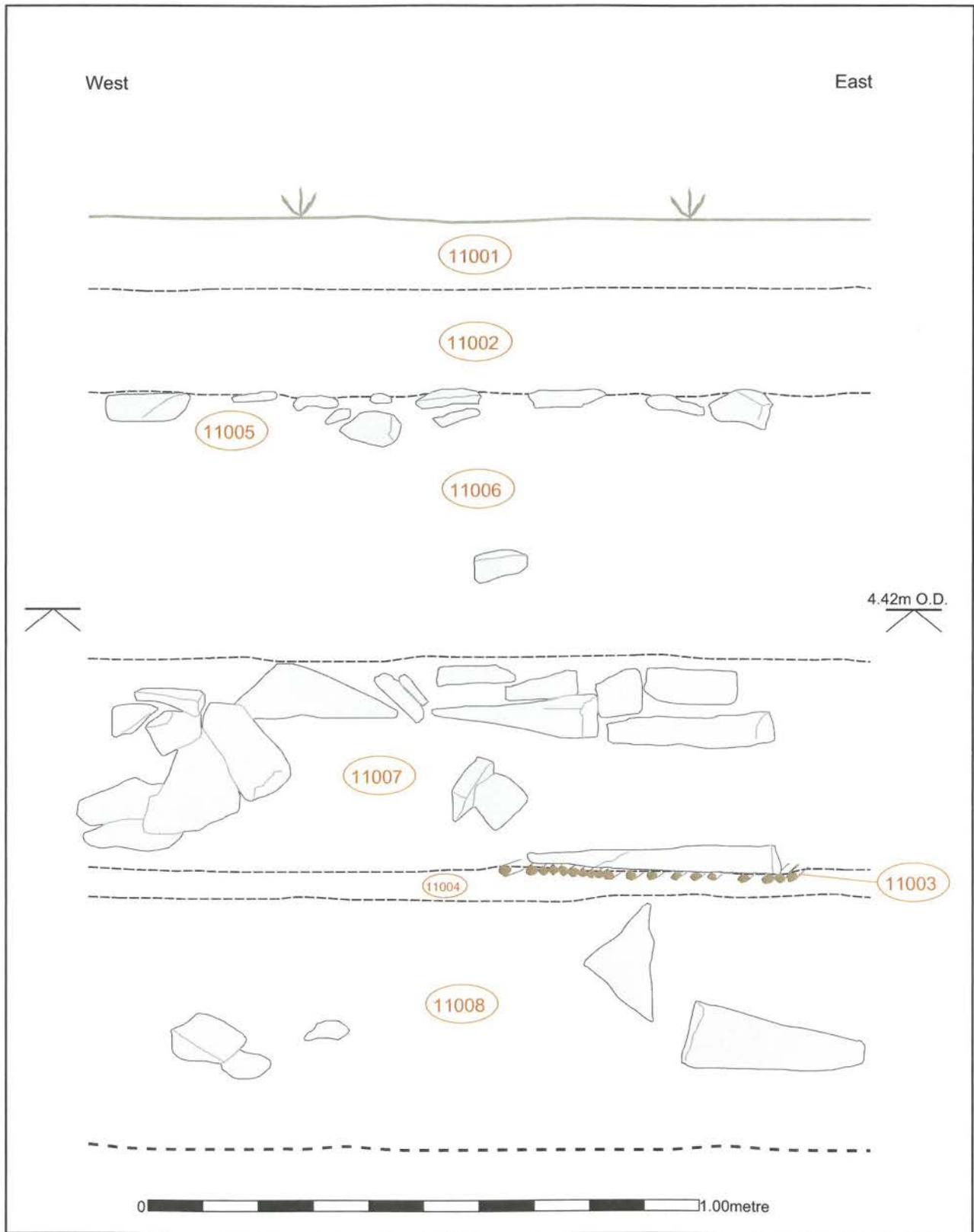


Figure 13. South facing section, Trench 11

3.4 Specialist reporting

The Finds by Steve Sell

Finds from fifteen contexts/nine trenches, including unstratified material from Trenches 2, 5 and 9, was examined. Roman pottery was noted in Trenches 2 and 10; otherwise the assemblage consisted entirely of later post-medieval or undiagnostic material.

Prehistoric

Natural thermally fractured flint was noted in Trench 11 (11005).

Roman

South Wales Greyware was recovered from two contexts in Trench 2, 2006 (1 sherd) and 2007, which produced a total of 20 fragments including the rim of a narrow-necked jar and a sherd from the shoulder of another jar. As few as two vessels may be involved. Roman pottery was also recovered from Trench 10 (10006), where three sherds were noted. One appears to have been sooted internally.

Part of what may be an imbrex was noted close to the surface of Trench 7 (7001); alternatively, it may be from a post-medieval tile.

Medieval and earlier post-medieval

No medieval or earlier post-medieval finds were recovered, with the exception of a single sherd of North Devon Gravel-tempered pottery from Trench 6 (6001), for which a 17th century date may be appropriate, and the roof tile fragment from 7001 if this piece is post-medieval rather than Roman. An ox-shoe from the surface of Trench 7 (7000) is likely to be post-medieval in date.

Later post-medieval and modern

Transfer-printed earthenwares and other ceramics of 19th century or later date were collected from Trenches 2, 4, and 9. A fragment of pale green bottle glass from Trench 12 (12002) is likely to be of similar date.

The animal bone, which includes the skeleton of a cow from Trench 12, is reported elsewhere (see below).

Faunal analysis by Martin Locock

Introduction

During archaeological investigations in advance of construction works at Project Oyster, Gwent Europark, two groups of animal bone were recovered: an articulated skeleton, in Trench 12, context 12002, and a small group of mixed bone from Trench 11, context 11005, associated with a possible road feature. Although direct dating evidence was not recovered (the presence of a sherd of post-medieval bottle glass may be residual), it is considered likely that the skeleton is of Iron Age/Romano-British date and the Trench 11 material is medieval.

Method

The animal bone was inspected and identified by comparison with known specimens and atlases (Schmid 1972; Hillson 1992; Cohen and Serjeantson 1986). Where species could not be established, elements were assigned to size classes (large mammal, medium mammal), based on Shackley (1981). No distinction was made between sheep and goat and rabbit and hare. Completeness was recorded using a code in which the parts of the bone were numbered from 1-5, from proximal to distal. Bone counts include all fragments larger than 10mm; joining parts within a single context were counted as one. Ribs and vertebrae were assigned to size class only. Metrical data was recorded using Driesch (1976) and compared to published data (University of Southampton 2003). Age classes follow Noddle (1977, 381) (N neonatal, A juvenile, B immature, C adult). The bone count corresponds to NISP.

Assemblage summary

The analysed assemblage comprises 518 bones, of which 99% were identified to species level (see Table 1); all is from domestic sources.

Table 1: summary of analysed bone

Species	NISP	% all bone	% identified mammal
Cow	515	99.4*	99.4*
Sheep/goat	1	0.2	0.2
Medium mammal	2	0.4	0.2
<i>Total</i>	<i>518</i>	<i>100.0</i>	<i>100.0</i>

* comprises single burial

Condition and retrieval

The bone is in good condition, with limited evidence for weathering but some mechanical damage probably arising from shrinkage of the surrounding clay. Preservation of bone surfaces is fair-good, and cut and tooth marks were visible on one bone. All the bone was probably deposited and buried soon after butchery. None of the bones are burnt. The articulated remains from 12002 represent a single cow skeleton, buried without defleshing; allowing for some fragmentary bone, it is likely that the entire skeleton was present.

