

The Llandeilo Roman Forts: Archaeological Investigations 2003-2007



Paratowyd gan Archaeoleg Cambria
Ar gyfer Yr Ymddiriedolaeth Genedlaethol

Prepared by Cambria Archaeology
For the National Trust



A R C H A E O L E G
CAMBRIA
A R C H A E O L O G Y

ARCHAEOLEG CAMBRIA ARCHAEOLOGY

RHIF YR ADRODDIAD / REPORT NO. 2006/38
RHIF Y PROSIECT / PROJECT RECORD NO.54934

Rhagfyr 2007
December 2007

**The Llandeilo Roman Forts:
Archaeological Investigations
2003-2007**

Gan / By

GWILYM HUGHES

*Archaeoleg Cambria yw enw marchnata Ymddiriedolaeth Archaeolegol Dyfed Cyfyngedig.
Cambria Archaeology is the marketing name of the Dyfed Archaeological Trust Limited.*



**YR YMDDIRIEDOLAETH GENEDLAETHOL
THE NATIONAL TRUST**



Gyda chymorth
Cronfa Dreftadaeth y Loteri
Supported by the Heritage Lottery Fund

ARCHAEOLEG CAMBRIA
Ymddiriedolaeth Archaeolegol Dyfed Cyf
Neuadd y Sir, Stryd Caerfyrddin, Llandeilo, Sir
Gaerfyrddin SA19 6AF
Ffon: Ymholiadau Cyffredinol 01558 823121
Adran Rheoli Treftadaeth 01558 823131
Ffacs: 01558 823133
Epost: cambria@cambria.org.uk
Gwefan: www.cambria.org.uk

CAMBRIA ARCHAEOLOGY
Dyfed Archaeological Trust Limited
The Shire Hall, Carmarthen Street, Llandeilo,
Carmarthenshire SA19 6AF
Tel: General Enquiries 01558 823121
Heritage Management Section 01558 823131
Fax: 01558 823133
Email: cambria@cambria.org.uk
Website: www.cambria.org.uk

Cwmni cyfyngedig (1198990) ynghyd ag elusen gofrestredig (504616) yw'r Ymddiriedolaeth. The Trust is both a Limited Company (No. 1198990) and a Registered Charity (No. 504616)

**CADEIRYDD CHAIRMAN: C R MUSSON MBE B Arch FSA MIFA. CYFARWYDDWR DIRECTOR: E G
HUGHES BA FSA MIFA**

The Llandeilo Roman Forts: Archaeological Investigations, 2003- 2007

INTRODUCTION

This report describes the results of an archaeological investigation, including geophysical survey and excavation, undertaken on two recently discovered Roman Forts in Dinefwr Park, Llandeilo (Fig. 1, SN620 225). The archaeological work formed part of a wider project being undertaken by the National Trust with the aim of restoring the designed landscape, enhancing the natural environment and facilitating access to all. This project was funded by the Heritage Lottery Fund and the Wales European Funding Office. The National Trust intended to restore many of the features of the designed landscape, and this was to include the removal of some field boundaries and tree clumps and the establishment of others. Before this could be achieved there was a need to provide more and better information on the character and survival of the archaeological deposits in this area of the Park. This was the principal objective of the archaeological investigation. The investigation also had the potential for addressing a number of research objectives several of which had been highlighted during the production of a research framework for the archaeology of Wales (www.archaeoleg.org.uk). These are outlined in more detail below. From the beginning there was also an intention to ensure that opportunities would be provided for schoolchildren and members of the public to be closely involved in the project.

The geophysical survey was undertaken in two stages by Stratascan, in February and March 2003 and between May and July 2005. The first phase demonstrated the presence of two superimposed Roman forts, associated roads and *vicus* and a possible bathhouse in the eastern part of Dinefwr Park (Stratascan 2003; Hughes 2003). The initial geophysical survey also suggested a high degree of preservation of the archaeological deposits. The second phase extended the survey to include the whole of the area of the larger of the two forts and to clarify the extent of the archaeology in the area of the *vicus* and the possible bathhouse (Heard 2005). The main phase of the excavation was undertaken by Cambria Archaeology over a period of three weeks in June and July 2005 and this phase of the work was accompanied by a major programme of public outreach and involvement. Two smaller pieces of fieldwork were undertaken in July 2006 and March 2007.

For ease of reference the larger of the two forts is referred to as Fort 1 in this report and the smaller fort is referred to as Fort 2.

ARCHAEOLOGICAL BACKGROUND

Note – the PRN numbers refer to the Primary Record Numbers on the regional Sites and Monuments Record held and maintained by Cambria Archaeology).

Prior to the 1990s the evidence for Roman activity within the area of Dinefwr Park was fragmentary. A milestone (PRN 972) bearing an inscription to the Emperor Tacitus (AD275-276) was recorded in 1697 apparently built into a farmhouse near Dinefwr although this object is now lost (Jarret 1969, 186). However, it may have been brought to the site from its original findspot. There are also antiquarian records of a possible Roman structure below Llandyfeisant church (PRN 7367) and this is also marked on the early editions of the OS maps. A number of Roman coins have been found from the Llandeilo area including a possible mid-late 3rd century coin hoard (PRN 886), a possible late 1st century coin hoard (PRN 869) and an *as* of Tiberius (AD10) found before 1920 at the junction of Alan and

Latimer Roads (PRN 875). In addition the head of a female pottery figurine (now lost) was recorded near to Llandeilo Bridge (PRN 874).

During the early 1980s aerial survey and fieldwork identified clear stretches of the Roman road running between Llandovery and Carmarthen (James and James 1984). One stretch was identified to the northeast of Cwmifor in the area of Down Farm. It is thought that this stretch of road then continues in a southwesterly direction and may underlie the course of the current A40 as it approaches Rhosmaen. Stretches of the road have also been identified to the west of Llandeilo between Broadoak and Llanegwad. Given the midway location of Llandeilo between Carmarthen and Llandovery it was considered the obvious place for a Roman fort that were frequently spaced a day's march apart (James 2000, 30-31).

Finds of Roman pottery were subsequently recovered during a brief walkover survey in 1993 from two areas immediately to the south of Home Farm (PRN 47646 and 47647 and Crane 1994, 2 and 6). Several fragments of pottery including samian ware were recovered from the northwest corner of 'Brick Field' (PRN 47646) and further fragments (PRN 47647), including part of amphorae handle, were recovered from the spoil created by a recently excavated pond in the field to the south of the Cae William rugby ground. The character of this material was considered to be entirely consistent with a military establishment or high status settlement dating to the late 1st – early 2nd century AD (see page 14 below). A small-scale geophysical survey was undertaken in the areas where this material was found. Although this survey was inconclusive, the results were based on a very small sample area. Finds of Romano-British pottery have also been identified in a streambed at the western end of the landscaped park just inside the western boundary (PRN 32105 – see page 14 below).

All this evidence prompted Heather James in 1993 to tentatively suggest the layout and location of the Roman fort immediately to the south of Home Farm. This was intended to inform the planning process relating to proposals that had been put forward at that time for a proposed golf course. The results of the current geophysical survey demonstrate that her prediction was extraordinarily accurate.

In 2000, a number of coins, including seven silver denarii (PRN 47648), found by a metal detectorist in the area of Home Farm were reported to the Carmarthenshire County Museum under the Portable Antiquities Scheme (and identified by Edward Besley of the National Museums and Galleries of Wales). They include three Republican coins (c 100BC to c 31BC), one coin dating to the reign of Augustus (27 BC to AD14) and three late 1st century AD coins (AD69-AD96).

The opportunity to investigate the area of Home Farm was provided early in 2003 when the National Trust bought the Farm and associated fields with the assistance of a grant from the Heritage Lottery Fund. Soon after the purchase of this land, the National Trust commissioned Cambria Archaeology to undertake a wide-ranging archaeological survey that was intended to inform the developing conservation plan for the whole of the estate. This included both topographic survey in the area of the Deer Park (Murphy 2003) and geophysical survey. The principal focus of the geophysical survey, undertaken by Stratascan, was the large block of land (c. 27 hectares) to the south of Home Farm.

THE GEOPHYSICAL SURVEY

Methodology

An initial reconnaissance survey using magnetic susceptibility was undertaken across the whole of the area (Stratascan 2003, 5). The intention was to use these results to identify areas of potential that would be targeted with more detailed magnetometer survey. A total of 19.78 hectares were surveyed using magnetometry in two stages. Both phases collected readings at 0.25m centres along transects 1m apart using dual FM256 Fluxgate Gradiometers. The data was processed using Geoplot 3 and the combined results are illustrated in Figure 2. A detailed review of the methodology of the survey is provided in the Stratascan reports (Stratascan 2003 and Heard 2005). The following text is a narrative of the combined results of the two phases of geophysical survey.

Results

Fort 1

The first phase of the survey identified the eastern corner of the multivallate defences of Fort 1, although this interpretation was not finally confirmed until the second phase of the survey had been carried. The initial survey suggested that the defences comprised at least three and possibly four ditches and associated ramparts. A four-post structure, probably an interval tower, was located on the line of the inner rampart of the northeast defences close to the eastern corner. The second phase of the survey identified the southern and western extent of this fort. Three defensive ditches run along the southeastern side of the fort and two along the southwestern side. Gateways can be identified in both of these sides. A third possible defensive ditch on the southwest side lies approximately 55m to the southwest. The internal dimensions (ie the area lying within the inner ditches) are 240m x 160m (3.84 hectares).

The orientation and internal layout of Fort 1 cannot be determined with any certainty from the geophysical survey results alone. It seems probable that the front of the fort (the *praetentura*) is located to the northeast. This is certainly the case with Fort 2 (see below). A group of anomalies within the eastern corner of the fort suggest the presence of several substantial buildings apparently of at least two phases. These structures either relate to the internal arrangements of Fort 1 or to a development external to Fort 2. It is possible that part of the northern and eastern defences of Fort 1 continued to be used as an annex to Fort 2 and provided some protection for these structures.

A large thermoremnant response was detected on the inner line of the southeast defences. This was interpreted by Stratascan as a possible kiln or large hearth (Stratascan 2003, 11). The location of such a feature, dug into the rear of the inner rampart, would seem to be logical with the intervallum road acting as a windbreak. A further line of larger positive anomalies appear to coincide with the rear of the inner rampart associated with the southwest line of defences. Lines of 'pit-like' anomalies in the southern corner of Fort 1 suggest the structural remains (possibly post-holes) of a rectangular building or buildings.

Fort 2

The alignment and internal arrangement of Fort 2 is much clearer and it has overall internal dimensions of c 140m x 110m (1.54 hectares). Although only the southern corner of the defences was fully covered by the survey, elements of all four sides were recorded and three of the four entrances can be clearly identified. The southeastern line of the defences appears to be represented by at least three

ditches. The outer two ditches appear to be joined at the entrance on this side (the *porta principalis dextra*). This defensive arrangement, referred to as a 'parrot's beak system' has been linked with the *legio II Adiutrix* who were based in Chester. However, the apparent presence of this feature at Llandeilo and elsewhere must now call this association into question (Jeff Davies pers. comm.). There appears to be a slightly wider berm between the second and third ditches on the southeastern side, especially noticeable to the northeast of the entrance. The composition of the northeastern and northwestern defences is not as clearly defined although the entrances (the *porta praetoria* and the *porta principalis sinistra*) can be clearly identified. There does not appear to be any break in the outer defences on the southwest side of the fort in the area where the rear entrance (the *porta decumana*) might be expected. However, a break is apparent in the inner ditch on this side of the fort. Possibly the outer ditches were crossed by a bridge.

Topographically the layout of the fort appears to follow conventional lines. The assumed location of the *porta decumana* corresponds with the highest point of the fort and a second slightly lower knoll corresponds with the location of the *porta praetoria*. The remaining area of the fort is laid out on more level ground along the top of a low ridge. There are excellent sight lines to the west down the Twyi valley towards Carmarthen and to the northeast up the Twyi valley towards Llandovery. The view to the southwest is dominated by the hill on which the later medieval castle stands. The view to the southeast is more restricted by the proximity of Penlan Fawr.

Part of the internal layout of roads can be confidently identified, in particular the *via principalis* and the front part of the *via praetoria*. Elements of the intervallum road (the *via sagularis*) can be identified and this presumably continued around the remaining internal perimeter of the fort. A second transverse road can just about be identified (possibly the *via quintana*). Numerous rectilinear features have been picked out by the detailed geophysical interpretation (Stratascan 2003, Figure 18). It is suggested that some of the stronger positive anomalies might be indicative of structures built with material having thermoremanent properties such as fired clay and brick (Stratascan 2003, 11). Clearly this would need to be tested by excavation. It is possible to predict the location of certain buildings. In particular the headquarters building (the *principia*) is likely to be located near to the centre of the fort between the *via principalis* and the *via quintana*. The one internal area of the fort with relatively weak responses is located between the presumed location of the *principia* and the *porta decumana*. If there were no buildings in this area it is possible that it may have been used as a parade or practice area. Alternatively, this area may have been disturbed when the nearby tree clump was established in the mid to late 18th century.

The Roads

There are clear indications of a road heading northeast out of the front entrance of Fort 2. This road appears to branch into two approximately 60m from the entrance, although this might alternatively suggest two phases of road alignment. The northern branch approaches the fort entrance at right angles and appears to fade-out after approximately a further 60m. The southern branch approaches the fort entrance at a slight angle and is flanked by two substantial roadside ditches. These ditches turn away from each other at right angles approximately 220m from the fort entrance, creating a funnel-like entrance.

The road leading from the southeastern entrance of Fort 2 leads across the former northeastern area of Fort 1. Evidence for roadside development is suggested by the geophysical survey and this possibly relates to external structures associated

with the later fort rather than internal activity associated with the earlier fort. There are just hints of roadside ditches extending beyond the northwest entrance to Fort 2. The rectangular building to the northwest of the forts lies directly on the line of this road. It seems likely that this road ultimately extends beyond the areas surveyed and links up with the observed sections of the Roman road heading westwards towards Carmarthen (*Moridunum*).

External settlement and other features

The activity either side of the Roads to the northeast of Fort 2, especially in the area where they converge near to the northeastern entrance of the fort, is suggestive of a small settlement or *vicus*. To the southeast of this activity is a substantial linear feature apparently defining two sides of a small enclosure, although there was no trace of the other sides in the southern field. A number of substantial pit-like and linear anomalies, of uncertain origin, are located in the eastern part the survey to the east of Fort 1. These are partly obscured by a linear anomaly caused by a modern service trench.

Several positive linear anomalies to the northwest of the forts appear to define one end of a rectangular structure at least 30m long and 18m wide. A curvilinear anomaly suggests the presence of an apsidal room attached to the northwestern side of the structure. These features are associated with a high level of magnetic debris of probable archaeological significance and a strong discrete positive anomaly suggestive of a ferrous object. The field name, 'brick field', has led to previous suggestions that a brick kiln might be expected in this area. However, the association of this structure with the line of the road leading from the fort and the previous finds of Romano-British pottery from this area suggests a building of Roman date. The size of this building and the proximity to a nearby stream suggested that it could even be a bathhouse despite the distance from the fort.

A number of linear and curvi-linear anomalies can be identified in the area to the west of the forts. One of these, to the northwest of the forts, is probably caused by a ditch surrounding a tree clump dating to the 18th century landscaping. However, several linear anomalies to the south of this may be contemporary with the Roman occupation.

THE EXCAVATION

Excavation Objectives

The principal objective of the excavation was to determine the character of the buried archaeology in order to inform the future management of this part of the Dinefwr landscape. The aim was to work towards an understanding of the extent, character, quality, date and survival of any features or deposits of archaeological significance.

Although this was a management objective, the site has the potential for addressing a number of specific research themes several of which have been highlighted by the ongoing exercise of identifying a research framework for the archaeology of Wales (www.cpat.org.uk/research). For the Roman period two of the three priority areas that have been highlighted in this research framework exercise are:

'Interaction between Roman occupiers and the indigenous population - The nature of the interaction between the colonisers and the colonised has yet to be established. We believe that this theme can best be addressed by investigating

high-status settlement where there is greater potential for material remains. So far there has been little attempt to adequately analyse this type of settlement (the *civitas* towns excepted) in Wales. These will undoubtedly vary in type from region to region, and can include hill-forts in some areas, though the class would normally be judged to encompass settlements of 'small town' character and *villae* in a non-military and *vici* in a military context.'