Butchery and craft evidence

There is no evidence of butchery on the skeleton. One of the bones from Trench 11 had been chopped and may have been reused as a tool (of unknown purpose), since its surface was highly patinated as if it had been repeatedly rubbed.

Species present

The cow is adult (Age class C), probably of age of 4-6 years. Meddens and Beasley 2001, 164, reports similar burials, dated to the third Roman phase of the nearby site at Nash, although the Project Oyster example is closer in size to the larger Iron Age than Roman examples

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(University of Southampton 2003). Meddens and Beasley argue from the domination of the bone assemblage by cattle that their site is characteristically military, ignoring the fact that 70% of the bone is from their special burials.

Discussion

The burial of a cow, without butchery, would have required a significant amount of labour, and it is likely that the slaughter and deposition was a ritual marking the bounds or closure of a site.

Catalogue

Context	Species	Catalogue
11005	Sheep/goat	Tibia, 2-3, chopped, gnawed by dog, heavily patinated
11005	Medium mammal	Unidentified, x2
12002	Cow	Skull (fragments) Teeth (loose) x10 Mandible x 2; tooth wear PM4 d, M1 g, M2 f, M3 e Vertebra (fragments) x 24 Ribs (fragments) x 61 Pelvis (fragments) x 4 Scapula x 2 modern damage Humerus x 2 GL 310mm Radius x 2 GL 300mm Ulna x 2 Femur x 2 GL 395mm Tibia x 2 GL 340mm Carpals/tarsals x 52 Astragalus x 3 Calcaneum x 3 Metacarpal x 2 Metatarsal x 2 P1 x 8 P2 x 7 P3 x 7 Unid (frag) x 295

Wood analysis by Andy Sherman

Introduction

A total of 18 pieces of worked timber were recovered from two contexts (1006 and 11003) for post-excavation analysis. Descriptions of the woodworking techniques given below follow established methods for the description of conversion methods, tool facets and point types (eg Coles and Orme 1985; Brunning and O'Sullivan 1998).

The Trench 1 timbers

Trench 1 was excavated to a depth of 5.60m below the current ground surface with the basal deposit being a bluish-grey alluvial clay (1007); overlying context 1007 was a deposit of woody peat (1006). Due to the depth and unstable nature of the ground surface it was not possible to enter the trench to investigate context 1006 *in situ*. On examination of the spoil from this context a number of timbers were noted, 33 fragments of which were recovered for post-excavation analysis. Twenty-five of these fragments showed no sign of working and were discarded, with the remaining eight identified for further analysis. A single piece of this unworked timber (sample number *004) was sent to the wood specialist Ian Tyers for species identification and dendrochronological dating. Although sample proved unsuitable for dendrochronological analysis it was identified as *Alnus* and is likely to be the native *Alnus glutinosa* (see below).

Results

w001

Timber w001 was a quarter-split roundwood that measured 271mm in length, with a breadth of 66mm and a depth of 35mm. Although this timber showed significant excavation damage one end would appear to have been worked to a chisel-end point, formed by a single working facet. This facet measured 14mm in length and 17mm in width. The facet had a slightly concave character and shallow cutting angle of 33°. On one side of the timber the bark had been removed, with the outer edge apparently cut to a chamfer at an angle of 45° to the horizontal and a width of 19mm. A U-shaped jam curve 18mm wide and 12mm in length was recorded at the non-worked end of this chamfer.

w002

This timber was a half-split roundwood 218mm in length, 119mm in breadth and 51mm in depth. No evidence of secondary working was visible on this timber.

w003

Timber w003 was a half-split roundwood, which measured 74mm in length, 124mm in breadth and 44mm in depth. On one of the inner faces of the timber was a single working facet 11mm in length and 22mm in width, with a slightly concave facet character. No evidence of secondary working was visible on this timber.

w004

This timber is a box-quartered roundwood, which measured 216mm in length, 162mm in breadth and had a depth of 99mm on one side and 79mm on the other. The bark has been stripped of the outer surface of timber w004 and working facets were noted on all four surfaces, the largest of which was 68mm in length and 28mm in width with a slightly concave character.

w005

This timber was a quarter-split roundwood, measuring 112mm in length, 98mm in breadth with a depth of 49mm. The bark had largely been stripped from the outer surface of the timber and the inner surface of the timber was covered in a series of small working facets. The largest of which measured 9mm in length and 18mm in width, with a concave facet character. At one end of **w005** the timber was cut vertical across the grain to produce a blunt end.

w006

Timber **w006** was a tangentially split roundwood that measured 350mm in length, 216mm in breadth and 73mm in depth. The bark had been partial stripped from the outer surface of the timber, whilst two opposing inner surfaces were chamfered; both of these chamfers were 68mm in width and cut at an angle of 29° to the horizontal. A series of working facets were clearly visible on both chamfers, the largest of which measured 37mm in length, 32mm in width and had a slightly concave facet character.

w007

Timber **w007** was a quarter-split roundwood, which measured 179mm in length, 117mm in breadth and 105mm in depth. While this piece displayed significant excavation damage its outer surface appeared to have been worked into an L-shaped joint running along the length of the timber, with a breadth of 95mm and a depth of 69mm. Although the inner surfaces of this possible joint were badly bruised a number of poorly defined working facets were visible. The largest of these facets had a length of 11mm and width of 17mm, with a flat facet character.

w008

This timber was a quarter-boxed roundwood measuring 390mm in length, 130mm in breadth and 88mm in depth. Whilst this timber appeared to be tapering towards a worked point no evidence of secondary working was visible.

The brushwood structure 11003

A brushwood structure (**11003**) measuring approximately 1.20m north-south and 1.70m east-west was recorded within Trench 11. After initial cleaning, photograph and planning (see Figures 12 and 13; Plate 20 and 21) the structure was block lifted in four sections (sample numbers *008 – *011), each approximately measuring 0.60m x 0.40m for post-excavation analysis.

Results

Samples *008 - *011 were excavated during the post-excavation phase of the project, with approximately 200 pieces of un-worked brushwood being recovered from the sampled area. (Due to the un-worked nature of these pieces it was deemed unnecessary to issue each with an individual wood number). This brushwood varied in diameter between 01mm and 31mm with a maximum length of 174mm. Five of these pieces showed coppiced heels. The brushwood had been laid in an amorphous mass, parallel to the contemporary ground surface with a maximum depth of 70mm. Although there was no evidence for a supporting sub-structure the brushwood had been secured in place by eight, small roundwood pegs; details of the individual pegs are given in Table 1 (overleaf).

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Table 1: Pegs from brushwood structure 11003

Wood number	Conversion	Length (mm)	Diameter (mm)	Point	Facet character & dimensions (length and width, mm)	Cutting angle
011	Roundwood	119	16	C1	Flat, 35, 16	20°
012	Roundwood	146	25	C2	Flat, 83, 6	21°
013	Roundwood	82	29	C2	Flat, 46, 29	25°
014	Roundwood	110	18	C1	Flat, 51, 21	10°
015	Roundwood	143	11	C2	Flat, 34, 11	20°
016	Roundwood	42	11	C1	Flat, 22, 11	25°
017	Roundwood	62	13	C1	Flat, 32, 16	16°
018	Roundwood	61	10	W1+1	Flat, 11, 12	32°

Notes

Point types:

C (Chisel-end): Point is worked on one side only

W (Wedge-end): Point is worked on two sides

X+X: Number of working facets recorded on each side of timber

Seven of these pegs had chisel-end points formed from one or more working facets, whilst **w018** had a wedge-end point formed from three working facets on one side and a single facet on the opposing side of the peg. The largest of the facets within the group of three measured 11mm in length and 12mm in width, with a flat facet character. Its cutting angle was a shallow 32° and all three facets had clean junctions. The single facet on the opposing side of the peg was 40mm in length and 8mm in width with a flat character. This facet appeared to have formed by an area of bark and sapwood being torn away from the peg.

The worked point on peg **w011** consisted of a wedge-end produced by a single working facet, which measured 35mm in length and 16mm in width. The facet had a flat character and a very shallow cutting angle of 20°. Running diagonally across this facet was a blade signature consisting of two 1mm high ridges, 5mm apart. This blade signature was identified on two further roundwood pegs **w014** and **w017**.

Peg **w014** had a wedge-end point created from a single working facet; the end of this facet had been cut vertical across the grain to create a blunt end. This is a recurrent feature on the bases of larger upright timbers, within later prehistoric buildings across the intertidal zone of the Gwent Levels. It seems probable that these timbers had been hewn in this manner to create uprights, which would be resistant to sinkage in the underlying, relatively soft sediment (Nayling 1999, 3). It is possible that this technique is being replicated on a smaller scale in this structure. It is interesting to note that a number of the other pegs are broken at their worked ends, and it is possible that this technique was originally used on a larger proportion of the pegs.

A five percent sub-sample of the brushwood assemblage was sent to the wood specialist Ian Tyers for species identification. A total of four species were identified (see below) including *Alnus glutinosa* (Alder), *Salicaceae* (Willow and Poplar family), *Quercus* (Oak) and *Pomoideae* (probably Hawthorn).

Recovered from the upper surface of the brushwood structure where two larger roundwoods **w009** and **w010**.

The first of these timbers (**w009**) was a Y-shaped roundwood with fresh breaks on the end of each arm. The timber measured 572mm in total length, with the longest arm measuring 460mm in length and the shortest arm measuring 55mm. The main body of the timber has a diameter of 54mm, whilst the longest arm has a diameter of 24mm and the shortest a diameter of 21mm. At the opposite end of the timber was a single working facet, 61mm in length and 33mm in diameter, forming a chisel-end point. The facet had a slightly concave character with a very shallow cutting angle of 19°. A large number of small side branches had been removed along the length of this timber.

Timber **w010** was a sinuous roundwood that measured 711mm in length and 37mm in diameter. The end of this timber has been worked into a chisel-end point, formed from three working facets. The largest of these facets had a length of 35mm and width of 19mm, with a slightly concave facet character. This facet had a very shallow cutting angle of 12° and all three facets had clean junctions. A number of small side branches had been removed along the length of the timber.

Samples from Trench 15

Trench 15 was excavated to a depth of 4.10m below the current ground surface, with the basal deposit being a woody peat containing substantial quantities of large un-worked timbers, which on initial inspection appeared to be mainly birch and alder. Two of these timbers (sample numbers *005 and *006) were recovered for dendrochronological dating plus confirmed species identification and sent to the wood specialist Ian Tyers. Although the samples proved unsuitable for dendrochronological analysis they were identified as *Betula* (Birch *005) and *Fraxinus excelsior* (Ash *006) (see below).

Conclusions

The Trench 1 timbers

The quantity of worked timber recovered from Trench 1 suggests that there could be a significant wooden structure somewhere in the vicinity of this trench. However, as this material was not investigated *in situ* it is impossible to state conclusively that such a structure exists. Unfortunately, none of the timber recovered from this trench is in itself diagnostic to a structures function and it is impossible to speculate on the nature of this feature, if it indeed exists at all.

The brushwood structure 11003

The brushwood structure **11003** would appear to form a foundation below the sandstone rubble surface **11007**, designed to support the road surface across an area of boggy ground created by the relic channel **11009** (see results section above). Given the relatively shallow depth of the brushwood deposit it is debatable, however, as to how long this structure would have provided a viable foundation for the road surface and is perhaps indicative of a relatively short life span. This engineering technique can clearly be seen in the Roman Road excavated by Page (2000, 24) to the west of Carmarthen, although in this case the foundation was a more sophisticated corduroy structure.

The very shallow cutting angle (0-20 degrees) seen on over half of the roundwood pegs, (**w011**, **w012**, **w014**, **w015** and **w017**), indicates a concern for a sharp point, as well as the ability of the blade to cut into the wood successfully when wielded at steep trajectories (Brunning and O'Sullivan 1997, 164). Whilst the flat nature of the facet characters recorded on all the pegs are occasionally produced by some bronze blades they are more often produced

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by those made of iron. Although it should be noted that this is only a general descriptive distinction, as blade angle and edge angle play their parts in the shaping of facets (Coles and Orme 1985, 27). When taken into account with the fairly sophisticated nature of the road construction the woodworking techniques seen here suggest a construction date of the Roman period or later for this structure.

The presence of five coppiced heels within the brushwood assemblage from context **11003** could represent the use of wood taken from managed woodland. However when considering coppiced heels it is important to realise the impact an active beaver colony can have on the surrounding landscape. One of the side effects being the natural coppicing of trees. The presence of active beaver colonies in the surrounding area (all be it during the Bronze Age) was identified during Nayling and Caseldine's work at Caldicot by the presence of beaver-chewed branches and a complete beaver femur (Nayling and Caseldine 1997, 166 and 235). The continued presence of beaver colonies in later periods throughout this area is highly likely, and when taken into account with the knotty morphology of the wood recovered from context **11003**, (an indication of wood from an unmanaged source), it must cast some doubt on the presence of managed woodland in the Greenmoor Arch area.

The two roundwood timbers (**w009** and **w010**) recovered from the upper surface of context **11003** are perhaps of an early date than the brushwood structure itself. The larger size and slightly concave character of the facets on these two timbers could suggest that they were worked with bronze blades as opposed to iron ones. Whilst the size of the timbers and nature of the point working on both samples suggest that they were originally intended as larger stakes rather than constituent parts of a brushwood foundation. When taken into consideration with the timbers stratigraphical location on the very surface of the brushwood structure it is perhaps tempting to suggest that the timbers have been re-used. However as noted above the analysis of facet size and character can be biased by a number of factors, therefore, a definitive answer to this supposition can only be provided by the positive dating of samples **w009** and **w010**.

Dendrochronological analysis by Ian Tyers

A total of 14 samples were examined. Samples *003 to *006 were presented for dendrochronological analysis; none were found to be oak and none had any useful numbers of rings, thus proving unsuitable for dendrochronological analysis. In all samples microscopic cross-sections were taken from the timbers in three planes (radial, tangential and traverse) each mounted on glass slides and features examined with a compound microscope at up to 400x magnification. The features were compared with illustrations and keys in Schweingruber (1978). The results of this are:

Samples *003 to *006

Initial group	Species
600/10004/*003	<i>Betula</i>
600/10006/*004	<i>Alnus</i>
600/15005/*005	<i>Fraxinus</i>
600/15005/*006	<i>Betula</i>

They are all probably native, they are often found in wet conditions.