'Archaeology of the early campaign years- The hitherto simplistic tale of pre-Flavian – early Flavian military operations will not stand up to modern scrutiny as exemplified by the complexity of re-visited and recently discovered sites. Our failure to understand this phase has singular significance for the history of the province as a whole.'

The forts at Dinefwr, and the associated features suggested by the geophysical survey, clearly have relevance in addressing both these issues. In particular, the field investigation had the potential for beginning to address the following specific issues:

1 – chronology. Among the chronological questions were: to confirm the suggested sequence of the two forts and to attempt to establish the date of the establishment of the first fort? How long a gap was there between the abandonment of the first fort and the establishment of the second? When was the second fort abandoned? These issues of chronology are particularly relevant to the second of the research framework themes outlined above and in particular the implications that this dating has for the nature and timing of the conquest of southwest Wales.

2 – The morphology of the forts. In particular, were the internal buildings entirely of timber or were any rebuilt in stone? Is there any evidence for a reduction in the size of either of the forts suggesting a reduction in the size of the garrison? Were elements of the earlier fort's defences incorporated into the layout of the later fort to create some form of defended annex. If so what was the nature of the activity within this annex?

3 – The Vicus and other external structures. A study of the apparent *vicus* area near the northeastern entrance to the fort will clearly contribute to the first of the two research themes highlighted in the Research Framework exercise. In particular, what was the character and date of the *vicus*? What can this tell us about the nature of the relationship between the Roman garrison and the native population? What was the nature of the associated ditched enclosure – was this associated with the fort (perhaps a practice camp) or did it form part of the later designed landscape? What was the nature of the structure to the northwest of the forts. Was this a bathhouse or other ancillary building associated with the Roman Fort(s) or is it a structure associated with the post-medieval designed landscape or with Home Farm?

Learning opportunities and public relations

The excavation provided a unique opportunity to involve members of the local community and local schools and colleges. During the excavation phase of the project, a number of places were offered to those wishing to gain some training in archaeological techniques and to those wishing to participate for just a short time as an introduction to the process of excavation. In the event 49 individuals took part in the excavation. Organised visits from local schools and other educational activities were also arranged. Over 500 school children and students visited the excavation from 13 different schools and colleges and work experience was provided over two days for an additional 38 sixth formers as part of a Careers

Wales 'Master Class'. Two organised public open days attracted over 1500 visitors and accompanying bilingual exhibition displays and literature and a web-based 'dig diary' was produced. Finally, the investigation received a significant amount of media interest and featured as part of Channel 4's Big Roman Dig with live broadcasts during the weekend of the 2nd and 3rd July 2005. A full list of outreach activities is provided in Appendix 1.

Methodology

The main phase of excavation in 2005 involved the excavation of eight initial trial areas (Fig. 2). Several smaller trenchers were subsequently excavated in July 2006 and March 2007. The specific objectives of each trench were as follows:

Trench 1 (Initially 20m x 6m but subsequently extended) – this targeted the defensive system of Fort 1 (believed to be the earlier of the two forts) in an area adjacent to one of the gateways.

Trench 2 (20m x 6 m) – this targeted the interior of Fort 2 to determine the character and form of internal structures. The location of this trench also coincided with a point where the defences of Fort 1 intersect with the structures and features associated with Fort 2. This should establish the overall sequence of construction of the two suggested phases.

Trench 3 (15m x 4m) – this targeted the rectangular structure shown in the southeast area of the geophysics and thought to be in the interior of Fort 1. The aim was to establish whether or not this feature relates to either of the fort phases or to a later phase of activity possibly associated with the later designed landscape.

Trench 4 (15m x 4m) – this targeted the area of the *vicus* with the intention of establishing the form and character of the archaeological features in this area and the relationship between these features and the road approaching the northeast entrance to Fort 1.

Trench 5 (20m x 2m) – this formed an extension to Trench 4 and was specifically designed to examine the character and possible date of the large ditch adjacent to the southern side of the *vicus*.

Trench 6 (18m x 2m and 4m x 2m) – an L-shaped trench designed to examine the character and date of the structure indicated by the geophysics to the northwest of the Roman Forts.

Trench 7 (15m x 2m) – this examined the area adjacent to a possible roadway defined by parallel ditches.

Trench 8 (30m x 2m) – this examined an area adjacent to Carmarthen Road that is earmarked by the National Trust for potential new tree planting.

Trenches 9 and 10 (each 20m x 2m) – these were excavated in July 2006 to examine the character of a curvilinear feature detected by the geophysical survey to the northwest of the Forts.

Test Areas 1 – 7 (Fig. 2, TA1 – TA7) – This series of 1m square test pits was excavated along the northern side of the East Drive into Dinefwr Park as part of the Scheduled Monument Consent for the proposed construction of a new visitor footpath into the Estate.

In addition to these trenches, two small test pits (each 2m by 2m) were excavated through the ploughsoil by work experience students from Careers Wales. Both test pits were located immediately to the south of the pond to the northeast of Fort 2 (Fig. 2, TP1 and TP2). No features were excavated in either of the Test Pits.

In each case the topsoil/ploughsoil was machine excavated to the top of the undisturbed archaeological features or deposits. Following machine excavation all trenches were cleaned by hand. A pre-excavation plan was prepared of each of the archaeological surfaces exposed. The time and resources only allowed for the partial examination of the internal structures and only a small sample of features were excavated. However, this sample excavation was sufficient to determine the overall character of the surviving archaeology and to inform most of the specific research objectives outlined above.

Description of results

The following is a summary of the results of the excavation on a trench by trench basis. Provisional interpretations of some of the features recorded are also provided. A detailed list of those contexts containing cultural material is provided in Appendix 2 to allow a concordance with the features described in the text. The dating summaries are based on the pottery identifications provided by Peter Webster. These are listed in Appendix 3.

Trench 1

Description (Figs 3 and 4) – The Ploughsoil (1000) consisted of dark grey-brown silty-loam up to 0.3m deep. This overlay a layer of dark yellow-brown silty-clay (1046), also up to 0.3m thick. No archaeological features could be observed in plan cutting into this layer and consequently this was also removed by machine. It overlay a light yellow-brown silty-clay (1047).

Numerous features were observed cutting this lower layer of silty-clay including four large square post-pits (1005, 1007, 1014 and 1022) and two linear ditches (1003 and 1016). The four post-pits were all of similar dimensions, up to 1.2m square and between 0.7 and 0.8m deep. However, two of the pits (1007 and 1014) were partly visible in the southern section of the excavation and were cut from a slightly higher level (ie through the overlying layer 1046 – even though they had not been observed in plan). In each case the fill of the post pits consisted of brown sandy-clay with frequent small stones (eg Fig. 4, 1022). Possible post pipes were visible in the sections of three of the pits (1005, 1014 and 1022) suggesting substantial vertical timbers up to 0.4m across. None of the pits contained any finds.

The easternmost and larger of the two ditches (1003) had a v-shaped profile and was up to 1.7m wide and up to 1.1m deep. It terminated short of the southern edge of the excavation with a square-shaped butt-end. The primary fill was a dark grey sandy silt up to 0.2m thick (Fig. 4, 1031). In the northernmost section of the ditch this was overlain by a deposit of dark brown-black silt (1024) with a high proportion of charred barley (see Caseldine below) and charcoal. The overlying fill (1019) was a thick deposit of grey-brown, silty clay up to 0.6m thick with 'streaks' of iron staining. The uppermost fill (1017) was a mid-brown clay silt with frequent flecks of charcoal. Several fragments of Romano-British pottery, brick and tile were recovered from the various fills of the ditch.

The westernmost ditch (1016) was smaller, up to 1m across and up to 0.5m deep with a v-shaped profile. It had a single fill of grey-brown, silty clay with no finds (1015). It also terminated short of the southern edge of excavation but it had a rounded butt-end. A small and shallow pit (1021) was located to the west of this ditch close to its terminal. It contained the broken lower part of an amphora (Dressel 20) including the basal 'spike'. A circular pit (1026), 0.75m in diameter and 0.4m deep, was located in the area of the berm between the two ditches. A large, more oval pit (1042) 1.2m by 0.7m and 0.6m deep was located to the east of the larger ditch. No finds were recovered from either of these features.

Dating summary – A sherd of Verulamian mortarium (mid-1st to mid-2nd century) and a fragment from a flanged bowl (pre-Flavian or Flavian) was recovered from the base of the ploughsoil (1001). The fill (1009/1019) of the inner defensive ditch contained a fragment from a flagon (probably early – mid Flavian).

Interpretation – The features in Trench 1 clearly relate to the northern side of a gateway through the southwestern defences of Fort 1. The four square pits probably belong to a large 6-post gateway tower with the remaining two pits lying outside of the excavated area (Fig. 3). The larger of the two ditches (1003) represents the innermost defensive ditch. The thick clayey fill presumably represents the deliberate backfilling of the ditch with the turf rampart when the fort was decommissioned. The outer ditch (1016) was surprisingly shallow and appears to have been too slight to have provided an effective defence. However, it is possible that it was originally cut from a higher level (as was clearly the case with at least two of the square post-pits). A suggestion has been made that the lower half of an amphora, recovered from the shallow pit adjacent to the entrance, may have been used as a *piswa* (Jeff Davies pers com).

Trench 2

Description (Figs 5 and 6) – The ploughsoil (2000/2001) was up to 0.3m deep. In the southeastern half of the trench it overlay a layer of yellow-brown silty-clay with occasional small angular stones (2012). In the northwestern part of the trench the ploughsoil overlay a more mixed sandy-silt (2050) which was darker in colour and contained more frequent angular and rounded stones and occasional flecks of charcoal.

An area measuring 10m x 2m was hand excavated through the silty-clay (2012) in the southeast corner of the trench. This deposit was found to be up to 0.4m deep. The lower part of the deposit (2022) was slightly darker in colour and overlay (and had partly slumped into) a substantial v-shaped ditch (2047), orientated northeast-southwest. The ditch was approximately 2.4m wide and 1m deep and it was filled with dark brown silty-clay (2048). No finds were recovered from the fill. The ditch was cut into a further deposit of brown, silty-clay (2051) although this was not sample excavated.

Numerous features were recorded cutting the overlying silty clays (2012 and 2050). The most prominent of these were two parallel ditches approximately 4m apart and orientated northeast-southwest (2009 and 2011). They were both shallow features with u-shaped profiles and they were between 1.5 and 2m wide and up to 0.4m deep. They were both filled with yellow brown sandy silt (2008 and 2010). Up to 50% of the fills consisted of small angular and rounded stone. A small number of fragments of Romano-British pottery were recovered from the fills. The northernmost ditch (2009) was cut by a narrow linear gully (2049) with a possible right angle return (2019). This had steep sides, a flat base and was 0.35m wide and 0.15m deep.

At the southern end of the Trench were two square post-pits (2040 and 2039) up to 0.7m across and 0.5m deep. The westernmost of these pits (2039) contained the suggestion of a circular post pipe approximately 0.3m diameter. The largest feature that was excavated in the northwestern end of the trench was a large shallow pit (2017) up to 2.5m wide and 0.5m deep. This pit extended beyond the northeastern limit of excavation. The dark brown sandy silt fill (2016) contained large quantities of Romano-British pottery, glass and other cultural material. Other features excavated included four sub-oval or sub-rounded pits of various sizes (2003, 2005, 2024 and 2026). A complete Malvernian pottery vessel, fragments of cremated bone, fragments of possible industrial slag and several large stones were recovered from the fill of the northernmost of these pits (2003). However, the vessel did not contain any substantial quantities of cremated bone and there was nothing to indicate what it might have originally contained (if anything). The fill of the southernmost pit (2024) contained several fragments of cremated bone, pottery fragments and a large paste mellon bead. This pit also contained evidence for a post-pipe (Fig. 6, 2046), 0.4m in diameter. The smallest pit (2005) also contained fragments of cremated bone.

Dating summary – sherds of south Gaulish Samian were recovered from a number of contexts including the lower ploughsoil (2001), two of the small pits (2003 and 2005) and the elongated pit (2016). The ploughsoil also contained other coarseware fragments including sherds of Malvernian ware and a bead rim jar (possibly 1st century – early 2nd century). The elongated pit (2016) also contained coarseware sherds including a rim of Malvernian ware and a grey ware rim (both 1st century – early-2nd century).

Interpretation – it seems likely that the lower ditch (2047) recorded in the southeast of the trench, is one of the defensive ditches of the earlier of the two forts (Fort 1). The overlying deposits of silty-clay (2022 and 1012) possibly represent levelling deposits, preparing the site for the construction of the later fort (Fort 2).

The two, parallel linear gullies (2009 and 2011) may represent drainage ditches either side of an internal road associated with Fort 2. It seems possible that much of the stone contained in the fills of these gullies derived from a road surface that has subsequently been ploughed away. If this interpretation were correct, the road surface would have been up to 3.5m wide.

The geophysical survey suggests that part of the *Principia* should be located in the southeastern end of the trench. It is possible that the two large square post-holes (2039 and 2040) represent part of a collonade fronting onto the *Principia*. The area to the northwest of the two linear gullies contained indications of a complex stratigraphy perhaps representing several phases of building activity. The pits and post-holes that were sample excavated clearly only relate to the latestmost phase. There were some suggestions that several of these features (2003, 2005 and 2024) might have been associated with cremation deposits suggesting a reuse of the area for burial after Fort 2 had been decommissioned. This possibility must await further examination of the burnt bone recovered from the pits. Further evidence for post-fort activity is represented by the linear gully (2049) and pit (2019) that might be part of a structure overlying part of the earlier internal road of the fort.

Trench 3

Description (Fig. 7) – The ploughsoil (3000) was up to 0.3m thick and overlay weathered shale bedrock (3003). Numerous criss-crossing, linear gullies and features were observed cutting this underlying bedrock. The majority of the gullies were orientated northwest-southeast or northeast-southwest. However, within these general orientations, groups of gullies with slightly different orientations were noted. In terms of morphology the gullies fell into two basic groups.

Group 1 gullies had steep to vertical sides with flat bases and were approximately 0.4m wide and between 0.4 and 0.6 m deep. They were filled with grey brown, silty-clay with up to 50% small shattered, shale fragments. Within this group of gullies at least three phases of activity were present with several gullies (including 3020 and 3024) apparently belonging to an early phase, three belonging to a second phase (3014, 3028 and 3005) and two belonging to a third phase (3018 and 3007).

Group 2 gullies had a different character. They tended to be smaller and shallower (up to 0.3m wide and up to 0.2m deep) with a u-shaped profile although the fill tended to be very similar to the fill of the Group 1 features. An early phase was represented by at least three Group 2 gullies (3032 and 3036 and possibly 3034) and a second phase was represented by two gullies (3022 and 3012). The early phase Group 2 gullies may have been associated with two large square pits (3030 and 3051) approximately 1.2m square. One of these pits (3030) was at least 1.4m deep. A third possible pit was also observed in plan but it was not excavated.

The Trench 3 features were almost entirely devoid of finds apart from a few fragments of clay daub and a single sherd of Roman-British pottery from the fill of one of the Group 1 gullies (3020).

Dating summary – an abraded sherd of south Gaulish Samian (probably pre-dating the later 80s AD) from the ploughsoil and a single sherd from an oxidised jar were the only pottery fragments from the trench.

Interpretation – It is suggested that the Group 1 gullies were the structural foundations for rectangular timber buildings. They may have functioned either as slots for horizontal foundation beams or as the trenches for lines of vertical posts. It is suggested that at least some of the Group 2 gullies are associated with a drainage system associated with the various buildings. It is possible that the large square pits may have acted as drainage sumps.

The various features appear to represent at least four phases of activity associated with buildings on slightly different orientations. It seems logical to suggest that the earliest phase (Fig. 7, Phase 1) relates to a building (possibly a barrack block) associated with Fort 1. The later phases (Fig 7, Phases 2, 3 and 4) possibly relate to buildings within an annex to Fort 2. The most prominent of these buildings in Phase 4 (represented by 3018) appears to be the latestmost building on the site and cuts across all the other features. A small annex appears to have been added to the southeast of this building (represented by 3007). It seems likely that this building corresponds with several of the distinct linear anomalies visible on the geophysical survey. Two of the Group 2 gullies (3022 and 3012) appear to run parallel with the wall of this late building suggesting that they are either eaves drip gullies or the foundation trench for some form of portico structure.

Trench 4/5

Description (Fig. 8) - The ploughsoil (4000) varied in depth from 0.25m at the southeast end of the trench to 0.55m at the northwest end of the trench. This reflected the significant slope down from the south to the north. It overlay a series of archaeological features and deposits that in turn overlay or cut the underlying silty-clay subsoil in the northwestern end of the trench and the exposed shale bedrock in the southeastern part of the trench.

The largest of these features was a substantial v-shaped ditch (4015) orientated northeast-southwest in the central area of the trench. The ditch was up to 2.7m wide and 1.1m deep and it was cut into the underlying shale bedrock. The primary fill (4022) consisted of small angular shale fragments mixed with silty-loam. This was overlain by deposits of silty clay (4007 and 4008) with frequent shale fragments and frequent fragments of orange red burnt clay and daub. The uppermost fill (4024) was a more homogenous layer of dark brown silty-clay loam with fragments of angular shale. The ditch fill was recut by a second v-shaped ditch on the same alignment (4023) 1.5m wide and 0.6m deep. This recut was filled by a dark brown silty-loam (4001) that contained relatively large quantities of Romano-British pottery fragments.

Very few archaeological features could be identified in the area to the southeast of this ditch apart from a series of plough marks (4020) cutting the underlying shale bedrock. However several linear gullies, ditches and small pits were recorded to the northwest of the ditch. The largest of these was a ditch (4009) with a v-shaped profile and orientated northeast-southwest. It was up to 1.2m wide and 0.6m deep with a dark brown, silty-clay loam fill (4006) with frequent small angular stones and a considerable quantity of Romano-British pottery fragments. To the northwest of this ditch was a shallow bowl-shaped hollow (4027) up to 1.5m across and 0.15m deep and filled with red-brown, burnt clay and charcoal.

Between the two ditches (4009 and 4015) were a series of narrow and shallow linear gullies (including 4016, 4017, 4018, 4012 and 4014) and small pits (including 4025 and 4026). Some, but not all, of these features were sample excavated. The linear gullies were up to 0.2m wide and up to 0.15m deep with square-shaped profiles. One of the two pits (4026) was packed with large sherds of amphorae.

Dating summary - This trench contained the largest group of datable pottery. The ploughsoil contained sherds of South Gaulish Samian (dated c AD 90-110) and a fragment from a form 37 Central Gaulish Samian bowl (c AD 115-135). The pottery from the fill of the recut ditch (4023) included South Gaulish Samian (c AD 70-90) and Malvernian ware. The earlier cut of this ditch (4015) contained Samian ware (c AD 70-90) and part of a storage jar probably in Severn Valley ware. One of the gullies (4018) contained sherds of Central Gaulish Samian (c AD 100-120) and South Gaulish Samian (c AD 70-110) was recovered from the fill of the v-shaped ditch (4009). This feature also contained coarse ware fragments including Malvernian ware, a grey ware rim (1st or early 2nd century AD) and a flanged bowl or dish in Black-Burnished ware (2nd century).

Interpretation - The large recut ditch (4015) clearly corresponds with the pronounced linear anomaly visible on the geophysical survey and apparently defining one side of a rectilinear enclosure. The apparent absence of any significant archaeological features in the interior of this enclosure suggests that it might have had a military function, perhaps a practice camp immediately outside the fort. This is in contrast to the complex of linear features to the northwest of the ditch that probably relate to small timber buildings associated with the fort *vicus*. The burnt clay-filled hollow has the appearance of a domestic hearth associated with one of these buildings. It is not clear how these buildings relate to

the smaller ditch (4009). This may have been a drainage ditch alongside the southern side of a road entering the entrance of Fort 2 from the southwest. The geophysical survey suggests such a road forking away for the main access road into the northeast gateway of Fort 2. The datable pottery indicates a general date range for this activity from c AD 70 to AD 135.

Trench 6

Description (not illustrated) – The ploughsoil was 0.3m deep and overlay an extensive spread of charcoal and brick fragments in the northwestern end of the trench. No features or structures could be identified within these spreads but a sample of the brick was collected for examination. The only other feature that was identified in the trench was a linear land drain, 0.3m wide and 0.6m deep and filled with large stones.

Interpretation – Initial impressions are that the brick fragments have the appearance of a post-medieval assemblage. Both in terms of the fabric and the form of the fragments they were quite distinct from the brick and tile fragments recovered from known Roman contexts elsewhere on the site (see Appendix 4). This suggests that the anomalies recorded by the geophysics may originate from post-medieval, possibly eighteenth century activity. However, further work is needed to confirm this interpretation.

Trench 7

Description (Fig. 8) – the ploughsoil was 0.25m thick and, over much of the trench, directly over the natural shale bedrock with the exception of the northwestern end where the bedrock was overlain by a subsoil of sandy silt. Near to the interface between the natural bedrock and this sandy silt was a large ditch (7006) orientated northeast-southwest. It had a u-shaped profile and was 1.8m wide and 0.9m deep with a grey-brown, clay-silt fill. The only find from this fill was a large lump of iron slag. To the southeast were two further ditches (7007 and 7008) with similar northeast-southwest orientations and u-shaped profiles. However, they were narrower (up to 0.8m wide) and shallower (up to 0.4m deep). These two ditches cut a shallow spread of burnt clay (7010) that contained two small flint flakes.

Dating summary – One of the smaller ditches (7007) contained several small fragments of post-medieval pottery. The other (7008) contained the base of a red ware vessel possibly a flagon and a sherd from an amphora (Dr. 20).

Interpretation – The largest of the three ditches recorded (7006) shows up as a distinct linear anomaly on the geophysical survey. According to the geophysics it appears to define the southeastern side of a road approaching, at a slight angle, the entrance of Fort 2. However, the ditch is far larger than might be expected for a roadside drainage ditch. The remaining two ditches are not obviously represented on the geophysical survey and perhaps are an indication that the survey is an under-representation of the complexity of the archaeology across the site. However, the small fragments of Post-medieval/modern pottery from the fill of one of these ditches (7007) suggests that this is not Roman in date.

Trench 8

Description (not illustrated) – The ploughsoil was approximately 0.25m thick and overlay a thick dump of dark brown-black sandy loam containing modern building material and other modern debris. This was at least 1m deep at which point machining was halted and the trench backfilled.

Interpretation – No significant archaeological features were identified.

Trenches 9 and 10

Description (Fig. 9) – These two trenches formed a separate phase of investigation undertaken in July 2006 to examine a curvilinear feature to the northwest of the Forts. In both of the Trenches the topsoil was up to 0.4m thick and overlay the natural shale bedrock. A large v-shaped ditch (004 and 007), corresponding with the geophysical anomaly, was identified and sample excavated in both of the trenches. The westernmost trench (Trench 1) intersected with the line of the ditch at right angles and this allowed the full profile of the ditch to be determined (004). It was up to 3m wide and 1.5m deep with steep sides and a flat base (0.3m wide). The primary fill was a yellow brown clayey-silt mixed with small angular shale fragments. The upper clayey-silt fill (002) was less stony. It was not possible to determine the full profile of the ditch in Trench 9 but it was clearly changing direction (curving to the north) as indicated by the geophysical survey.

To the north of the ditch in Trench 10 was a small feature running under the western edge of excavation (005). It was up to 0.8m wide and 0.2m deep and appeared to be sub-circular in plan. The upper fill consisted of a burnt reddened clay (008).

No finds were recovered from any of the features excavated.

Interpretation – Although no dateable finds were recovered from any of the features, the dimensions, profile and fills of the ditch very closely resembled the v-shaped ditch recorded in Trench 4/5 which was clearly of Roman date. It seems reasonable to assume that the ditch recorded in Trenches 9 and 10 is also of Roman date and surrounded a small enclosure that performed a similar function (possibly a practice camp) to the enclosure immediately to the northeast of the Forts. Only one single feature was recorded in the interior of this presumed enclosure, the clay filled pit (005) that appeared to be a hearth.

Test Areas 1-7

These seven 1m square test pits were excavated in March 2007 along the line of a proposed footpath to the southeast and southwest of Fort 1. Only one feature was identified, in Test Area 6. This was possibly part of the defensive ditch system of Fort 1. A possible post-hole, defined by an oval setting, was revealed in the top of the ditch fill. A full report on the results of these test areas appears elsewhere (Page *et al* 2007).

ASSESSMENT OF THE ROMAN POTTERY

By Peter Webster

Fieldwalking assemblage, 1993

The possibility of a Roman site in Dynevor Park was revived in 1993 as a result of field walking undertaken in advance of the Llandeilo Northern Bypass and other activity in the area. As part of the publication process for the 2005 excavations, this material was reviewed by a group from the Cardiff University, Centre for Lifelong Learning. A listing of all finds and an area-by-area summary of significant pieces will be placed in the archive. Here it is sufficient to make a few comments on the Roman material and illustrate three of the finds.

Samian ware - Only five sherds were recovered as follows:

South Gaulish: probable Curle 11 base (Pond site); bowl probably Curle 11 (Field 'E', SE Annex); dish or plate (Field 'D').

Les Martres-de-Veyre: form 18/31 Field 'E', NW corner).

Central Gaulish: forms 18/31 (Field 'E', N) and 36 (Field 'E', NW).

Overall, these span the period from c.A.D.70 to c.A.D.150 but the date range could be a lot shorter. All could have been discarded within the period c.A.D.90-130.

Amphora - The only amphora fabric recovered is that of the common south Spanish olive oil amphora, Dressel 20, but this appears to be present in small quantities in most areas. Although, in the absence of rims, only a broad date may be given, these finds support 1st and 2nd century occupation.

Other Roman coarse pottery - If we exclude mortaria, the certainly Roman coarse pottery would broadly support the dating provided by the samian. The absence of Black Burnished Ware may be significant. The ware is present in south Wales from the conquest but becomes much more common from the Hadrianic period onwards. So its absence might support a mainly pre-Hadrianic occupation. Very few certainly Roman rims were recovered and only one seems worthy of illustration.

1. A necked jar in light orange micaceous fabric with a grey core. The high shoulder suggests a 1st to early 2nd century date. PRN 14750, Pond site.

Mortaria - In terms of their date, the mortaria sherds recovered appear to be at variance with the other material.

2. Mortarium in off white fabric with rounded rosy 'quartz' trituration grits. Probably from Oxfordshire, cf. Young 1977, M10 (c.A.D.180-240). PRN 14759. Field 'E', NW corner.
3. Mortarium in off white fabric from Oxfordshire; cf. Young 1977, M17.4 (c.A.D.240-300). With one other very worn mortarium sherd. From the stream 2005 (PRN 32105).

Taken together, these sherds suggest some sort of activity probably in the first half of the 3rd century, significantly later than the norm for the area and, indeed, for the material excavated in 2005 from the fort and vicus.

General - the dating of the finds appears to cluster around two date ranges. Most fit within the first and earlier second century, a period which the 2005 excavations indicates can be associated with the Roman forts and their civil settlements. The mortaria, however, suggest that there was later occupation in

the vicinity, probably in the third century. Of this episode in the landscape history of Dynevor, the excavations of 2005 are silent.

Excavation assemblage 2005

The excavations have produced a modest collection of pottery, most of which shows some erosion from soil action. As an assemblage it is not over endowed with diagnostic pieces but the pattern is consistent. A full description of pottery by context is provided in Appendix 3. The following were noted.

Samian. A number of contexts produced small collections of samian. This is most easily summarised by form and source as follows:

Source	Form	Max no. Vessels	Date range
S.Gaul	15/17	1	Mid-late 1 st century
	18/18R	2	60-90
	18 or 18/31	2	70-110
	18/31R	1	90-110
	27	2	60-110
	29	2	65-90
	33	1	60-110
	35	1	70-110
	37	1	65-110
	Cup	2	60-110
	Bowl	1	60-110
Les Martres	37	1	100-120
	37	1	?115-135
C.Gaul	37	1	?125-140.

The enormous predominance of South Gaulish samian is immediately apparent as is the number of pieces which *may* be Flavian or later. Given that the excavation was mainly sampling upper levels, the dearth of Central Gaulish (and thus certainly 2nd century) pieces is probably significant. The assemblage is small, but as it stands, it would be consistent with a site which saw a reduction in activity in the later Trajanic period and abandonment under Hadrian – a classic Welsh scenario. The start-date of the site is more difficult to determine and is more likely to be subject to revision as more earlier levels are examined. On present evidence, a Flavian foundation is most likely. Certainly pre-Flavian forms are absent and the assemblage would not be out of place at any Flavian foundation in Wales. The number of decorated pieces is unusually low and this makes it unwise to rely upon the predominance of form 29 over form 37 as a chronological indicator. It is, however, worth noting that were the proportions of 29 to 37 to be maintained in a much larger sample, a foundation date in the very early Flavian period might seem possible. It is a point to bear in mind if further excavation is possible.

Amphorae. Two sources were noted. The most common, as on most sites, was the large globular amphorae of Dressel form 20 which contained olive oil from southern Spain. With one exception, those amphorae found lack rims, the main diagnostic feature. The one rim seen appeared to belong to the period c.A.D.70-120 and was certainly not of the distinctive pre-Flavian shape. Also present were fragments and two rims of Gauloise form 4 (otherwise known as Pélichet 47) which was a container for south Gaulish wine. Although interesting in terms of the

economics of the site, this amphora is of little help chronologically as it appeared in Britain from the mid 1st century into the 3rd century.

Mortaria. Few mortaria were noted. There were, however, some substantial fragments of the class usually known as Gillam 238 – a buff mortarium with large flattened rim noticeable from the way in which the internal grits are also spread over the rim (although soil action has eroded most of these at Llandeilo). This is a 1st century import from the Pas de Calais area of N.Gaul). The class mainly appears c.A.D.70-100 and is typical of Flavian forts in Wales. The Verulamium mortarium noted would also not be out of place on a Flavian site, although not restricted to that period.

Other coarse pottery. Rims are scarce but those which were seen included a number of the small everted rims from high shouldered bowls which are found in the period from the mid 1st to the early 2nd century and are typical of the Flavian period. The flanged and carinated bowls which form the other major element of 1st century assemblages might be expected but none have been noted. This suggests a predominance of jars over bowls to an extent which is unusual.

There appeared to be only a few fragments of Black-burnished ware, which one would expect in greater quantity had extensive occupation extended beyond c.A.D.120-30. There were, however, examples of the flanged bowl in BB1, a 2nd century form. Among other imports into the area, some possible Severn valley Ware is present and a number of pieces of the crude hand-formed dark grey/black jars with crushed rock filler usually associated with the Malvern area. The tradition of the Malvern jars is undoubtedly an Iron Age one, but their importation into Wales belongs to the Roman period extending into the 2nd century. It may be significant that the ware is absent from Neronian Usk although appearing in forts of Flavian foundation in both central and south Wales. The fabric seems to be more prevalent in central and west Wales than in the south (quantities at Loughor were, for instance, very low – less than 0.5% of the total vessels found; Trawscoed on the other hand has plenty). Importation along routes through central Wales seems most likely, therefore. The ware is comparatively plentiful at Llandeilo. The crudity of the pottery makes it unlikely that it was imported for its aesthetic or even its functional qualities and it seems most likely to have been a container for some commodity – perhaps salt?

Post-Roman pottery. The small amounts of post-Roman pottery are presumably the result of agricultural activity – the spreading of middens upon the land prior to ploughing. The small size of these later pieces would bear this out. It may be noted that the post-Roman pieces were almost all 17th and 18th century and it may be that the practice of midden spreading (or ploughing) ceased by the early 19th century, possibly on enclosure.

THE ROMAN GLASS

by Dee Williams

The excavation produced a total of twenty six fragments of Roman vessel glass, three beads and one fragment of molten glass.

The small assemblage covers a period from the mid 1st century through to the mid/late 2nd century A.D. Of the vessel glass, sixteen fragments are from natural-coloured bluish-green bottles (No.5), containers used for the transport and storage of liquids. Another three bluish-green fragments include the rim of a cast pillar-moulded bowl (No.3) and two featureless fragments (not catalogued) from fine-blown vessels which could not be identified. Fragments of deliberately

coloured glass comprise four fragments from the rim and body of a dark blue tubular-rimmed bowl (No.1) and one body fragment from the body of a yellowish-green conical jug (No.2). A beaker or cup in colourless glass (No.4) is represented by two small body fragments. Personal objects comprise a single dark blue 'wave' bead (No.6) and two turquoise paste melon beads (No.7-8). The one small fragment of molten glass is bluish-green in colour and may have been used as a gaming-piece or counter (No.9).