Samples *008 to *011

Brushwood structure	Species
600/11003/*008-*011	<i>Salicaceae</i>
600/11003/*008-*011	<i>cf Salicaceae</i>
600/11003/*008-*011	<i>Quercus</i>
600/11003/*008-*011	<i>Quercus</i>
600/11003/*008-*011	<i>cf Pomoideae</i>
600/11003/*008-*011	<i>cf Pomoideae</i>
600/11003/*008-*011	<i>cf Pomoideae</i>
600/11003/*008-*011	<i>Alnus</i>

Young brushwood stems do not always develop the characteristics of 'adult' timber and as a result some identifications are problematic.

Species

Betula is Birch, there are several native types, indistinguishable.

Alnus is Alder, the native type is *Alnus glutinosa*.

Fraxinus is Ash, the native type is *Fraxinus excelsior*.

Salicaceae is the Willow and Poplar family, this covers many types of native trees, and archaeological wood is generally indistinguishable beyond this grouping.

Quercus is Oak, the native types are indistinguishable.

Pomoideae are fruitwood types, including apple/pear/hawthorn, the latter is perhaps the most likely given the context.

Conclusion

The samples *003 to *006 are all probably native and they are often found in wet conditions. The samples *008 to *011 represent mostly scrubland, woodland edge, or understory trees suitable for the exploitation of brushwood. The sampled assemblage is remarkably diverse.

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Without knowing the sampling strategy it seems possible this diversity indicates a large quantity of harvested stems have been comprehensively mixed up during the construction of the surface, or that the surface has been repaired on numerous occasions with different materials.

4. Discussion

The peats belonging to the Middle Wentlooge Formation, which were uncovered during trenching (Trenches 1, 7, 8, 10, 12, 13, 14 & 15) are indicative of two types of organic wetland environment broadly known from across the Caldicot Level (Lawler 1994; Locock 1999b; Nayling and McGrail 2004; Roberts 2000b and Sherman and Gerrard 2007). The lower peat bed encountered on site comprised of an alder (*Alnus*), ash (*Fraxinus*) and birch (*Betula*) dominated wooded environment (carr) with deciduous trees appearing as upright stumps/boles and collapsed brushwood during excavation. The upper peat bed was a substantial organic deposit, on average up to 2m thick, with a heavy bias towards phragmites plant remains indicating a long-standing salt marsh environment. The base of the lower peat has been dated to the end of the 5th millennium BC based on the analysis of wood from the equivalent horizons at Barland's Farm (Lawler 1994, 14) and the Vurlong Reen (Walker *et al* 1998, see Table 4, 58). The overlying phragmites peat bed is known to belong to the Bronze Age (Rippon 1996) and is the consequence of a significant environmental shift from the existing deciduous woodland communities to one of salt marsh. The presence of well-preserved deciduous remains within the lower peat bed (within the above mentioned trenches) apparently lying submerged *in situ* and the identification of a band of alluvial silts (1005) found to overlie these deposits in at least one trench (Trench 1) are certainly indicative of a rapid marine transgression. It is important to note that these former hidden organic wetlands can vary significantly in thickness and compaction as they are readily susceptible to later activity particularly the embanking and drainage that is prevalent on the Gwent Levels from the Roman period onwards and is still actively practised today within the Caldicot Level. However, the peat beds belonging to the Middle Wentlooge Formation that were recorded across the site were found to relatively uniform in thickness sloping (or more accurately undulating) gently to the west. As a consequence the relative depths of this formation were found to be much deeper to the centre and west of the Project Oyster site.

The environmental sequence of salt marsh on the Caldicot Level is known to continue into the 1st millennium BC, where another rapid rise in relative sea levels initiates the commencement of the Upper Wentlooge Formation (Rippon 1996; Locock and Walker 1998; Walker *et al* 1998). This process was recorded across the entire site as a substantial clean blue-grey alluvium found sealing the peat deposits. It is pertinent to note that although the Project Oyster site proved to be similar stratigraphically to the adjacent Wilkinson site, where significant deposits and structures of an Iron Age date were situated on 'dry' islands located within the base of the Upper Wentlooge Formation, the entire Project Oyster site proved to be archaeologically sterile, in terms of material culture, at these contemporary depths (Locock 1999b).

Worked wood has been identified from two trenches; Trenches 1 and 11. In Trench 1 enough worked wood was found to suggest that there was some form of structure here, though it is impossible to tell of what type or date. The quantity of worked timber recovered from Trench 1 suggests that there could be a significant wooden structure somewhere in the vicinity of this trench. However, as this material was not investigated *in situ* it is impossible to state conclusively that such a structure exists. Unfortunately, none of the timbers recovered from this trench is in itself diagnostic to a structures function and it is impossible to speculate on the nature of this feature, if it indeed exists at all. A sample of these timbers was identified as *Alnus* and is likely to be the native *Alnus glutinosa* (see above), but this sample proved unsuitable for dendrochronological analysis.

Within Trench 11 a small section of brushwood structure (11003), composed of alder (*Alnus glutinosa*), willow/poplar (*Salicaceae*), oak (*Quercus*) and hawthorn (*Pomoideae*), had been

identified that was probably built as a foundation to support an overlying road surface (**11007**) through a boggy area. Although there was no evidence for a supporting sub-structure the brushwood had been secured in place by eight, small roundwood pegs. When taken into account with the fairly sophisticated nature of the road construction, the woodworking techniques seen here suggest a construction date of the Roman period or later for this structure. It is thought the presence of five coppiced heels within the brushwood assemblage, from context **11003**, could represent the use of wood taken from managed woodland. However, when considering coppiced heels it is important to realise the impact an active beaver colony can have on the surrounding landscape. One of the side effects being the natural coppicing of trees. The presence of active beaver colonies in the surrounding area (all be it during the Bronze Age) was identified during Nayling and Caseldine's work at Caldicot by the presence of beaver-chewed branches and a complete beaver femur (Nayling and Caseldine 1997, 166 and 235). The continued presence of beaver colonies in later periods throughout this area is highly likely, and when taken into account with the knotty morphology of the wood recovered from the brushwood structure (**11003**) (an indication of wood from an unmanaged source) it must cast some doubt on the presence of managed woodland in the Project Oyster area.

During the evaluation several substantial stone features were uncovered in Trenches 2, 5, 6, 9, 10, and 11. Within Trenches 5 and 6 and positioned on a northeast to southwest alignment two linear stone features (**5005** and **6004**), established as robbed road surfaces, were found to exhibit identical structural characteristics and are thought to be part of the same feature. The full width (c3m) of the stone structure was revealed in Trench 5 but only the western edge in Trench 6. A definite almost 'kerbed' edge to the stone feature was seen to exist in both trenches. Surviving within Trench 6 (but not Trench 5) were areas of sandstone packing believed to have been used as a suitable 'metal' material for the base of surface paving.