None of the Llandeilo glass is provenanced although the likely area of production and supply is the Rhineland and other centres of manufacture in the north-west provinces. It was from these areas that most imported 1st-2nd century glass was produced (Price and Cottam 1998, 5).

Tablewares:

Coloured glass vessels

1. One rim and two body fragments of bowl; translucent dark blue. Tubular rim; rim edge bent out and folded downwards. Blown. Rim diameter 100mm+; wall thickness 1mm. [2016] Trench 2. Fill of pit. One small fragment, possibly from the same vessel, was recovered from the fill of a pit, context [2002]

Too little of this vessel survives to determine the body profile. Shallow and deep (Isings 1957, form 45 and form 44) tubular-rimmed bowls were both produced. The former type dates from c.AD 43 and appears to go out of fashion after AD 60/65 whilst the latter more common type continues in use into the third quarter of the 2nd century (Price and Cottam 1998, 77-80). Vessels produced in strong deep colours as opposed to natural coloured bluish-green or colourless are rare after the 1st century (*ibid.*, 15).

2. Fragment from body of jug; translucent yellowish-green, decorated with vertical ribs; single vertical rib extant. Blown. [2001] Trench 2. Layer -lower level of ploughsoil.

This fragment is from a jug of conical shape (Isings 1957, form 55a), a type which had a cylindrical neck, an angular ribbon handle and a straight-sided body (Price and Cottam 1998, 152-4, and fig.67). Price and Cottam cite several find spots from excavated sites around Britain. Amongst these are finds from the legionary fortress at Usk, Gwent, where fragments from two jugs, one of yellow-green, the other of blue-green was recovered from late Neronian/early Flavian contexts (Price 1995a, 179, nos.100-101, fig.46). Conical jugs were made in a variety of colours from the late 1st - 2nd century and those of yellow-green like the Llandeilo example continue in use to the third quarter of the 2nd century (Price and Cottam 1998, 153).

Bluish-green vessels

3. Fragment from rim and upper body of cast pillar-moulded bowl; bluish-green. Plain vertical rim, parts of two prominent sloping vertical ribs below. Cast, wheel-polished interior and on outside of rim; the rest of the exterior is fire-polished. Rim diameter 160-180mm; maximum thickness at rim 4mm; minimum wall thickness 2.5mm. [4008] Trench 4. Fill of v-shaped ditch.

Cast pillar-moulded bowls (Isings 1957, form 3) are very common in 1st century Flavian contexts with bluish-green examples continuing in use through to the early 2nd century (Price and Cottam 1998, 44). For local parallels compare examples from the Church Street excavations in Carmarthen (Brennan in H.James

2003, 342-344, nos.1-2 and Fig. 8.14., no.1), recovered from late 1st/early 2nd century contexts.

Colourless vessels

4. Fragment from body of cup or beaker; translucent colourless, decorated with two horizontal wheel-cut lines. Blown. Wall thickness 1mm. [2016] Trench 2. Fill of pit.

One other very small fragment (not illustrated) from the same context and possibly from the same vessel is decorated with a single horizontal wheel-abraded line.

The form of this vessel is not identified although a late 1st or 2nd century date seems likely. A variety of colourless cups and beakers with this type of simple decoration were made and used from the end of the 1st century through to the 4th century (Price and Cottam 1998, 34).

Bottle glass:

5. Fragment from handle of bottle; bluish-green. Part of folded upper attachment of ribbon handle. Width 35mm.[2001] Trench 2. Lower level of ploughsoil.

This one handle fragment and another fifteen body fragments including one which is heat-distorted, are from bottles of cylindrical (Isings 1957, form 51) and square (form 50) or other prismatic form. These containers are very common and almost always form the largest proportion of any Roman glass assemblage. Cylindrical bottles are scarce after the early 2nd century whilst square types continue in use to the end of the 2nd century. For the variation in shape, their distribution and date range see Price and Cottam (1998, 191-211).

Beads:

6. Fragment of small annular bead; translucent dark blue; opaque broken white wave marvered flush with surface. Height 9mm. [4006] Trench 4. Fill of v-shaped ditch.

This bead falls into Guido's group 5, type A (1978, 62-64 & fig.21, no.1. See also Plates. I & II, nos.10a-h). Beads of this type occur in contexts from the 4th century BC right through to the Saxon period, and as such are not closely dateable (Guido 1978, 26 and 63). A complete example of this type of 'wave-decorated' bead was found at the nearby fort site of Pumsaint (Brennan in Burnham & Burnham 2004, 132, fig.2.89, no.10), where it was recovered from the lower fill of a clay-lined cistern, the finds of which date to the Flavian-Trajanic period (Burnham & Burnham 2004, 34).

7. Complete small melon bead; turquoise glass paste. Height 11mm; diameter 17mm; perforation diameter 9mm. [2033] Trench 2. Fill of pit.

8. (Not illustrated) Melon bead fragment; turquoise glass paste; height 17mm. From TP2.

Nos. 7 and 8 are very common types of beads which are frequently found on 1st and second century sites.

Miscellaneous:

9. (Not illustrated) Small tear-shaped droplet of molten glass with rounded upper surface and flat under surface; bluish-green. [4006] Trench 4. Fill of recut – ditch.

This may have been found and used as a gaming-piece or counter. Gaming-pieces are a frequent find on military sites. These are usually round in shape and nearly always opaque black or white in colour. A 1st/2nd century date is likely.

ASSESSMENT OF MISCELLANEOUS FINDS by Duncan Schlee**Lead objects**

The lead finds comprise 18 items. Artefact type, quantity and trench locations for all the items are presented in the table. There are five items of unworked waste, five items of sheet lead, and nine items that show some evidence of specific use or function (four weights, a bung or wedge and four miscellaneous objects). Fourteen of the items were unstratified metal detector finds. Stratified lead items were recovered from (4004) the fill of beam slot 4017 in Trench 4, and (2016) the fill of pit 2017 in Trench 2.

The type, form and condition of the objects reported here reflect the physical properties of lead. Most pieces appear to be made from recycled scrap pieces of sheet or thicker strips used, in a piecemeal fashion for uncertain purposes. Other items are unworked splashes, droplets, or amorphous lumps in various forms. Identifiable objects consist of roughly formed weights, decorative (?) beading, and a possible bung or wedge (*cf* James 2003, 341; Object 5). Lead therefore seems to have been used in small quantities for a variety of purposes, primarily as weights (items 1,2,3 and 4), bungs (item 5) and fastenings (items 6 and 7). Items 6 and 7 may suggest decorative or ornamental uses for lead. There are sources of lead at a few locations in the Tywi valley region (Hall 1993), although it is not known whether they were exploited in the Roman period. There is no direct evidence of lead smelting or production from the excavated areas of the fort, although some lead working can be inferred from the presence of unworked droplets and amorphous lumps of lead. The majority of lead items were recovered from Trenches 2 and 4/5, areas of the fort (and vicus) that were most intensively occupied. The lead weights do not appear to have had a uniform value.

Summary of lead object distribution

Object type	T1	T2	T3	T4/5	T6	T7	Total
Unworked waste	1	3		1			5
Sheet lead		2		3			5
Misc		2	1	1			4
Lead weights	1	2				1	4
Total	2	9	1	5	0	1	18

Catalogue

1 – ?Weight. Probably a broken former flat circular disc 22mm in diameter, 10mm thick with a hole of roughly 7mm diameter. Weight 17.49g. Appears to be formed

from a strip of irregular profile rather than a pierced disc. There are three incised marks on one of the faces. Trench 7, Unstratified.

2 – Weight. A 1.8cm diameter pierced disc with a 1cm hole. 1.1cm high and roughly triangular in section, the apex forming a ridge around the circumference. Weight 12.06g. Trench 1, ploughsoil context 1000.

3 – Weight. A flat circular disc 2.1cm in diameter and 8mm thick, with an off centre angled hole 7mm in diameter. Rounded in profile and possibly formed from a strip rather than a pierced disc. Weight 14.75g. Trench 2, topsoil context 2001.

4 - ?Weight. A roughly formed flattened 45mm length, 10mm wide, 5mm thick with rounded edges, bent in the middle. Probably a partially formed weight. Weight 15.20g. Trench 2, context 2016.

5 - A sub-circular object 3.2 x 3cm, wedge-shaped in profile 1.2cm (max), 3mm (min), with a shallow irregularly profiled groove around the thicker edges. The lower (?) face is slightly concave, the upper face has two straight parallel lipped edges. Perhaps a bung or wedge. Weight 46.92g. Trench 2, context 2016.

6 - A fragment of possible decorative beading (?) 48mm long, 12mm wide and 6mm thick, semicircular in section with two setting lugs 12mm long, 7mm diam. and 22mm apart. Weight 26.42g. Trench 2 unstratified.

7 - A fragment of possible decorative beading (?) 48mm long, 12mm wide and 6mm thick, semicircular in section with two setting lugs 12mm long, 7mm diam. and 22mm apart. Weight 26.42g. Trench 2, unstratified.

Copper alloy objects

All the copper alloy objects were recovered from plough soil or the spoil heap. Cu 1 (context 2007, Trench 2) is a poorly preserved and delicate fragment, possibly from a brooch. Cu 5 (context 1000, Trench 1) is a fragment of a decorative strip, possibly a rim decoration for a wooden vessel. The remaining copper alloy objects are two coins. The coin from context 3001, Trench 3 was too fragmented and corroded to be identifiable. The coin from Trench 4/5 was an unstratified metal detector find. It has been attributed to Trajan (AD 98-117).

Summary of copper alloy object distribution

Object type	T1	T2	T3	T4/5	T6	T7	Total
Misc.	1	1					2
Coin			1	1			2
Total	1	1	1	1			4

Burnt clay fragments

Fragments of burnt clay were collected from several features on the site. All of this material is fragmentary. The fragments were inspected in order to ascertain if any objects such as loom weights were present, or whether industrial processes or ovens could be identified. Three general types of burnt clay material were identified, although these categories are not necessarily easily distinguished due to variations in the original material and the type and intensity of the burning processes through which they became preserved.

Type 1(brick): Clay material with stone inclusions that has been fired to produce relatively hard and bright red fragments has generally been interpreted as brick, although no fragments with evidence of edges or faces were identified.

Type 2 (daub): Material identified as daub is generally of a less clean clay or soil material and occasionally contains inclusions such as charred grain or slag fragments. The daub fragments are generally less heavily fired and contain numerous small voids, probably the result of vegetable matter having been mixed in with the clay to improve its structure. Only a few fragments of daub were large enough or sufficiently well preserved to show evidence of wattle impressions. The best example of burnt daub with wattle impressions (Bc 5) was, however, more heavily fired and of a more brick-like fabric.

Type 3 (oven fabric?): The third category is characterised by being harder, lighter and more porous than the majority of daub fragments. This has been interpreted as evidence that the material has been exposed to relatively high temperatures, and is assumed to be derived from kiln or clay oven structures.

The majority of burnt daub fragments were recovered from ditch fills and the fills of structural features in Trenches 2 and 4. Feature 4027 in Trench 4 has been interpreted as a hearth. Its fill (4010) contained two fragments interpreted as brick. In addition to burnt clay fragments fill 2002 from feature 2003 contained a variety of other cultural material, including a complete vessel and several lumps of possible roasted limestone (?). The fill of the whole vessel, initially thought to be a cremation burial, was found to be devoid of finds and the significance of the deposit as a whole, remains uncertain. Fill 2016 from feature 2017 (an elongated pit) contained a large quantity of burnt clay along with a variety of other cultural material. Fill 2023 also contained notably large quantities of burnt clay fragments, including wattle impressions.

Because of the variation in fabric, variable burning conditions, and poor preservation, the burnt clay was of limited interpretive use as an assemblage. The three types of burnt clay identified, do not appear to be the result of distinct firing processes on specific material types, and cannot therefore be used as evidence to suggest specific processes were being carried out in specific locations with any certainty. The most acceptable interpretation is that the burnt clay material is primarily derived from the destruction of wattle and daub buildings or structures. There was however, no evidence to suggest wholesale destruction of buildings on the site.

Summary of burnt clay distribution

Object type	T1	T2	T3	T4/5	T6	T7	Total
Type 1 (brick?)	1	40	1	47			89
Type 2 (daub?)	5	179	7	94			285
Type 3 (oven?)		5					5
Total	6	224	8	141	0	0	379

Stone objects and anthracite

Numerous small fragments of anthracite were probably used as fuel for cooking, heating, or industrial purposes, although none was found in sufficient quantities or in association with other excavated features to suggest any locations where

these activities may have occurred. Interpretation of the geophysical survey has suggested that a number of thermoremanent responses may be possible industrial sites dug into the ramparts of Fort 1, but these were not excavated, so the use of anthracite as fuel cannot be confirmed. Only two anthracite fragments were recovered from stratified deposits. The remainder were recovered from the plough soil. It is therefore possible that the presence of anthracite in Roman period deposits is coincidental.

Several rounded limestones and fragments recovered from 2002 (the fill of pit 2003) in Trench 2, are porous and flakey and may have been roasted, possibly for use as a flux? The miscellaneous stone from Trench 2 has been used for roofing tiles, but this cannot be inferred from the recovered fragment. Worked stone in Trench 2 consists of two pebbles. One has a smooth depression in it, suggesting it may have been used to grind or polish another item. The other pebble may also be worked but to a lesser extent. A gaming piece or counter recovered from context 2004 in Trench 2, consists of a finely polished black pebble with a flat base. Other counters or gaming pieces recovered from the excavation were made from droplets of glass.

Summary of stone objects and anthracite distribution

Object type	T1	T2	T3	T4/5	T6	T7	TP1	TP2	Total
Anthracite frags	2		12	7			2	4	28
Worked stone		3							3
Misc stone		1							1
Limestone		10							10
Total	2	13	12	8	0	0	2	4	42

Iron objects

Numerous iron or iron rich items were recovered from the excavations. The majority of the items recovered were either too corroded or fragmented or concreted to be identifiable. Nails were the only readily identifiable category of object. Four categories of nail could be distinguished, large, medium, small and dome headed. They were generally round, flat-headed and square or rectangular in section.

'Large' nails were at least 9.5cm long, generally square headed and 1.5cm wide. In section, large nails were square or rectangular and roughly 1.3cm at their widest point. Well preserved 'medium' nails were roughly up to 6cm long, with a flat, round head roughly 1.5cm in diameter. The widest part of medium nails was roughly 8mm. 'Small' nails were roughly up to 3cm long, with square or round heads up to 5mm wide. In section, small nails were square or rectangular and up to 3mm wide. 'Dome-headed' nails were roughly 1 cm in diameter, with a short pin roughly 2mm wide.

Most examples were fragments, with only a few being complete, or including the nail head. Nail fragments were attributed to the four categories according to their size. Of the concretions, unidentifiable fragments and objects, only three items have been selected as possibly suitable for X ray investigation.

Most of the ferrous items were recovered from Trenches 2 (90 items), 1 (23 items), 4/5 (37 items) and 7 (12 items). This distribution is largely due to the quantities of nail fragments recovered. The use of nails is most likely associated with building construction, and nail distribution would not appear to suggest any

significant differences in activity across the site. Thirty ferrous items were recovered from fill 2016 which also contained a wide variety of other cultural material.

Summary of iron artefact distribution

Object type	T1	T2	T3	T4/5	T6	T7	TP1	TP2	Total
Large nails	2	5		6	1	4		1	19
Medium nails	2	52	1	49					104
Small nails	1			6	1				8
Dome-head nails	2	1		2					5
Concretions	10	22		28		5			65
Indet. objects	3	7		1		2		1	14
Total	20	87	1	89	2	11	0	2	215

Metal slag

The majority of slag fragments recovered from trenches 2 and 4/5 were generally small and were not found in any great concentrations within deposits or features. These are the areas of most intensive occupation. Slag may have been produced on a small scale in a domestic context, rather than large scale industrial operations. Trenches 1, 6, and 7 produced fewer, but larger fragments. The locations of these trenches, on the periphery of the site may suggest more industrial scale activities were being undertaken in these locations. Trench 6 was located at the site of a possible post-medieval brick kiln, the likely source of the slag recovered.