A separate stone feature was identified within Trench 2 (**2006**), also positioned on a northeast to southwest alignment, though at a slightly different angle to that identified in Trenches 5 and 6, which produced a single piece of South Wales Greyware. The structure within Trench 2 is believed to be broadly contemporary on stratigraphical grounds with the structures found in Trenches 5 and 6. An earlier phase of activity was also identified in Trench 2 in the form of a thin 'surface' horizon (**2004**) and several structures (**2007** and **2008**) from which twenty fragments of South Wales Greyware were recovered, possibly from as little as two vessels.

The stone feature (**9004**) within Trench 9 was not sectioned as Test Pit 49 had previously been excavated through it and showed it to be a single phase of stone rubble construction but more than twice the width (c10m) of the structure identified in Trench 5. Interestingly, within the west of Trench 9 several large paved stones survive situated on top of the stone rubble foundations, which would appear likely to represent the original uppermost surface of the feature. However, as no similar paved stones survive to the east of the feature we can tentively suggest there may have been extensive robbing within this area.

Two distinct stone features were identified within Trench 10 positioned on differing alignments; the first located on the west side of the trench (**10006**) on a northeast to southwest alignment and the second on the east side of the trench aligned east to west (**10005**). These stone features were found to exhibit a similar construction method to the stone features seen elsewhere in Trenches 2, 5, 6, 9, and 11. The exact nature of these stone features remains unknown, however, as only a fraction of each was investigated, their stratigraphical location and the presence of Roman pottery from **10006** would lend support to both having a possible Roman origin and contemporary relationship to the deposits identified in Trench 2 and 11.

Within Trench 11 two distinct phases of stone construction were recorded both showing at least four courses, although the earlier structure (**11007**) was constructed of significantly larger

sandstone blocks than the overlying structure (**11005**), which had a predominantly rubble construction. The base of **11007** appears to have been particularly saturated at the time of its construction as a small area of brushwood surface (**11003**) (discussed above) was recorded during excavation. Further evidence as to the wetness of the area comes in the form of a palaeochannel (**11009**) located below structure **11007** and the presence of a large quantity of dumped sandstone blocks both within the palaeochannel and underlying the above structure, within the clay of **11008**. It seems that these two distinctly different stone features are on slightly differing alignments, though both are positioned in an approximate northeast to southwest direction, however, only the one edge of both **11007** and **11005** was uncovered by the evaluation trench. These stone features are thought to belong to two phases of road construction and it is apparent from the accumulation of natural silty-clay (**11006**) that a short hiatus occurred after stone structure **11007** was presumably abandoned.

In all trenches investigated where stone structures were investigated it was found that there appears to have been some level of later robbing activity, as evidenced by the presence in places of an incomplete but apparently paved surface and packing stones. The stone features recorded in Trenches 2, 5, 6, 9, 10, and 11 appear to broadly conform to a northeast southwest alignment. However, it is not possible to say for certain that the stone features identified in Trenches 5 and 6 (**5005** and **6004**) are part of the same stone feature seen in Trench 2 (**2006**). Although the evidence is not incontrovertible, the alignment of the stone features identified in Trenches 2, 9, 10, and 11 indicate that they are possible disparate lengths of the same feature. The stone features identified in Trench 2 and associated South Wales Greyware may be a continuation of structures reported by Lawler (1994) in TP20, and lend support to his theory that argues for a Roman date to his feature on geological evidence despite its high level within the stratigraphy.

A further supposition as to the relationship between the stone features and surfaces within Trenches 2 and 11 can also be presented given the presence of a stratigraphical hiatus represented by a significant build up of natural silty-clay between the lower (**2007**, **2004**, **2008** and **11007**) and upper (**2006** and **11005**) stone structures in both trenches. It would be reasonable to suggest based on this evidence that there are two distinct phases of activity within both trenches that may prove to be contemporary; however, further investigation would be necessary to substantiate this hypothesis.

During the widening of Trench 12, to allow safe working at depth, the articulated remains of a single and complete cow skeleton (**12002**) was identified on the periphery of the excavation and at a similar depth to the Roman stone features already discussed above. The cow was identified as an adult of probably 4-6 years old. Although direct dating evidence was not recovered (the presence of a sherd of post-medieval bottle glass may be residual), it is considered likely that the skeleton is of Iron Age/Romano-British date. The presence of the post-medieval glass bottle sherd would normally indicate a fairly recent date for the deposition of the animal. However, it is not inconceivable for the bottle glass to have percolated down through the overlying deposits, possibly arising from the shrinkage of the surrounding clay. Meddens and Beasley (2001, 164) report similar burials, dated to the third Roman phase of the nearby site at Nash, although the Project Oyster example is closer in size to the larger Iron Age than Roman examples (University of Southampton 2003). The burial of a cow, without defleshing or butchery, would have required a significant amount of labour, and it is quite possible that the slaughter and deposition was a ritually motivated. The position and articulated nature of the animal remains indicate a single depositional event, whether natural or otherwise, but without definitive stratigraphical or dating evidence we can only speculate at this stage as to its exact origins.

5. Conclusion

The evaluation process has proved successful in identifying both positive and negative responses to the archaeological resource. The earliest evidence on site relates to the potentially Neolithic timbers recorded in Trench 1. Whether these belong to an *in situ* structure or are dislocated flotsam is a moot point considering the great depth of the peat in this area of the site (c0m OD) and it is understood that any future development is unlikely to penetrate to this depth to the west of the site. The evaluation has demonstrated the undulating nature of the peat deposits and their greater depth to the middle and west of the site. The high peat deposits to the east of the site will need to be considered during the construction phase of the proposed development and suitable mitigation measures implemented. However, these should be manageable during this phase of the development. There is a complete absence of any material culture relating to the Iron Age exploitation of the area, which is in contrast to the extensive deposits known to exist to the west at the Wilkinson's site on high peat 'islands'.

The most significant feature on the site is the 'road' surfaces, which were identified in six places across the site, positioned on a northeast to southwest alignment. The 'road' surfaces were clearly divided into at least two phases separated by a short hiatus, which was visible in only the northeast of the site. Here, a substantial road surface overlay an earlier stone feature of probable similar origin but since only a fraction of this feature was uncovered (in Trench 11) this is not certain. This earlier feature was positioned over a brushwood track identified as Roman, on construction techniques, and therefore provides a tentative date for this lower stone feature. The upper 'road' surface was identified across the site but was shown to be much wider and have a significantly more complex layout to the northeast of the site, where several lengths were found to be on alternate alignments. Within this area the upper 'road' surfaces were also found to be much wider, c10m, than those exposed lengths to the southwest, which were only c3m wide. The recovery of South Wales Greyware from the wider sections of the 'road' surface suggests a Roman date for these features but it is not impossible that these 'road' surfaces belong to later periods given their alignment with the medieval slipway found at Westway to the southwest (Tuck forthcoming). Although the presence of the Barlands Farm bridge, quay and coastal boat (Nayling and Mcgrail 2004) on the same alignment, as well as the existence of limited Roman material culture, gives greater weight to the explanation of a Roman origin for these 'road' surfaces.

Given the general depths of the peat deposits these will need little mitigation other than that discussed above, specifically relating to those areas of the site where these deposits are closest to the surface. The linear 'road' surfaces will need a more comprehensive mitigation strategy, one that will involve further investigation of the archaeologically complex northeastern area of the site. However, the complexity of the archaeological resource is not such that additional evaluation is needed and can be managed during the construction phase of the development.