Summary of slag distribution

	T1	T2	T3	T4/5	T6	T7	TP1	TP2	Total
Slag fragments	2	9	0	19	2	2	0	0	34

Glass counters

Three glass counters or gaming pieces were recovered from the excavation. Two black pieces from Trench 2 and a white piece from Trench 4/5. A gaming piece made from a black pebble, and much larger than the glass examples was also recovered from Trench 2. These items were all located in the most intensively occupied areas of the fort.

Summary of glass counter distribution

	T1	T2	T3	T4/5	T6	T7	TP1	TP2	Total
Glass counters		2		1					3

Flint

Eight worked flint items were recovered from the excavation, five of which were from stratified contexts.

All the items are assumed to be of prehistoric origin, occurring in Roman deposits and fills coincidentally. No excavated features were considered to be of prehistoric date. The presence of worked flint, some of which are in good fresh condition, does however suggest that there was prehistoric activity in this location.

Summary of worked flint distribution

	T1	T2	T3	T4/5	T6	T7	TP1	TP2	Total
Worked flint	2	2	1			2	1		

ASSESSMENT OF THE CHARRED PLANT REMAINS

Astrid E. Caseldine and Catherine J. Griffiths (Department of Archaeology and Anthropology, University of Wales, Lampeter)

Samples were taken from selected contexts to assess the potential of the site for charred plant remains and hence for reconstruction of the palaeoeconomy associated with the forts during the periods of occupation.

The provenance of the samples was as follows:

Trench 1-Fort 1

Sample 7 Context 1024 – lower fill of large defensive ditch (1003).

Trench 2-Fort 2

Sample 1 Context 2002 – fill of pit 2003 containing complete Malvernian pot.

Sample 2 Context 2034 – basal fill of possible post pipe 2046 associated with pit 2024.

Sample 3 Context 2033 – fill of post pipe 2046 associated with pit 2024.

Sample 4 Context 2043 – lower fill of large pit 2017.

Sample 5 Context 2004 – fill of small pit 2005.

Sample 6 Context 2023 – fill of pit 2024 associated with post pipe 2046

Methods

Initially sub-samples were processed from all the samples, apart from sample 2 from context 2034 which was fully processed. The samples were processed using flotation and the flots and residues collected in a stack of sieves. The finest sieve mesh used was 250 microns. The samples were scanned using a Wild M5 stereo microscope and an assessment made. The results, along with details of the volumes processed and scanned, are presented in Table 1. Subsequently, the remaining material from all the samples was processed but so far this has not been examined.

Results

All the samples yielded charred plant macrofossils. The remains largely comprised cereal grains with smaller amounts of chaff, weed seeds and hazelnut fragments. The cereal included wheat (*Triticum* sp.), including spelt (*T. spelta*), barley (*Hordeum* sp.) and oat (*Avena* sp.). The presence of oat floret bases may enable the oat to be identified as either wild, cultivated or both. The weed seeds included species such as corn spurrey (*Spergula arvensis*), dock (*Rumex* sp.), bromes (*Bromus* sp.) and ribwort plantain (*Plantago lanceolata*).

The richest sample, which primarily consisted of barley grain, was sample 7 from the defensive ditch of Fort 1. Of the other samples, which were all from Fort 2,

sample 1 from pit 2003 was also rich in plant remains, but it differed from sample 7 in that spelt wheat dominated the assemblage. Remains were scarcer in the other samples but again wheat grain predominated, although weed seeds were more frequent in sample 6 from pit 2024 and sample 3 from the upper fill of post pipe 2046. Hazelnut fragments were most frequent in sample 4 from the large shallow pit 2017.

Discussion

The results from the assessment demonstrate that there is considerable potential for plant macrofossil analysis at the Llandeilo forts. The results suggest that most of the samples comprise processed grain but the presence of weed seeds in some of the samples suggests that some crop processing might have been taking place at the site. The rich barley sample from the defensive ditch might reflect disposal of grain that had become charred as the result of an accidental fire while it was being stored or accidental charring while it was being dried or roasted. The charred grain from pit 2003 might also reflect accidental charring but it is also possible that it was 'waste' that was burnt deliberately. The same could apply to the other samples.

The barley sample is from Fort 1 whereas the other samples, in which wheat appears to predominate, are from Fort 2, but as only one sample was recovered from Fort 1 it is not possible to draw any conclusions about changes in the relative importance of the crops being used at the forts. Barley is frequently used as a fodder crop and the occurrence of the substantial barley deposit in the Fort 1 ditch would be consistent with the view that the fort held at least an *ala quingenaria* (cavalry unit) or a *cohors milliaria* (a large infantry or mixed unit). The samples from Fort 2 probably relate to the latest phase of occupation, possibly a period of reuse of the interior of Fort 2 by the inhabitants of the *vicus* after the soldiers had left (see preliminary discussion below). It is these samples which contain some tentative evidence for crop processing.

A detailed interpretation of the results must await a full analysis of the samples. This would enable comparisons to be made with plant macrofossil evidence from other Roman sites in Wales including the fort at *Segontium* (Nye 1993) in north Wales and the auxiliary fort at Loughor (Probert 1997) in south Wales, as well as Roman Carmarthen (Hillman 1978, Caseldine 1993, 2003). Of particular interest is the food supply at the fort and the effect this might have had on the surrounding agricultural economy.

Conclusions and recommendations

The results from the assessment indicate that a full analysis of the samples would be worthwhile and that any further investigations at the forts and *vicus* should include the recovery of plant remains for analysis. The samples recovered from the two forts demonstrate that there is considerable potential to investigate the grain supply at the forts, and hence the diet of the inhabitants, as well as the possible effect of the forts on the local agricultural economy. Of particular interest is the extent to which grain might have been imported from further afield or to what extent the presence of the forts might have led to increased local production. Plant macrofossil evidence from elsewhere in the forts and the *vicus* might give some indication of the relationship between the forts and the native rural community. No samples were recovered from the *vicus* and if further investigations take place it would be particularly interesting to see if there was any evidence for crop processing activity and if the range of crops represented at the *vicus* differed from that at the forts.

Table 1 Charred plant remains from Llandeilo Roman forts

Trench		T1	T2	T2	T2	T2	T2	T2
Sample No.		7	1	2	3	4	5	6
Context		102	200	203	203	204	200	202
Volume - litres		4	2	4	3	3	4	3
		1	5	3.5	5	5	5	5
<i>Triticum</i> cf. <i>spelta</i> (Spelt wheat)	grain	-	>50	-	-	6	-	-
<i>T. spelta</i>	glume bases	1	-	-	-	1	-	-
<i>Triticum</i> sp.	grain	-	-	2	6	-	11	6
cf <i>Triticum</i> sp.	grain	-	-	-	-	-	1	-
<i>Hordeum</i> sp.(hulled) (Barley)	straight grain	-	5	-	-	3	-	-
<i>Hordeum</i> sp.(hulled)	straight/twisted/ indet. grain	>100	-	-	-	-	-	-
<i>Hordeum</i> sp.(hulled)	indet. grain	-	-	-	1	-	1	1
<i>Avena</i> sp. (Oat)	grain	>20	-	1	-	-	1	-
<i>Avena</i> sp.	floret bases	>10	-	-	-	-	-	-
Cereal indet.	grain	>100	>100	1	9	20	1	4
<i>Ranunculus repens</i> type (Creeping buttercup)		-	-	-	1	-	-	-
<i>Ranunculus</i> sp. (Buttercup)		-	-	-	-	-	-	1
<i>Corylus avellana</i> L (Hazel)	frags.	-	-	-	2	11	-	1
<i>Spergula arvensis</i> L. (Corn spurrey)		1						
<i>Persicaria</i> / <i>Polygonum</i> sp. (Knotweeds)		-	-	1	-	-	-	-
<i>Rumex acetosella</i> L. (Sheep's sorrel)		-	-	-	-	-	-	>1
<i>Rumex</i> sp. (Dock)		-	-	-	1	-	-	-
cf <i>Fabaceae</i> (Pea)	frags.	-	-	-	1	-	-	-
<i>Trifolium</i> sp. (Clovers)		-	-	-	1	-	-	-
<i>Apiaceae</i>		1	-	-	-	-	-	-
<i>Plantago lanceolata</i> L. (Ribwort plantain)		-	-	-	>5	-	-	>3
cf. <i>Luzula</i> sp. (Wood-rushes)		-	1	-	-	-	-	-
<i>Bromus</i> sp. (Bromes)		-	6	-	-	-	-	>2
Poaceae (Grass)		-	1	-	1	-	-	>1
cf. Poaceae		-	1	1	-	-	-	-
Seeds indet.		1	>4	-	3	1	1	-
cf. Seed case		-	1	-	-	-	-	-
Organic material indet.		-	-	-	-	1	-	-
Rodent jaw bone		1						
cf. Tooth frag.		-	-	-	-	1	-	-
Burnt bone		-	+	+	+	+	+	+

PRELIMINARY DISCUSSION

The clarity and detail provided by the geophysical survey of the Llandeilo forts is outstanding. It has now solved one of the outstanding uncertainties relating to the Roman conquest and occupation of southwest Wales; confirmation of the existence of the Roman fort at Llandeilo and its precise location. It provides yet more evidence, if more was needed, to refute the suggestion put forward by Jarrett that southwest Wales was almost exempt from military occupation (Jarrett 1969, 8). In fact the equal spacing along the Roman road of the forts at Llandovery, Llandeilo and Carmarthen, within a days march of each other, must have provided an effective control over the surrounding population. Of course the question still remains about how long this arm of control extended along the road to the west of Carmarthen (James *et al* 2002).

Choronology – The superimposition of two forts is extremely unusual in Wales. Only two other examples are known at Cardiff (Webster 1991) and Neath. At Cardiff a large pre-Flavian fort was followed by a Flavian establishment. It is possible that the Llandeilo forts were established in relatively quick succession in the later first century. This would appear to be supported by the, albeit limited, pottery evidence recovered to date. This does not appear to favour a pre-Flavian foundation for Fort 1 although the size of the sample is very small, especially from the area of Trench 1 (the gateway to Fort 1). On present evidence it seems more likely that Fort 1 dates to an early Flavian phase of campaigning (perhaps soon after AD 74) when such large forts were favoured (Davies 2000, 15). However, an earlier date for Fort 1 cannot be ruled out.

At present, it is impossible to determine the period of time between the abandonment of the earlier fort and the construction of the later fort. Possibly the abandonment of the earlier fort was related to the demands of campaigning in northern Britain and elsewhere in the period AD 78-83 (Davies 2000, 21). The subsequent disengagement from Scotland may have allowed the return of units to Wales. Of course, whether or not this was the scenario at Llandeilo remains speculative. The predominance of South Gaulish Samian over Central Gaulish Samian suggests that the site saw a reduction in activity during the early part of the second century and abandonment by AD140. This is not unusual in a south Wales context and it has been suggested that southwest Wales was bereft of troops by the mid-120s (Davies 2000, 24).

The morphology of the forts – the large size of Fort 1 has now been confirmed (3.85 hectares). This makes it one of the largest forts in Wales and compares with the forts at Llanfor at 3.6 hectares (Gwynedd Archaeological Trust 2002, 23) and Caersws I at 3.8 hectares (Jarrett 1969, 66). This size suggests that the fort held a substantial military unit, at the very least an *ala quingenaria* (cavalry unit) or a *cohors milliaria* (a large infantry or mixed unit) and perhaps even a larger legionary detachment.

The stronger geophysical survey readings associated with the later fort (Fort 2) suggests that it was a longer-lived establishment possibly dating to the 'garrison phase' of the Flavian conquest period. The smaller size (1.54 hectares) suggests that it held a smaller unit, perhaps a *cohors quingenaria peditata* (a small infantry unit). The excavation indicated that both forts had timber and earth defences and timber internal buildings. There was no evidence from the excavation to suggest that any of the buildings had been replaced in stone. Some suggestions for the possible internal arrangements of the later fort have been made above and these appear to be supported by the limited amount of excavation that has been undertaken within the interior of the forts.

Both forts appear to have utilised a relatively flat topped ridge with the long axis of the forts orientated along the line of the ridge. The slight relocation of the smaller later fort might have been dictated by minor variations in the local topography. The orientation of the earlier fort appears to have utilised specific local rises and ridges to maximise sight lines. However, there would have needed to be a subtle shift to accommodate the needs of a smaller fort. As noted above the front and rear gates of the later fort were also located to correspond with slight knolls.

The vicus and the possible bathhouse - During the time available, it was only possible to sample excavated features associated with the *vicus*. However, this demonstrated the complexity of the structures in this area and highlighted the potential of the deposits and structures to address issues of Romanisation and the interaction between Roman and native in the period immediately following the conquest. Of particular interest was the evidence for the reuse of the interior of Fort 2 by the inhabitants of the *vicus* after the departure of the soldiers.

The examination of the possible rectangular building to the northwest of the fort remains inconclusive although the brick that was recovered from this area appears more likely to be post-medieval in date than Roman.

ACKNOWLEDGEMENTS

The investigations owe a great deal to the hard work of the staff of both Cambria Archaeology and the National Trust and I am particularly grateful for the support and enthusiasm of Emma Plunkett-Dillon (National Trust). From Cambria Archaeology the principal project staff were Nikki Cook (assistant site director), Duncan Schlee, Ken Murphy, Richard Ramsay and Gwilym Bere (who all acted as area supervisors). We would like to thank all the numerous volunteers who participated in the excavation (a full list is provided in Appendix 5). Support from the National Trust came from Paul Faulkner, Philip James, Wyn Daviess. An academic advisory committee has been set up to support the investigation of the forts and this currently includes the author, Emma Plunkett Dillon, Jeff Davies (University of Aberystwyth), Heather James, Barry Burnham (University of Lampeter), David Thackray and Peter Webster (University of Cardiff).

Astrid Caseldine and Catherine Griffiths would like to thank Valerie Davies for assistance with the processing of samples from Llandeilo.

Ken Murphy and Emma Plunkett Dillon kindly provided comments on an earlier draft of this report and Hubert Wilson prepared the illustrations.

Finally, the excellent geophysical survey was undertaken by a team from Stratascan Ltd.

REFERENCES

- Brennan D 2003 *Glass*, in James H. *Roman Carmarthen. Excavations 1978-1993*. Britannia Monograph Series No.20, London.
- Burnham B & Burnham H 2004 *Dolaucothi – Pumsaint Survey and excavation at a Roman Gold-Mining complex 1987-1999*, Oxbow.
- Caseldine A 1993 'Priory Street charred grain reported', in James H 'Excavations in Roman Carmarthen 1978-1990', *The Carmarthenshire Antiquary* (1992) 28, 31.
- Caseldine A E 2003 'Analysis of a Roman charred grain deposit from Priory Street', in James H *Roman Carmarthen*, Britannia Monograph Series 20, 369-370.
- Crane P 1994 *Llandeilo Northern Bypass*, Dyfed Archaeological Trust unpublished report.
- Davies J L 2000 'Roman Wales: an introduction', in C Arnold and J L Davies *Roman and Early Medieval Wales*, Sutton Publishing.
- Guido M 1978 *The Glass Beads of the Prehistoric and Roman Periods in Britain and Ireland*, Society of Antiquaries Research Report 35, London.
- Gwynedd Archaeological Trust 2002 *Cadw grant-aided projects review 2001-2002*, unpublished report.
- Heard H 2005 *Dinefwr Roman Fort II, Llandeilo, Carmarthenshire*, unpublished report.
- Heywood B, Marvell A 1992 'Excavations at Neath', *Bulletin of the Board of Celtic Studies*, 39 (1992) 171-298.
- Hillman G H 1978 'Remains of crops and other plants from Carmarthen (Church Street)', in Boon G C *Monographs and Collections*, Cambrian Archaeological Association 1, 107-112.
- Hughes G 2005 'The Llandeilo Roman forts second interim report: archaeological investigations 2005', *Carmarthenshire Antiquary* 41, 168-174.
- Isings C 1957 *Roman Glass from Dated Finds*, Groningen.
- James H 2000 'Roman Carmarthenshire', *Carmarthenshire Antiquary* 36, 23-46.
- James H and James T 1984 'Aerial survey and the Roman road from Carmarthen to Llandovery', *Carmarthenshire Antiquary* 20, 23-28.
- James H, Murphy K and Page N 2002 *The discovery and investigation of a Roman road west of Carmarthen*, Cambria Archaeology unpublished report 2002/4.
- Jarrett M G 1969 *The Roman Frontier in Wales*, 2nd edn, Cardiff.
- Manning W H 1993 *Report on the Excavations at Usk 1965-1976. The Roman Pottery*, Cardiff.
- Murphy K 2003 *A topographic survey of the Deer park at Dinefwr Park, Llandeilo*, Cambria Archaeology unpublished report.