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Bibliography

- Baker, J, and Brothwell, D, 1980, *Animal diseases in archaeology*. Academic Press, London
- Beasley, M, 1998, *An assessment of the archaeological Excavations at the Nash Waste Water Treatment Works, Newport, South Wales. Site NAS 98*, Pre-Construct Archaeology Ltd, unpublished report: September 1998
- Bell, M and Neumann, H, 1995, 'Intertidal peat survey in the Welsh Severn estuary', *Archaeology in the Severn Estuary*, Volume 6, 29-33
- Bell, M, 1994, 'Field survey and excavation at Goldcliff, Gwent 1994', *Archaeology in the Severn Estuary*, Volume 5, 115-144
- Brunning R and O'Sullivan A, 1997, 'Wood species selection and woodworking techniques', in Nayling N and Caseldine A (eds), *Excavations at Caldicot, Gwent: Bronze Age Palaeochannels in The Lower Nedern Valley*, CBA Research Report 108
- Coles J M and Orme B J, 1985, 'Prehistoric woodworking from The Somerset Levels: 3. Roundwood', *Somerset Levels Papers* 11
- Driesch, A von den, 1976, *A guide to the measurement of animal bones from archaeological sites*. Harvard University: Peabody Museum Bulletin 1, Harvard.
- Gerrard, C, 2006, *Project Oyster, Gwent Europark, Newport, specification for archaeological evaluation Stage 2a*, GGAT report no. 2006/098
- Hillson, S, 1992, *Mammal bones and teeth: an introductory guide to methods of identification*. Institute of Archaeology, University College London, London.
- Lawler M, 1994, *Stage 1(b) archaeological investigations at Gwent Europark, Llandevenny*, GGAT report no. 1994/078
- Lawler, M and Allen B, 1994, *Archaeological monitoring of preliminary site investigations at Gwent Europark, Llandevenny*, GGAT report no.1994/034
- Locock, M and Walker, M, 1998, Hill Farm, Goldcliff: The Middle Iron Age Drainage on the Caldicot Level. *Archaeology in the Severn Estuary* 9, 37-44
- Locock, M, 1997, 'Gwent Levels Wetland Reserve, Hill Farm, Goldcliff: excavations 1997', *Archaeology in the Severn Estuary*, Volume 8, 1997, 55-65
- Locock, M, 1999a, *Gwent Europark, Llandevenny, Newport*. Review of archaeological strategy, GGAT report no. 1999/042
- Locock, M, 1999b, *Archaeological evaluation (Stage 2), Wilkinson site, Gwent Europark, Llandevenny, Newport*, GGAT report no. 1999/055
- Marvell, A, G, 2004, 'Roman settlement and economy', in Nayling and McGrail 2004, 91-110
- Meddens, F, and Beasley, M, 2001, Roman wetland seasonal pasture exploitation near Nash, on the Gwent Levels, Wales. *Britannia* 32, 143-185
- Nayling N, 1999, Later prehistoric occupation sites and associated palaeochannels: Gwent Levels intertidal zone, GGAT Report No: 00/99
- Nayling, N and Castledine, A, 1997, *Excavations at Caldicot, Gwent: Bronze Age Palaeochannels in the Lower Nedern Valley*, CBA Research Report 108
- Nayling, N and McGrail, S, 2004, *The Barland's Farm Romano-Celtic boat*, CBA Research Report 138

**Project Oyster, Gwent Europark, Newport:
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- Noddle, B A, 1977, The animal bone. *In H Clarke and A Carter Excavations in Kings Lynn, 1963-1970 (Society for Medieval Archaeology Monograph 7), 376-389.*
- Page, N, 2000, 'A Roman road west of Carmarthen: A new avenue of research', *Institute of Field Archaeologists, yearbook and directory of members 2000*
- Rippon, S, 1996, *The Gwent Levels: The evolution of a wetland landscape*, CBA Research Report **105**
- Roberts, R and Locock, M, 2001, *Gwent Levels Wetland Reserve, Goldcliff, Newport: archaeological investigations*, GGAT report no. **2001/091**
- Roberts, R, 2000a, *Lidl building, Gwent Europark, Newport: stage 2a field evaluation*, GGAT report no. **2000/003**
- Roberts, R, 2000b, *Lidl building, Gwent Europark, Newport: stage 2b field evaluation*, GGAT report no. **2000/013**
- Schmid, E, 1972, *Atlas of animal bones for prehistorians, archaeologists and Quaternary geologists*. Elsevier, London.
- Schweingruber, F H, 1978, *Microscopic Wood Anatomy*. 2nd Edition. Tuck, M, 2005, *Westway, Magor: Newport, archaeological watching brief*, GGAT report no. **2005/007**
- Shackley, M, 1981, *Environmental archaeology: an introduction*. George Allen and Unwin, London.
- Sherman, A and C Gerrard, 2007, *Project Oyster, Gwent Europark, Newport: Archaeological Field Evaluation, Stage 2a*. GGAT report no. **2007/014**
- Tuck, M, forthcoming, *Westway, Magor, archaeological watching brief*
- University of Southampton, 2003, *Animal Bone Metrical Archive Project (ABMAP, accessed from <http://ads.ahds.ac.uk/catalogue/specColl/abmap/search.cfm>)*
- Walker, M J C, Bell, M, Caseldine, A E, Cameron, N G, Hunter, K L, James, J H, Johnson, S and Smith, D N, 1998, Palaeoecological investigations of middle and late Flandrian buried peats on the Caldicot Levels, Severn Estuary, Wales. *Proceedings of the Geologists' Association*, **109**, 51-78.
- Yates, A 1997, *Nash WWTW Field Evaluation Nash, Monmouthshire*, GGAT report no. **1997/070**

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Appendix I

Inventory of contexts

Trench 1

Level of present ground surface: 5.722mOD

Context	Type	Depth	Description	Period
1001	Deposit	0m – 0.55m	Mid-brown silty-clay-loam topsoil with occasional small fragments of sandstone.	Modern
1002	Deposit	0.55m – 2.05m	Light-brown silty-clay with mineral leaching in the form of orange mottles. Deposit clean with no inclusions. Upper Wentlooge Formation	Unknown
1003	Deposit	2.05m – 3.6m	Blue-grey alluvial clay, very clean, no gleyed layer visible. Interface with overlying deposit pronounced. Upper Wentlooge Formation.	Unknown
1004	Deposit	3.6m – 5.1m	Black-brown phragmites peat bed. Friable, thick homogenous deposit with no deciduous timber inclusions, many preserved phragmites leaves. Middle Wentlooge Formation	Prehistoric
1005	Deposit	5.1m – 5.15m	Thick gleyed layer (c0.05m). Blue-grey marine alluvial clay, very clean. Middle Wentlooge Formation	Prehistoric
1006	Deposit	5.15m – 5.6m	Black-brown phragmites peat (Middle Wentlooge Formation) with deciduous timber including a large horizontal trunk and several small worked pieces of timber (see Appendix III).	Prehistoric
1007	Deposit	5.6m – n.b	Blue-grey alluvial clay, very clean. Lower Wentlooge Formation.	Unknown