Nash-Williams V E 1932 'The Roman Legionary Fortress at Caerleon in Monmouthshire. Report on the Excavations carried in the Prysg Field, 1927-9. Part III. The Finds', *Archaeologia Cambrensis*, 87 (1932) 265-349.

Nye S 1993 'The botanical report', in Casey P J and Davies J L with Evans J 'Excavations at Segontium (Caernarfon) Roman Fort, 1975-1979', CBA Research Report 90, 82-96.

Page M, Cook N and Nichols C 2007 *Dinefwr park East Drvie. Archaeological Evaluation, March 2007*, Cambria Archaeology unpublished report.

Peacock D P S and Williams D F 1986 *Amphorae and the Roman Economy*, London.

Price J 1995a 'Glass Vessels', in Manning W H, Price J and Webster J, *The Roman Small Finds*, Cardiff, University of Wales Press, 139-191.

Price J and Cottam S 1998 *Romano-British Glass Vessels: A Handbook*, (Practical Handbook in Archaeology 14), CBA.

Probert F 1997 'Report on the burnt grain', in Marvell A G and Owen-John H S, *Leucarum: Excavations at the Roman Auxiliary Fort at Loughor, West Glamorgan 1982-84 and 1987-88*, Britannia Monograph Series 12, 125-130.

Rogers G B 1974 *Poteries sigillées de la Gaule Centrale. I. Les motifs non figurés*, 28th supplement to *Gallia*, Paris.

Rogers G B 1999 *Poteries sigillées de la Gaule Centrale. II. Les Potiers*, Lezoux.
Romeuf, A-M 2001 *Les Martres-de-Veyre. Le quartier artisanal gallo-romain*, Lezoux.

S&S Stanfield J, Simpson G 1958 *Central Gaulish Potters*, Oxford for Durham, 1958. Revised as *Les Potiers de la Gaule Centrale*, Revue Archéologique Sites, Hors Série 37, Gonfaron 1990.

Stratascan 2003 A report for Cambria Archaeology on a geophysical survey carried out at Dynevor Park, Llandeilo Carmarthenshire, unpublished report.

Wallace C and Webster P V 1989 'Jugs and Lids in Black-burnished Ware', *Journal of Roman Pottery Studies*, 2 (1989) 88-91.

Webster P 1990 'The first Roman fort at Cardiff', in B C Burnham and J L Davies (eds) *Conquest, co-existence and change. Recent work in Roman Wales*, Tritium 25, Lampeter.

Young C J 1977 *Oxfordshire Roman Pottery*, British Archaeological reports, British series 43, Oxford.

APPENDIX 1

Excavations at Llandeilo Fort, Dinefwr Park 2005 - Outreach Activities

Updated November 2006

Press and Media

TV COVERAGE

- 27/06/05 – BBC Wales Today – Live and pre-recorded interviews with Gwilym Hughes and Pam Steane Price (Volunteer) for both lunchtime and early evening news bulletins
- 27/06/05 – S4C Newyddion – Pre-recorded interviews in Welsh with Wyn Davies and Richard Jones for evening news
- 27/06/05 – ITV Wales – Pre-recorded interviews with Gwilym Hughes, Nikki Cook and Emma Plunkett-Dillon for evening news
- 27/06/05 – Telegop TV – Pre-recorded interviews with Gwilym Hughes, Emma Plunkett Dillon and Richard Ramsey.
- 02/07/05 – Channel 4 Time Team – live and pre-recorded interviews with Gwilym Hughes, Emma Plunkett Dillon and Jeff Davies and pre-recorded interview with Nikki Cook.
- 03/07/05 – Channel 4 Time Team – live and pre-recorded interviews with Gwilym Hughes and pre-recorded interviews with Emma Plunkett Dillon and Nikki Cook.
- 07/07/05 – S4C Wedi Saith – Pre-recorded interviews in Welsh with Gwilym Hughes, Gwilym Bere, Wyn Davies and Toby Small (Volunteer). Broadcast on 11/07/05.
- 14/07/05 – BBC2 Wales. Pre-recorded interviews with Gwilym Hughes and Emma Plunkett Dillon. Broadcast as part of a programme covering a journey on the Heart of Wales line in November 2005.

RADIO COVERAGE

- 21/06/05 – BBC Radio Wales – Live interview with Emma Plunkett Dillon
- 24/06/05 – Radio Carmarthenshire – Pre-recorded interview with Gwilym Hughes
- 27/06/05 – BBC Radio Wales (Good Morning Wales) – Live interview with Nikki Cook
- 27/06/05 – Radio Carmarthenshire – Live/pre-recorded interview with Nikki Cook
- 06/07/05 – Radio Carmarthenshire – Pre-recorded interview with Ken Murphy
- 14/07/05 – Radio Carmarthenshire – Pre-recorded interview with Gwilym Hughes
- 15/07/05 – Radio Carmarthenshire – Pre-recorded interview with Gwilym Hughes
- 15/11/05 – BBC Radio Wales – Interview given by G Hughes on the Llandeilo Roman Fort for the programme 'Past Masters'.

NEWSPAPER AND JOURNAL COVERAGE

- 15/06/05 – Towy Valley Guardian – Front page article
- 15/06/05 – Carmarthen Journal – article
- 21/06/05 – Western Mail – Article with photograph
- 30/06/05 – South Wales Evening Post – article with photograph
- 07/05 – The Post [Community Magazine] July edition – article with photograph
- 05/07/05 – Western Mail – article with photograph
- 06/07/05 – Carmarthen Journal – Article with photographs
- 06/07/05 – Towy Valley Guardian – Full page article with photographs
- 13/07/05 – Towy Valley Guardian – Front page photograph of Open Day
- 15/07/05 – South Wales Evening Post – article with photograph
- 07-08/05 – British Archaeology – Article
- 07/09/05 – Carmarthen Journal – advertising forthcoming talk on the Fort
- 14/09/05 – Carmarthen Journal – report on lecture on the Fort
- 14/09/05 – Twyi Valley Gaurdian – report on talk on the Fort

01/06 – Current Archaeology - Article on the filming of the Big Roman at Dinefwr Park by Carenza Lewis of the Time Team.

Volunteers

A total of 33 volunteers spent between one week and three weeks on the excavation. In addition, 16 volunteers worked on the site as part of the two participants afternoon sessions organised for 29th June and the 6th July.

School and Educational Visits

Tre-gib Comprehensive School, Llandeilo	c.170
Trap County Primary School	c.5
Llangadog County Primary School	c.22
Cwmifor County Primary School	c.12
Maes-y-bont County Primary School	c.12
Parc-y-rhun County Primary School	c.45
Llangunnor County Primary School	c.12
Ysgol Teilo Sant	c.24
Llandeilo County Primary School	c.120
Ffairfach County Primary School	c.50
Penbryn special needs school	c.12
University of Glamorgan Department of Lifelong Learning	c. 12
Llangunnor County Primary School	c.16

A pre-arranged visit from Llandybïe CP School on Tuesday July 5th had to be cancelled due to poor weather conditions.

All the schools received bilingual education packs in advance of their visit allowing teachers to supplement their tour with cross-curricula activities.

Careers Wales Master Class

11/07/05 – Approximately 18 students spending full day on site
15/07/05 – Approximately 20 students spending full day on site

On both days students were given a full tour of the excavation and spent the remainder of the day excavating two test pits in the *vicus* area of the site.

Open days

09/07/05 – Approximately 700-800 visitors
16/07/05 – Approximately 1000 visitors

On both open days visitors were provided with a bilingual handout indicating main findings of the excavation and copy of geophysical survey. Bilingual exhibitions included an introduction to the site, examples of the school education packs and work undertaken by Ffairfach County primary and photographic displays of the excavation and the Time Team filming.

Members of staff were stationed at each of the excavation trenches and gave continuous talks on what had been found to date.

A further open day was held Saturday 15th July 2006 as part of National Archaeology Week. This focussed on follow-up work on the small enclosure to the northwest of the forts.

Other important visitors

09/06/05 – Professor Shepard Frere and Dr Hugh Toller
28/07/05 – Academic Advisory Group meeting (Dr Jeffrey Davies and Dr Barry Burnham)
28/07/05 – Iwan Huws, National Trust Director for Wales
01/07/05 – Rhodri Glyn Thomas, AM for Carmarthenshire East
05/07/05 – Dr Peter Webster and Janet Webster, University of Cardiff
06/07/05 – Andrew Marvell, Acting Director, Glamorgan-Gwent Archaeological Trust
07/07/05 – Visit from Cadw Inspectors (Sian Rees, Kate Roberts and Jonathon Berry)
07/07/05 – Rob Woodside, Archaeologist with the National Trust
11/07/05 – Steve Chandler, Transport Wales, Welsh Assembly Government
13/07/05 – Visit from CCW Tir Gofal Project Officers
14/07/05 – Simon Murray, Director of Operations, National Trust
12/07/05 – Members of the National Trust Committee for Wales

Dig Diary

A bilingual Dig Diary was maintained throughout the course of the excavation with daily updates with photographs. Preliminary indications are that this diary has received at least 1000 visitors to date.

Newsletter

A five-page newsletter was produced prior to the beginning of the excavation. This was pre-circulated to schools, prospective volunteers and was distributed at various locations and events in the run up to the dig. Over 500 copies were produced and distributed in both English and in Welsh.

A news sheet was produced and handed out to visitors during the two open days providing an update on the progress of the excavation. This was produced in both English and in Welsh.

Exhibition Boards

An exhibition display was prepared in advance of the excavation and was used at an Open Day for the Dinefwr restoration Project held by the National Trust in the Civic Hall, Llandeilo on Saturday 28th May. The exhibition then spent a month on public display at Newton House until the beginning of the excavation. During the excavation it was on permanent display in the exhibition marquee set up on site.

Other exhibition boards showing fort reconstructions and copies of the geophysical survey were set up next to each of the excavation trenches allowing visitors to locate themselves and have an indication of the original appearance of the fort at the various locations.

Lectures and Talks

12/06/03	Llandeilo Rotary Club
08/10/03	Llandeilo Community Association
13/10/03	Llandeilo Round Table
14/02/04	Carmarthenshire Antiquarian Society
27/02/04	Friends of Llandeilo Library
02/03/04	National Trust Dinefwr Park Volunteers
02/07/04	Carmarthen U3A Club
17/07/04	Carmarthen Museum – National Archaeology Day
27/04/05	Llandovery Family History Society
09/06/05	Llandovery Civic Trust
08/09/05	Creigiau Good Companions, Cardiff

13/09/05	National Trust Dinefwr Heritage Week.
15/09/05	Llandeilo and District Civic Trust Society
15/10/05	CBA Wales/Cymru AGM, Welshpool
18/10/05	Lampeter Students Archaeological Society,
21/11/05	NHS Retirement Fellowship, Glangwili Hospital, Carmarthen
17/01/06	Hanes Llambled, Lampeter
10/03/06	Ammanford Arts Club
11/03/06	Carmarthenshire and Ceredigion Tourism Association
22/04/06	Carmarthen Antiquarian Society
08/05/06	Carmarthen Rotary Club
11/07/06	Dinefwr Park Volunteers
09/11/06	Cardiff Archaeological Society
18/11/06	Wrexham dayschool on the Romans in Wales

Publications

Hughes G, 2003 'A Roman fort at Dinefwr Park, Llandeilo: an interim statement on a geophysical survey by Stratascan', *Carmarthenshire Antiquary* 39, 144-147.
Hughes G 2005 'The Llandeilo Roman Forts second interim report: archaeological investigations 2005', *Carmarthenshire Antiquary* 41, 168- 174.
Hughes G and Plunkett Dillon, E 2006 'What the Romans did at Llandeilo', *Heritage in Wales* 32, 11-14.

APPENDIX 2

Summary of those contexts containing cultural material

Trench No	Context	Type	Fill of/(Filled by)	Description
Trench 1	1000	Layer		Ploughsoil
	1001	Layer		Clean up layer under ploughsoil
	1002	Fill	1003	Upper fill of inner defensive ditch
	1003	Cut	(1002)	Cut of inner defensive ditch
	1004	Fill	1005	Fill of post pit – part of six-post gateway tower
	1008	Fill	1003	Upper fill of inner defensive ditch = 1002
	1009	Fill	1003	Mid fill of inner defensive ditch
	1010	Fill	1021	Fill of small pit outside outer ditch containing amphorae
	1011	Fill		
	1012	Fill	1021	Fill of small pit outside outer ditch containing amphorae = 1010
	1013	Fill	1014	Fill of post pit – part of six-post gateway tower
	1015	Fill	1016	Fill of outer ditch
	1019	Fill	1003	Mid fill of inner ditch = 1009
	1024	Fill	1003	Lower fill of inner ditch containing large quantity of charred seed
	1027	Fill	1003	Upper fill of inner ditch = 1008
	1036	Fill	1016	Fill of outer ditch
	1037	Fill	1016	Lower fill of outer ditch
	1042	Cut		Cut of post pit in rampart area
	1043	Fill	1042	Fill of post pit
	1044	Fill	1042	Fill of post pit
	1045	Fill	1042	Fill of post pit
	U/S			Unstratified – mostly from spoil heap
Trench 2	2000	Layer		Upper level of ploughsoil
	2001	layer		Lower level of ploughsoil
	2002	Fill	2003	Fill of pit – containing compete Malvernian pot
	2004	Fill	2005	Fill of small circular pit containing fragments of cremated bone

	2006	Fill	2003	Fill of pot
	2007	Layer		Lowest level of ploughsoil – clean-up layer over archaeological deposits
	2008	Fill	2009	Fill of shallow ditch
	2012	Layer		Layer of yellow brown silt across southern end of trench
	2016	Fill	2017	Fill of elongated pit – containing large quantity of cultural material
	2018	Fill	2026	Fill shallow pit – reddish brown clay
	2020	Fill	2019	Fill of pit/gully
	2023	Fill	2024	Fill of pit containing cremated bone
	2033	Fill	2046	Fill of post pipe
	2041	Fill	2040	Lower fill of post pit
	2043	Fill	2017	Charcoal rich fill of large pit
	2048	Fill	2047	Fill of ditch
	U/S			Unstratified – mostly from spoil heap
Trench 3	3001	Layer		Plougsoil
	3002	Layer		Lower ploughsoil
	3006	Fill	3007	Fill of linear gully at south end of trench
	3017	Fill	3018	Fill of linear gully
	3019	Fill	3020	Fill of major linear gully running NE-SW
	3025	Fill	3026	Fill of rectangular pit in SE corner of trench
	3029	Fill	3030	Fill of large rectangular pit
	U/S			Unstratified – mostly from spoil heap
Trench 4	4000	layer		Ploughsoil
	4001	Fill	4023	Fill of recut (4023) ditch (4015)
	4002	Fill	4026	Fill of post pit – Packed with pottery sherds
	4003	Fill	4016	Fill of beam slot
	4004	Fill	4017	Fill of beam slot
	4005	Fill	4018	Fill of beam slot
	4006	Fill	4009	Fill of v-shaped ditch
	4007	Fill	4015	Fill of large v-shaped ditch
	4008	Fill	4015	Fill of large V-shaped ditch
	4010	Fill/layer	4027	Fill of hearth
	4011	Fill	4012	Fill of beam slot

	4013	Fill	4014	Fill of beam slot
	4019	Fill	4025	Fill of post pit
	4024	Fill	4015	Upper fill of V-shaped ditch
	U/S			Unstratified – mostly from spoil heap
Trench 6	6001	Layer		Ploughsoil
	6002	Layer		Layer of brick rubble at NW end of Trench
Trench 7	7000	Layer		Ploughsoil
	7002	Layer		Cleaning layer – base of ploughsoil
	7003	Fill	7006	Fill of V-Shaped ditch
	7004	Fill	7007	Fill of ditch/gully
	7005	Fill	7008	Fill of ditch/gully
	7010	Layer		Spread of burnt clay
	U/S			Unstratified – mostly from spoil heap
TP1				Topsoil from Test pit in area of <i>Vicus</i>
TP2				Topsoil from Test Pit in area of <i>vicus</i>

APPENDIX 3

Pottery Descriptions by Context

** = worth illustrating

CONTEXT	DESCRIPTION	POTTERY
T1+	Unstratified	Samian: South Gaulish abraded sherd. Probably 18 or 18/31. Coarseware: Amphora: Dr.20 basal 'button' Gauloise 4 handle sherd Tile, possibly post-med Scraps Roman grey jar sherd ?cup in hard cream with a thin and patchy lead glaze both inside and on the external wall. The form suggests a 17 th century date.
1001	Clean under ploughsoil	Mortarium: worn basal sherd of a Verulamium mortarium, well used by the time it was discarded. Verulamium mortaria appear to have been imported into Wales from the mid 1 st to the mid 2 nd century, cf. Manning 1993, 401-2. Flanged bowl in light red fabric with a body sherd, probably from the same vessel. The form suggests a conscious imitation of either the samian form Ritterling 12 or of the early examples of its successor, Curle 11. Ritterling 12 is a predominantly pre-Flavian form but its coarseware derivatives can appear on probably Flavian foundations (for instance, Neath, Heywood & Marvell 1992, Fig.7, 3).
1002	Upper fill Inner defensive ditch	Amphora: Dressel 20, sherd and scraps
1003	Cut, inner ditch	Coarseware: 4 sherds of soft brown, probably Roman
1004	Gate post pit	Fragment of chert or flint. Brown glazed Post-med bowl
1008	Upper ditch fill =1002	Abraded sherd of coarse dark grey ?med. Oxidised jar or flagon sherd, probably Roman
1009	Middle fill Inner defensive ditch	Coarseware: ** Flagon in red fabric burnt brown and dark grey. The small upper ring and even rings below it indicate a 1 st century date. Cf. Usk fortress type 4 (Greene in Manning 1993, 19, see also <i>ibid.</i> Fig.148, 2-4), and Caerleon, (Nash-Williams 1932, Fig.56, 82). Later 1 st century examples tend to be more flared and

		<p>to have a more prominent upper ring. Our example would seem likely to be early to mid Flavian.</p> <p>A wall sherd in smooth orange fabric with a grey core is possibly from the same flagon as is a handle fragment.</p> <p>** A sharply curving handle in light orange fabric is of interest because of the neat 'tenon' used to fix it to it in place (unsuccessfully, as it has become almost totally detached from its original vessel, probably a larger flagon than that noted above. The 'mortice and tenon' technique of fixing handles to flagons has been observed previously in Black Burnished Ware flagons (Wallace & Webster 1989, Fig.1, 1), but most other flagons handles were probably simply smoothed into place.</p> <p>Lump of burnt daub.</p> <p>Fragments of stone</p>
1010	Small pit outside outer ditch	<p>Amphora:</p> <p>Laminated slithers of Dr.20</p>
1011	Fill of ?	<p>Abraded fragments of a single ?tile - ?med.</p>
1012	Small pit = 1010	<p>Amphora:</p> <p>14 sherds, mainly laminated frags of Dr.20.</p>
1016	?	<p>Scraps</p>
T1	Amphora	<p>Substantial portions of Dressel 20 amphorae (South Spanish Olive oil). Unfortunately no rim survives, the only likely diagnostic feature.</p>
2000	Upper plough soil	<p>6 sherds of oxidised pottery. Probably Roman.</p>
2001	Lower ploughsoil	<p>Samian:</p> <p>Form 29, South Gaulish. Three abraded sherds could well be from the same vessel. The surface has been totally eroded but the upper zone appears to show an animal facing right and the lower zone a saltire with a block of leaf tips to its right. The form and decoration would suit a Flavian date c.70-90. Sherd of South Gaulish dish or cup, possibly form 33.</p> <p>Coarseware:</p> <p>Oxidised jar, oxidised sherds</p> <p>Amphora, probably Dr.20 with small sherds of Dr.20 and 3 larger sherds.</p> <p>Tile</p> <p>** Mortarium: Gillam 238 type, Pas de Calais, cf. Usk (Manning 1993), Pl.185,5 (c.A.D.65/70-100).</p>
2002	Malvern Pot pit	<p>Amphora:</p> <p>Dr.20 fragments (laminating)</p>

		Also a small neck fragment from a light red flagon.
2004	Small circular pit with cremated bone	<p>Samian: Form 27, South Gaulish.</p> <p>Coarseware: Black sherd with burnished interior, probably part of a BB1 bowl 2 sherds grey jar Abraded frags.</p>
2006	Pit fill	<p>Samian: Small sherd of South Gaulish 18 or 18/31.</p> <p>Amphora: Handle of Gauloise 4, South Gaulish wine amphora. 2 oxidised sherds, 1 grey jar sherd and scraps.</p>
2007	Lowest ploughsoil	<p>Coarseware:</p> <p>** Everted rim jar in very light red fabric. The high shoulder suggests a 1st to early 2nd century date.</p> <p>** Bowl in light grey fabric with a darker surface worn to reveal a thin reddish layer. Despite the double-bead rim, a vessel inspired by the samian form 37 seems most likely. 3 oxidised and 3 reduced sherds and 1 Malvern Jar sherd. A collection of small sherds including: 7 sherds of Malvern jar and scraps 12 sherds of mixed oxidised and reduced abraded sherds. Neck and rim sherd of bead rim jar in light orange, burnt grey in a patch. The high shoulder suggests a 1st to early 2nd century form. Very abraded sherd from an apparently similar jar in light to mid grey. Stone</p>
2008	Fill of shallow ditch	Abraded small fragments of amphora (probably Dr.20) and tile. Also a single sherd of a small thin-walled light red vessel, probably a beaker.
2012	Yellow-brown silt	2 small oxidised sherds and an oxidised lump.
2016	Fill of elongated pit	<p>Samian: Form 15/17, South Gaulish. Cup, South Gaulish, form 27 or 35. Form 37, base, South Gaulish.</p> <p>Coarseware: Rim from a Malvern jar. **Rim of Malvern Jar. Cf. Usk, Manning 1993, 232. 1st and early 2nd century. **Everted rim jar in light grey micaceous fabric. A black slip has been roughly painted</p>

		<p>in vertical lines part way down the wall. The rim form suggest a 1st to early 2nd century date.</p> <p>12 fragments mainly from the base of a wheel-thrown jar in dark grey.</p> <p>Curved rim jar in light grey</p> <p>16 light grey sherds including fragments from a jar or bowl with wavy line decoration applied probably with a brush.</p> <p>4 oxidised sherds including one with traces of white slip (probably a flagon, with three further probable sherds)</p> <p>Amphora: Dr.20 many sherds</p>
2018	Fill of shallow pit	Wall sherd of a ?flagon in hard dark grey with a possibly creamy wash.
2020	Fill of pit/gulley	<p>Burnt daub</p> <p>1 oxidised & 1 reduced sherd</p>
2023	Pit fill with cremated bone	<p>3 oxidised, 2 reduced sherds, Dr.20 and ?tile fragments, all abraded.</p> <p>Dr.20 sherds</p> <p>Abraded base, probably of a mortarium in red fabric – most probably from Wales but not necessarily local.</p> <p>Shoulder sherd of a thin-walled jar in light grey</p> <p>**Bowl or more probably a lid in light orange fabric, burnt grey in places and with a filler which is probably fired clay.</p> <p>3 sherds of Malvern Jar.</p>
2033	Fill of post pipe	Stone
2043	Fill of charcoal rich pit	Amphora, Dr.20 sherd, burnt.
3001	Ploughsoil	<p>Samian:</p> <p>A South Gaulish decorated bowl sherd which is very abraded, but appears to have the cordon and large beads of form 29 and thus to predate the later 80s A.D.</p> <p>Other:</p> <p>A collection of small oxidised sherds which are probably Roman, two harder oxidised sherds which are probably post-med., the rim of a cream glazed cup with brown slip trailed decoration (Staffs or Bristol, late 17th or early 18th century) and two sherds of a mug with uneven brown glaze (late 17th or early/mid 18th century) and two sherds of white glazed 'china' probably 19th century.</p>
3019	Fill of major linear gulley	Oxidised jar sherd
4000	Ploughsoil	
	Samian:	

- South Gaulish Plate, probably 18/31R. c.90-110.
Bowl fragment SG; & SG ?cup fragment.
- ** Form 37, Central Gaulish. The fabric is an intense orange-red and is probably from Les Martres-de-Veyre. The ovolo frieze lies over a fine wavy line. The small ovolo is poorly impressed but appears to have a roped tongue ending in a rosette (cf. S&S, Fig.9, 1, Rogers 1974, B38). The main decoration includes a vine scroll, Rogers 1974, M8 tentatively assigned to Potter X-6 and a small bird, possibly O.2292 the users of which also include X-6. However, a mould from Les Martres (Romeuf 2001, Pl.63, M17) shows all the extant elements of our design along with a matching vine scroll, Rogers 1974, M7. Romeuf ascribes the piece to X-9 and suggests a date c.A.D. 115-135.
- Coarseware:
- Amphora:
- ** Two joining rim sherds of Dressel 20 amphora (South Spanish olive oil); cf. Martin-Kilcher type 20 (late 1st to early 2nd century), Peacock & Williams 1986, 137. With wall sherds
- ** Rim fragment of South Gaulish wine amphora, Gauloise 4, cf. Peacock & Williams 1986, 142 & some abraded fragments.
- With a worn fragment of mortarium in light red with trituration grits of quartz and ?gravel and four large sherds of a Severn Valley Ware storage jar and smaller sherds
- Grey jar sherd
- Probably B1 bowl fragment
- 2 Malvern Jar sherds
- Oxidised & reduced frags.
- Bead rim bowl rim in grey with fresh break – probably a bowl reminiscent of the samian form 37.
- Curved rim jar in light orange with darker surface. Possibly an Usk fortress type 11 jar, but too worn for certainty.
- Worn mainly oxidised fragments
- 4001 Fill of recut ditch
- Samian:
- Form 18, South Gaulish, two laminated sherds. Probably c.70-90.
- Amphora:
- Large Dr.20 sherds and other frags.
- 2 Gauloise 4 sherds
- ** Rim fragment of Gauloise 4 amphora in smooth light orange-buff; cf. Peacock & Williams 1986, 142. With sherds
- Mortarium:
- ** Rim in cream granular fabric probably from the Verulamium region; cf. Frere 1972, no.224 (Flavian)

- Broken spout from a cream mortarium of Gillam 238 type, Pas de Calais; cf. ## above. Mortarium wall sherd in light red with ?gravel trituration grit.
Coarseware:
Sherds from 2 large storage jars, probably both Severn Valley Ware.
Grey jar base.
- ** Rim of a small everted rim beaker in buff. Wall fragments suggest that the vessel had rouletted decoration.
- ** Malvern type jar in dark grey to brown; cf. above. 1st or early 2nd century.
- 4002 Fill of post pit Amphora:
Dressel 20 –abraded sherds, some severely laminated.
- 4003 Fill of beam slot Coarseware:
A frag of stone I think.
4 Malvern Jar fragments
Very abraded SG samian chip.
Oxidised sherd
Fragment, possibly of rouletted beaker
(cf.4000)
- 4004 Fill of beam slot Jar base, probably BB1
- 4005 Fill of beam slot Samian:
** Form 37, Central Gaulish, probably Les Martres-de-Veyre. A small sherd shows part of what is probably a vertical panel of bifid stylised leaves, possibly Rogers 1974, G284 (S&S, Pl.6,4). To the right is the base of a cup stack with similarities to Rogers 1974, Q50. Both the motifs were used by Igotacus and this may be his work. C.A.D.100-120.
** Form 37, Central Gaulish. A small somewhat abraded sherd shows a small vine leaf, possibly Rogers 1974, H119 (used by Trajanic potters but also Sacer II and Servus III) and a small double medallion, possibly with a smaller circle within it (cf. S&S, Pl.98, 10). The design may have been part of a large winding scroll. ?Hadrianic.
Coarseware:
Eroded slithers, possibly a Dressel 20 amphora 'lid'.
Large jar; probably a Severn Valley Ware storage jar.
- 4006 Fill of V-shaped ditch Samian:
Form 27, South Gaulish.
Form 35, South Gaulish, 70-110.
Amphora:
Dressel 20.
Mortarium:
Rim sherd, probably from Gillam 238.

- BB1:
 Bowl sherds
 Handle probably from a jug
 BB1 lid fragment
 Other:
 Oxidised & reduced fragments
 Malvern Jar rim as ???
 Grey lid
 Everted rim jar in grey
 6 grey jar sherds
 Rim in light orange-red with a grey core – slight bead at the rim and a cordon below. A tankard is possible.
 A worn granular grey everted rim jar – 1st or early 2nd century.
 **Flanged bowl or dish in Black-burnished ware. 2nd century.
 Numerous small and abraded sherds are all probably Roman apart from a minute sherd of brown glazed 17th-18th century mug.
- 4007 Fill of large V-shaped ditch Samian:
 Form 18 or `18R with a possible rivet hole.
 c.70-90.
 Chip of samian, South Gaulish, probably from a bowl.
 Coarseware:
 Dr.20 amphora and 2 oxidised sherds.
- 4008 Fill of large V-shaped ditch Samian:
 A form 18 or 18R fragment probably from the same plate as that in 4007.
 ** 2 further fragments of the rouletted beaker in 4001 – sherds from the 2 contexts need uniting when marked.
 Storage jar with cordoned neck – probably Severn Valley Ware.
- 4010 Fill of hearth 1 oxidised & 1 reduced frag.
- 4019 Fill of post pit Mortarium base in let red with quartz and ?stone trituration grits
 1 BB and 5 reduced grey jar sherds
 Oxidised sherd with rusticated like blobs.
 Oxidised sherd with green glaze – post-med.
- 4024 Upper fill, V-shaped ditch Stone
 3 oxidised jar sherds and a lump.
- 4500 Not on list Fragment, probably from a flagon neck in soapy soft red to grey.
 Tile frags.
- 05+ Unstratified Form 37, South Gaulish. A very abraded sherd shows part of an ovolo frieze.

7002	Base of ploughsoil	Tiny sherd of post-med ?mug with uneven brown glaze. Staffs or Bristol, 17/18 th century.
7004	Fill of ditch/gulley	A small collection of small post-med sherds: 1 sherd of salt-glazed stoneware (early-mid 18 th century) 2 sherds of uneven brown glaze (probably later 17 th -early 18 th century mug) 1 sherd oxidised with a green glaze - ?18 th -19 th century.
7005	Fill of ditch/gulley	Coarseware: Base in fairly smooth fine light red ware, probably from a flagon. Amphora sherd, Dr.20 2 small post-med pieces, one a chip of glass, the other a brown glaze (?19 th century).
Yet to be seen:		Complete Malvern Jar. 1st to early 2 nd century.

APPENDIX 4

Preliminary comments on the Brick and tile by Peter Webster

A brief look at brick and tile from all contexts suggests that the products of the kiln in Area 6 are likely to be easily distinguishable from Roman products (material from 6001 and 6002 was sampled along with material from other areas – 4000, 4001, 2001):

- The material from area 6 appears to consist mainly of brick which was fired to a thickness of about 2½ inches (6.5cms).
- In the break, the bricks appear to have been made from clays which have been inadequately mixed giving a streaky buff/light red appearance.
- The filler used appears to have been a mixture of fired clay and rounded small gravel including rounded quartz.
- Firing appeared to have been at a comparatively low temperature, giving a soft product. However, this may simply be because the material recovered was waste and not indicative of the kiln products away from the site.
- Areas from around the fort included some of this material much abraded in the ploughsoil (there appeared to be some from 4000).
- However, other than this, the 'fort' areas produced little which was certainly brick (as opposed to tile), while area 6 produced little which was not likely to be brick.
- Presumably Roman tile products from 2001 and 4001 were generally harder fired than those from area 6, with a tendency to laminate, but with none of the signs of mixed clays that the area 6 bricks displayed. The result was a harder red fabric.
- The 'fort' tile fabric included a filler which, although it also included rounded gravel, did not contain the fired clay or quartz seen in the area 6 material.
- A cursory survey suggests that the two materials are both distinctive and, with the exception of the ploughsoil, mutually exclusive in their distribution. A more detailed review of the brick and tile does, however, need to be made to check this.
- It may also be noted that one tile, not of the 'kiln fabric' was found on area 6. This was too thin to be Roman and may be a post-medieval import to the site (or a separate kiln product).
- Context 2001 included a possible box tile, presumably from a hypocaust system. So a Roman bath house somewhere in the vicinity of the excavations cannot be excluded.