All depths below present ground surface. n.b = not bottomed

Trench 2

Level of present ground surface: 5.955mOD

Context	Type	Depth	Description	Period
2001	Deposit	0m - 0.30m	A silty clay with heavy bioturbation in the form of grass roots. Some small sandstone stones but generally very clean. One find of blue transfer ware.	Modern/Post-med
2002	Deposit	0.30m - 0.68m	A silty clay with orange mottling	Natural
2003	Deposit	0.10m - 0.40m	Stoney deposit. Large stones, between 40 x 30 x 8cm haphazardly placed. Machined through. No associated finds.	Unknown
2004	Deposit	0.68m – 0.72m	A single layer of sandstone pebbles (<0.1m) held within a fine silt clay with iron pan and manganese leaching.	Roman
2005	Deposit	0.72m – n.b	Blue grey silty clay with patches of iron panning and magnesium deposits. Alluvial clay.	Natural
2006	Deposit	0.36m – 0.45m	Single stone layer at the east end of Trench 2 of fairly large sandstone slabs, (<0.1m - 0.5m), with one exceptionally large stone of over 0.5m x 0.5m. One fragment of South Wales Greyware was recovered.	Roman
2007	Deposit	0.68m – 0.88m	Stone layer, located in west end of Trench 2, at least three irregular courses of stones varying in size from 0.1m x 0.1m x 0.05m to 0.4m x 0.3m x 0.35m plus. Some of the large stones may have been worked. Twenty fragments of South Wales Greyware were recovered.	Roman

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Context	Type	Depth	Description	Period
2008	Deposit	0.68m – n.b	Sandstone pebbles held within a silty clay matrix.	Roman
2009	Deposit	0.38m – 0.52m	A silty clay with orange mottling	Natural

All depths below present ground surface. n.b = not bottomed

Trench 3

Level of present ground surface: 5.947mOD

Context	Type	Depth	Description	Period
3001	Deposit	0-0.33m	Mid brown silty clay loam.	Modern
3002	Deposit	0.33-0.72m	Light brown silty clay. Upper Wentlooge Formation.	Natural
3003	Deposit	0.72-1.23m	Grey brown silty clay, no stones. Upper Wentlooge Formation.	Natural

All depths below present ground surface. n.b = not bottomed

Trench 4

Level of present ground surface: 5.820mOD

Context	Type	Depth	Description	Period
4001	Deposit	0-0.18m	Mid brown silty clay loam	Modern
4002	Deposit	0.18-0.38m	Light brown silty clay with orange mineral leaching. Upper Wentlooge Formation.	Natural
4003	Deposit	0.38-0.9m	Grey brown silty clay with mottling of leached minerals. Upper Wentlooge Formation	Natural

All depths below present ground surface. n.b = not bottomed

Trench 5

Level of present ground surface: 5.643mOD

Context	Type	Depth	Description	Period
5001	Deposit	0.15m	Silty clay loam topsoil. Heavy bioturbation.	Post-medieval/ Modern
5002	Deposit	0.13m	Dark greyish brown silty clay with isolated roots.	Post-medieval/ Modern
5003	Cut	0.13m	Cut of pit of unknown function, possible field grip.	Post-medieval/ Modern
5004	Deposit	0.1-0.32m	Mid-brown silty-clay with orange iron panning and isolated manganese flecks.	Post-medieval/ Modern
5005	Structure	0.25-0.40m	Linear stone feature thought to be a Roman or medieval road. The structure is composed of one to three courses of relatively flat sandstone and conglomerate stones. The stone feature had a clear edge formed by large sandstone blocks up to 0.5m in width with flat sides creating a straight edge; a pronounced camber was recorded in section but no flanking ditches were evident.	Unknown/ Roman?/medieval?
5006	Deposit	0.35-0.6m	A greyish brown silty clay with iron panning and manganese mottling throughout	Natural
5007	Deposit	0.13m	Mid brown silty clay loam	Post-medieval/ Modern
5008	Deposit	0.13-0.25m	Mid brown silty clay with mottling of orange iron panning and flecks of manganese	Post-medieval/ Modern

All depths below present ground surface. n.b = not bottomed

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Trench 6

Level of present ground surface: 5.618mOD

Context	Type	Depth	Description	Period
6001	Deposit	0m - 0.18m	Silty clay-loam topsoil with some sandstone pebbles and bioturbation.	Post-medieval
6002	Deposit	0.18m - 0.37m	Mid-brown silty-clay with orange (iron) mineral mottling. Manganese (black) flecks noted throughout deposit.	Natural
6003	Deposit	0.37m - 0.7m n.b	A grey-brown silty-clay with mineral leaching, possibly iron (orange) and manganese (black) showing as mottling. Slightly alluvial in character, indicating that a short period of inundation occurred after abandonment of context 6004..	Natural
6004	Structure	0.37m - 0.5m	A linear stone structure; was composed of 3 to 4 courses of sandstone and conglomerate slabs. The western edge of the feature is clearly visible as a fine edge, composed of large (c.0.5m width) sandstone blocks. It would appear that overlying courses have been partially robbed to a lesser and greater degree along its length. Much of the stone surface has buckled, many stones slumping at shallow angles which may have been caused by natural processes.	Unknown/ Roman?/ medieval

All depths below present ground surface. n.b = not bottomed

Trench 7

Level of present ground surface:

Context	Type	Depth	Description	Period
7000	Deposit	0m-0.26m	Dark brown silty clay loam topsoil	Post-medieval/ Modern
7001	Deposit	0.26m-1.67m	Mid brown silty clay subsoil with frequent root activity and isolated sub rounded stones	Natural
7002	Deposit	1.67m-3.0m	Greyish blue alluvial clay with frequent black organic staining. Upper Wentlooge Formation	Natural
7003	Deposit	3.0m-4.7m	Black brown phragmites rich peat. Middle Wentlooge Formation	Prehistoric
7004	Deposit	4.7m-5.0m (n.b)	Black brown deciduous wood rich peat. Middle Wentlooge Formation	Prehistoric

All depths below present ground surface. n.b = not bottomed

Trench 8

Level of present ground surface: 4.993mOD

Context	Type	Depth	Description	Period
8000	Deposit	0-0.25m	Mid brown silty loam topsoil	Post-medieval/ Modern
8001	Deposit	0.25-1.50m	Orange brown silty clay subsoil	Natural
8002	Deposit	1.50-3.25m	Blue grey alluvial clay. Upper Wentlooge Formation.	Natural
8003	Deposit	3.25-4.60m	Brown phragmites rich peat. Middle Wentlooge Formation.	Prehistoric
8004	Deposit	4.60-5.50m	Red brown woody peat. Middle Wentlooge Formation.	Prehistoric

All depths below present ground surface. n.b = not bottomed

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Trench 9

Level of present ground surface: 5.093mOD

Context	Type	Depth	Description	Period
9001	Deposit	0m - 0.2m	Mid brown silty clay loam topsoil containing organic material in the form of grass roots	Post-medieval/ modern
9002	Deposit	0.2m - 0.4m	Light brown silty clay topsoil with orange iron mottling	Natural
9003	Deposit	0.4m - 0.45m	Light grey blue alluvial clay with orange iron panning	Natural
9004	Structure	0.45m n.b	A substantial stone surface comprised of large, but intermittent, sandstone slabs over a compacted rubble layer of smaller sandstone cobbles and pebbles. Possible foundation of a substantial road c10m wide. Some large (c0.4m x 0.3) pavestones survive to northwest of trench, no pavestones survive to southeast. The structure had a visible camber in section.	Unknown/ Roman?/ medieval?

All depths below present ground surface. n.b = not bottomed

Trench 10

Level of present ground surface: 5.010mOD

Context	Type	Depth	Description	Period
10001	Deposit	0-0.2m	Mid brown silty clay loam topsoil.	Post-medieval/ Modern
10002	Deposit	0.2-0.8m	Light brown clay subsoil.	Roman
10003	Deposit	0.8-2.4m	Blue grey alluvial clay. Upper Wentlooge Formation.	Natural
10004	Deposit	2.4-3.8m	Black brown phragmites rich peat. Middle Wentlooge Formation.	Prehistoric
10005	Structure	0.25-0.6m	Linear stone feature, Possible Roman road, composed of 1-3 layers of sandstone and conglomerate slabs.	Unknown/ Roman?
10006	Structure	0.75-0.9m	Eastern edge of linear stone feature, possible Roman road, composed of 1-3 layers of sandstone and conglomerate slabs. Three sherds of South Wales Greyware were noted.	Roman

All depths below present ground surface. n.b = not bottomed

Trench 11

Level of present ground surface: 5.146mOD

Context	Type	Depth	Description	Period
11001	Deposit	0m - 0.13m	Mid brown silty clay loam topsoil with heavy bioturbation	Post-medieval/ Modern
11002	Deposit	0.13m - 0.33m	Mid brown silty clay with orange iron mottling	Natural
11003	Structure	1.2m	Brush wood surface consisting of laid lengths of brush wood. 30mm-70mm in length; 7mm-40mm in diameter. Apparently laid parallel to each other.	Unknown/ Roman?
11004	Deposit	1.19m - 1.26m	Light brown silty clay with grey mottling. Frequent inclusions of decomposing organics. Contains alluvial lenses.	Unknown/ Roman?
11005	Structure	0.33m - 0.58m	Compacted sandstone rubble surface overlaid by flat sandstone pavestones. Only the diagonal edge of this feature evident in this trench (west end). The upper surface is composed of large boulders with a clear edge on its east side. A great deal of tumble was noted to the	Unknown/ Roman?

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Context	Type	Depth	Description	Period
			east of the east edge, possibly the result of robbing and the sorting of stones. The construction method is identical to the other lengths of road exposed in trenches 2, 5, 6 and 9. However this length of road is presumed to be twice the width as those in trenches 5 and 6. A section through west end of trench exposed four courses of sandstone rubble.	
11006	Deposit	0.58m – 0.83m	A substantial accumulation of natural silt clay. Deposit has mineral leaching, orange (iron) mottles, and alluvial lenses represented by grey mottles. Deposit represents a hiatus between this deposit and 11007	Unknown
11007	Structure	0.83m – 1.19m	A substantial stone surface thought to be a road surface. The substantial stone structure has four to five courses of large sandstone pavestones, with smaller sandstone rubble packed over the upper surface. This feature is thought to be an earlier road surface possibly related to the overlying stone structure 11005. At the base a brushwood surface (11003) was revealed lying interdigitised with foundation stones. The matrix around this structure is a silty-clay with heavy bioturbation, equivalent to 11004.	Roman?
11008	Deposit	1.26m – 3.2m	An alluvial clay belonging to the Upper Wentlooge Formation with a large quantity of sandstone boulders and pebbles dumped into it. A palaeochannel (11009) was contained within this context.	Natural
11009	Negative feature	2m – 3m	A large (1.5m wide x 1m in depth) palaeochannel (11009) above peat (11010) and contained within alluvial clay (11008). The palaeochannel had moderately steep sloping sides and a bowl-shaped base.	Natural
11010	Deposit	3.2m n.b	Phragmites peat bed belonging to the Middle Wentlooge Formation.	Prehistoric
11011	Deposit	1.26m – 3.2m	Fill of palaeochannel 11009. A black organic silty-clay with grey-blue alluvial lenses and a substantial quantity of sandstone boulders and pebbles appear to have been dumped into the top of the channel, presumably to shore up foundations of stone structure 11007.	Natural

All depths below present ground surface. n.b = not bottomed

Trench 12

Level of present ground surface:

Context	Type	Depth	Description	Period
12001	Deposit	0-0m.27m	Friable mid brown silty clay loam topsoil.	Post-medieval/ Modern
12002	Deposit	0.27m-1.26m	Light brown silty clay with iron/mineral leaching creating orange brown mottles.	Unknown
12003	Deposit	1.26m-2.11m	Blue grey blocky and tacky alluvial clay. Upper Wentlooge Formation.	Natural
12004	Deposit	2.11m-3.3m	Black brown phragmites peat. Middle Wentlooge Formation.	Prehistoric
12005	Deposit	3.3m-3.8m (n.b)	Black brown alder/birch peat. Middle Wentlooge Formation	Prehistoric

All depths below present ground surface. n.b = not bottomed

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Trench 13

Level of present ground surface:

Context	Type	Depth	Description	Period
13000	Deposit	0m-0.25m	Mid brown silty clay loam topsoil	Post-medieval/ Modern
13001	Deposit	0.25m-1.8m	Orangey brown silty clay subsoil containing isolated angular and sub angular sandstone pebbles and iron staining. Upper Wentlooge Formation	Natural
13002	Deposit	1.8m-3.2m	Grey alluvial clay with black organic staining. Upper Wentlooge Formation	Natural
13003	Deposit	3.2m-4.17m	Black brown phragmites rich peat. Middle Wentlooge Formation.	Prehistoric

All depths below present ground surface. n.b = not bottomed

Trench 14

Level of present ground surface:

Context	Type	Depth	Description	Period
14000	Deposit	0m-0.3m	Mid brown silty clay loam topsoil.	Post-medieval/ Modern
14001	Deposit	0.3m-2.0m	Greyish brown silty clay subsoil with frequent iron mottling with isolated rounded stone. Upper Wentlooge Formation	Natural
14002	Deposit	2.0m-3.7m	Bluish grey alluvial clay with frequent black organic staining. Upper Wentlooge Formation	Natural
14003	Deposit	3.7m-5.0m	Brownish black phragmites rich peat. Middle Wentlooge Formation.	Prehistoric
14004	Deposit	5.0m-5.1m	Brownish black peat with moderate amounts of wood. Middle Wentlooge Formation	Prehistoric

All depths below present ground surface. n.b = not bottomed

Trench 15

Level of present ground surface:5.354mOD

Context	Type	Depth	Description	Period
15000	Deposit	0-0.3m	Dark brown silty clay loam topsoil	Post-medieval/ Modern
15001	Deposit	0.3-0.7m	Mid brown silty clay subsoil.	Natural
15002	Deposit	0.7-1.9m	Greenish blue silty clay with moderate iron staining. Upper Wentlooge Formation.	Natural
15003	Deposit	1.9-3.10m	Blueish grey alluvial clay with organic staining. Upper Wentlooge Formation	Natural
15004	Deposit	3.1-3.95m	Blackish brown phragmites rich peat. Middle Wentlooge Formation	Prehistoric
15005	Deposit	3.95-4.10m	Mid brown peat with frequent wood. Middle Wentlooge Formation.	Prehistoric

All depths below present ground surface. n.b = not bottomed