APPENDIX 5

Glass Archive report by Dee Williams

Catalogue *

Catalogue & Illustrate **

Context: U/S Trench 1. Topsoil.

No. of fragments: 1

Details: Fragment from body of 'cylindrical' wine bottle; olive green.

Date: Post-medieval, 19th or 20th century.

Context: [2001] Trench 2. Layer –lower level of ploughsoil.

No. of fragments: 1 **(a) ** Catalogue entry 2**

Details: Fragment from body of conical jug; translucent yellowish-green, decorated with vertical ribs; single vertical rib extant. Blown.

Date: Late 1st - 2nd century. Jugs in this colour continue in use to the third quarter of the 2nd century (Price & Cottam 1998, 153). See: Isings (1957) form 55a.

No. of fragments: 1 **(b) ** Catalogue entry 5**

Details: Fragment from handle of bottle; bluish-green. Part of folded upper attachment of ribbon handle. Width 35mm. Single handles of this type were found on cylindrical, (Isings 1957, form 51), square (form 50) and other prismatic bottles.

Date: 1st-late 2nd century.

No. of fragments: 1 **(c)**

Details: Small flake from bottle; bluish-green. Probably part of (b) above.

Date: 1st-late 2nd century.

Context: [2002] Trench 2. Fill of pit.

No. of fragments: 1 * **Catalogue entry 1**

Details: Small featureless fragment from body of vessel; translucent dark blue. Blown. Wall thickness 1mm. This small fragment is quite likely to be part of the bowl found in context [2016] see: (a).

Date: 1st-early 2nd century.

Context: [2004] Trench 2. Fill of small pit.

No. of fragments: 1

Details: Fragment from base of cylindrical bottle; bluish-green.

Date: 1st-early 2nd century.

Context: [2007] Trench 2. Layer –lowest level of ploughsoil.

No. of fragments: 1

Details: Heat-distorted fragment from cylindrical or prismatic bottle; bluish-green.

Date: 1st-late 2nd century.

Context: [2016] Trench 2. Fill of pit.

No. of fragments: 3 **(a) ** Catalogue entry 1**

Details: One rim and two body fragments of bowl; translucent dark blue. Tubular rim; rim edge bent out and folded downwards. Blown. Rim diameter 100mm+; wall thickness 1mm.

Too little of the vessel survives to determine the body profile. Shallow and deep (Isings 1957, form 45 and form 44) tubular-rimmed bowls were produced. The former type appears to go out of fashion after 60/65 A.D. whilst the latter type continues in use into the third quarter of the 2nd century (Price and Cottam 1998, 77-80). Vessels produced in strong colours as opposed to natural coloured bluish-green or colourless are rare after the 1st century.

Date: A 1st century is likely.

No. of fragments: 1 **(b) ** Catalogue entry 4**

Details: Fragment from body of cup or beaker; translucent colourless, decorated with two horizontal wheel-cut lines. Blown. Wall thickness 1mm. The true form is not identified but a Flavian date is likely. Colourless cups and beakers with this type of decoration were made and used from the end of the 1st century through to the 4th century (Price and Cottam 1998, 34).

One other small fragment from the same context and possibly from the same vessel is decorated with a single horizontal wheel-abraded line.

Date: A 1st-2nd century date is likely.

No. of fragments: 7 **(c)**

Details: Body fragments from cylindrical or prismatic bottles; bluish-green.

Date: 1st- late 2nd century.

Context: [2023] Trench 2. Fill of pit.

No. of fragments: 1 **** Catalogue entry 7**

Details: Complete small melon bead; turquoise glass paste. Height 11mm; diameter 17mm; perforation diameter 9mm. Paste melon beads are frequently found on 1st and second century sites.

Date: A 1st-2nd century date is likely.

Context: [2033] Trench 2. Fill of post-pipe.

No. of fragments: 1

Details: Fragment of window glass; light olive green; thickness 1mm.

Date: Post-medieval, 18th or 19th century.

Context: [3001] Trench 3. Ploughsoil.

No. of fragments: 1

Details: A very small fragment of translucent colourless glass; thickness 4mm. This tiny chip is too small to determine vessel form.

Date: Post-medieval, not closely dateable but almost certainly modern.

Context: [4000] Trench 4. Ploughsoil.

No. of fragments: 3 **(a)**

Details: Body fragments from cylindrical or prismatic bottles; bluish-green. One fragment has vertical scratches externally caused by frequent removal from a basket or wooden case (Price & Cottam 1998, 191).

Date: 1st- late 2nd century.

No. of fragments: 1 **(b)**

Details: Small fragment from body of indeterminate vessel; bluish-green; wall thickness 1mm. Blown.

Date: A 1st or 2nd century date is likely.

No. of fragments: 1 **(c)**

Details: Fragment from body of wine bottle; olive green.

Date: Post-medieval, 18th century form.

Context: [4001] Trench 4. Fill of recut – ditch.

No. of fragments: 1

Details: Fragment from body of bottle; bluish-green.

Date: 1st- late 2nd century.

Context: [4006] Trench 4. Fill of v-shaped ditch.

No. of fragments: 1 **(a)**

Details: Small fragment from body of indeterminate vessel; bluish-green; wall thickness 1mm.

Date: A 1st/2nd century date is likely.

No. of fragments: 1 **(b) ** Catalogue entry 6**

Details: Fragment of small annular bead; translucent dark blue; opaque broken white wave marvered flush with surface. Height 9mm.

This bead falls into Guido's group 5, type A (1978, 62-64 & fig.21, no.1. See also Plates. I & II, nos.10a-h). Beads of this type occur in contexts from the 4th century BC right through to the Saxon period, and as such are not closely dateable (Guido 1978, 26 and 63). A complete example of this type of 'wave-decorated' bead was found at the nearby fort site of Pumsaint (Brennan in Burnham & Burnham 2004, 132, fig.2.89, no.10), where it was recovered from the lower fill of a clay-lined cistern, the finds of which date to the Flavian-Trajanic period (Burnham & Burnham 2004, 34).

Date: Roman, not closely dateable.

No. of fragments: 1 **(c) * Catalogue entry 9**

Details: Small tear-shaped droplet of molten glass with rounded upper surface and flat under surface; bluish-green. Possibly used as a gaming-piece though these are usually round in shape and nearly always opaque black or white in colour.

Date: Roman, a 1st/2nd century date is likely.

Context: [4008] Trench 4. Fill of v-shaped ditch.

No. of fragments: 1 **** Catalogue entry 3**

Details: Fragment from rim and upper body of cast pillar-moulded bowl; bluish-green. Plain vertical rim, parts of two prominent sloping vertical ribs. Cast, wheel-polished interior and on outside of rim; the rest of the exterior is fire-polished. Rim diameter 160-180mm; maximum thickness at rim 4mm; minimum thickness below 2.5mm.

Cast pillar-moulded bowls are very common in 1st century Flavian contexts with bluish-green examples continuing in use through to the early 2nd century (Price and Cottam 1998, 44).

Date: 1st-early 2nd century.

Context: [4019] Trench 4. Fill of post-pit.

No. of fragments: 1

Details: Fragment of window or bottle glass; bluish-green with dull slightly pitted surfaces; thickness 2.5mm, a little too thin perhaps for window glass?

Date: 1st- 2nd century.

Context: [6001] Trench 6. Ploughsoil.

No. of fragments: 1 **(a)**

Details: Fragment from body of bottle; greenish-blue.

Date: Post-medieval, modern.

No. of fragments: 1 **(b)**

Details: Window glass; pale blue.

Date: Post-medieval, modern.

Context: [7002] Trench 7. Cleaning layer – base of ploughsoil

No. of fragments: 1

Details: A very small flake of wine bottle glass; olive green.

Date: Post-medieval.

Also from this context is one very small piece of coal.

TP1

No. of fragments: 6

Details: Fragments from base of wine bottle; olive green.

Date: Post-medieval, 18th or early 19th century.

TP2

No. of fragments: 1 **(a) * Catalogue entry 8**

Details: Fragment of melon bead; turquoise glass paste; height 17mm.

Date: A 1st-2nd century date is likely.

No. of fragments: 2 **(b)**

Details: Two very small fragments from body of indeterminate vessel; translucent colourless; wall thickness 1mm.

Date: Too small to determine date.

No. of fragments: 1 **(c)**

Details: Very small fragment of vessel glass; bluish-green; thickness 1mm.

Date: Too small to determine date.

No. of fragments: 1 **(d)**

Details: Small fragment from body of wine bottle; olive green.

Date: Post-medieval, 18th or 19th century.

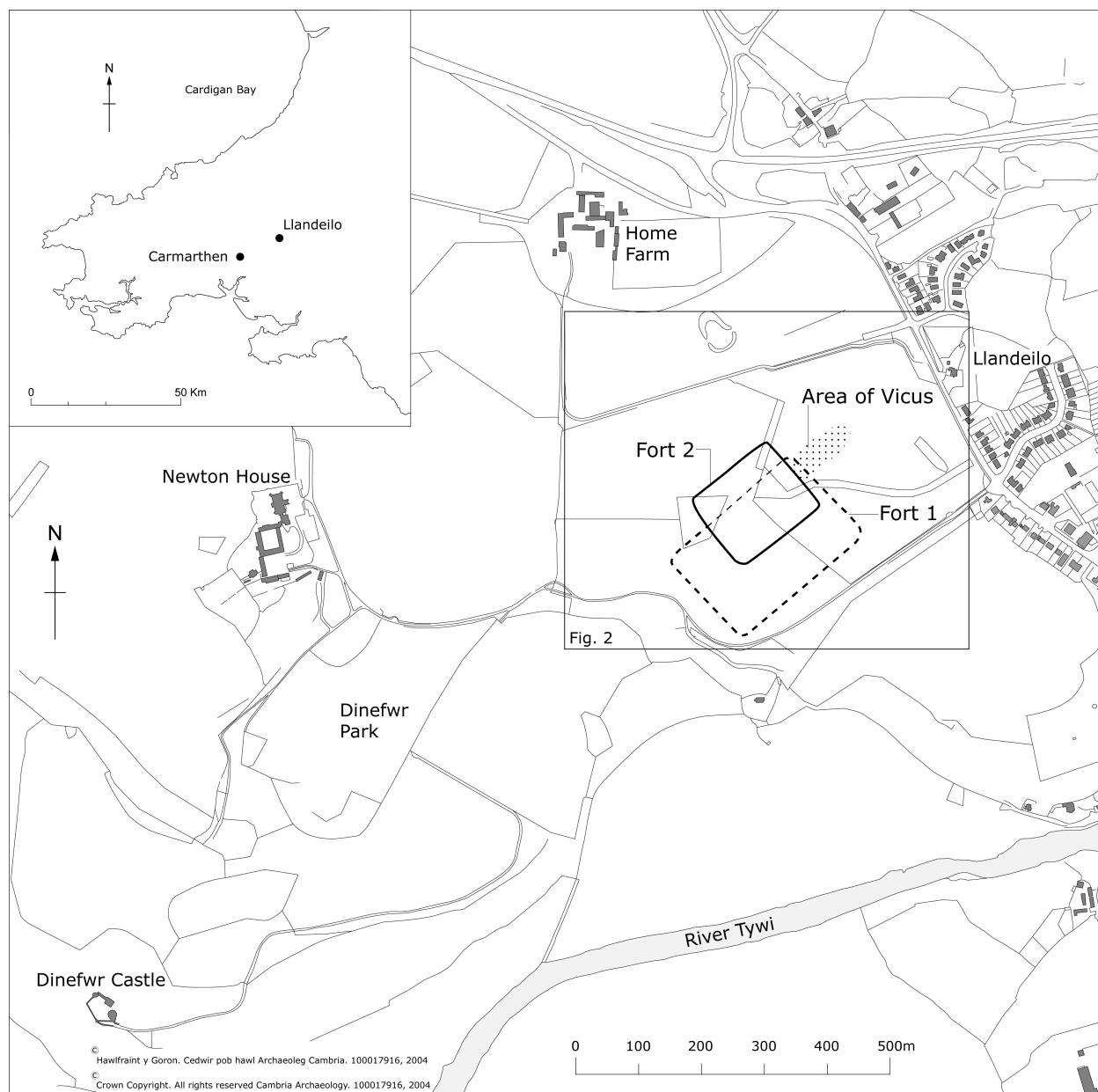


Fig.1 Location



Fig.2 Trench locations overlying the geophysical survey. (Geophysics by Stratascan).

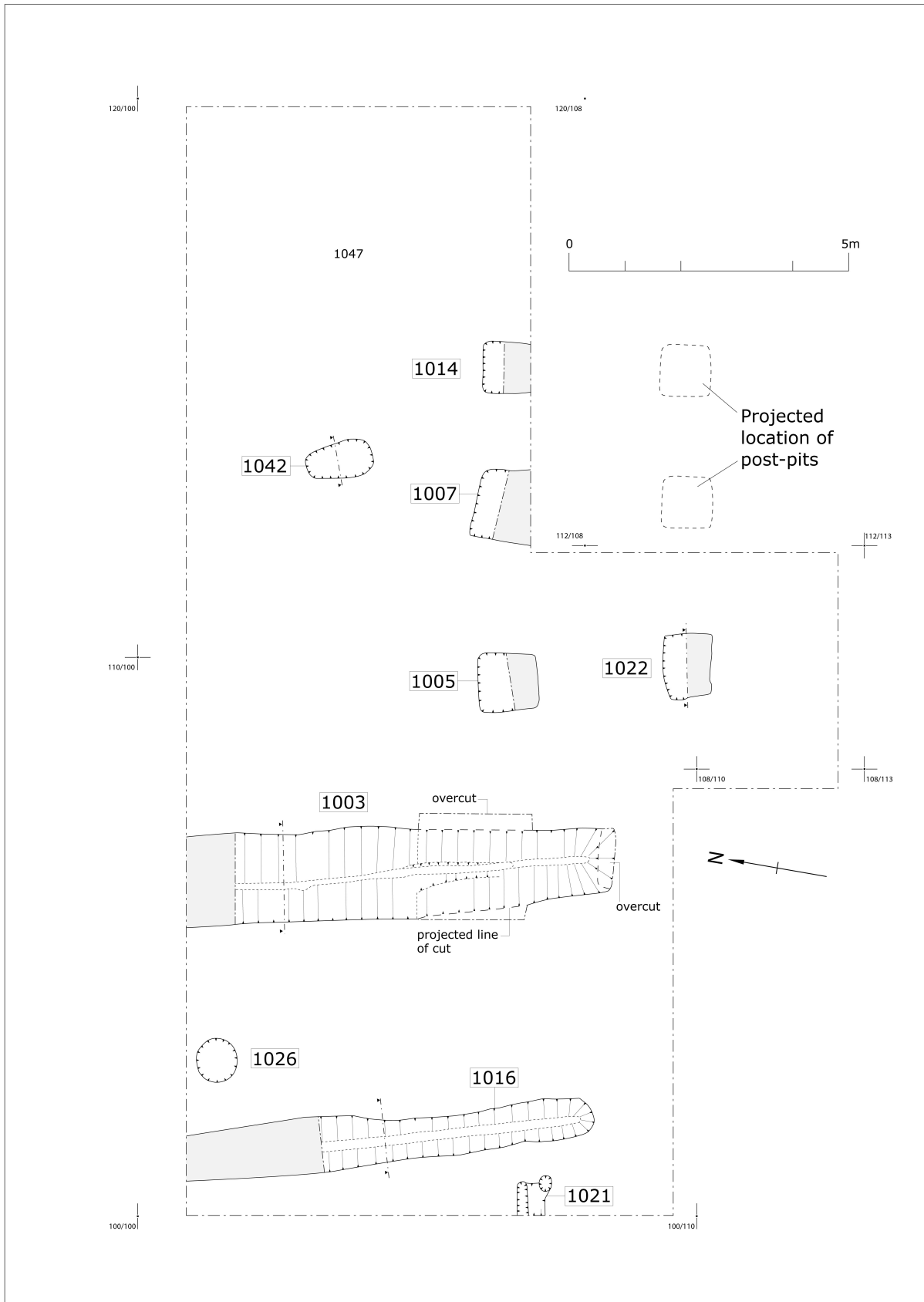


Fig.3 Trench 1: Plan

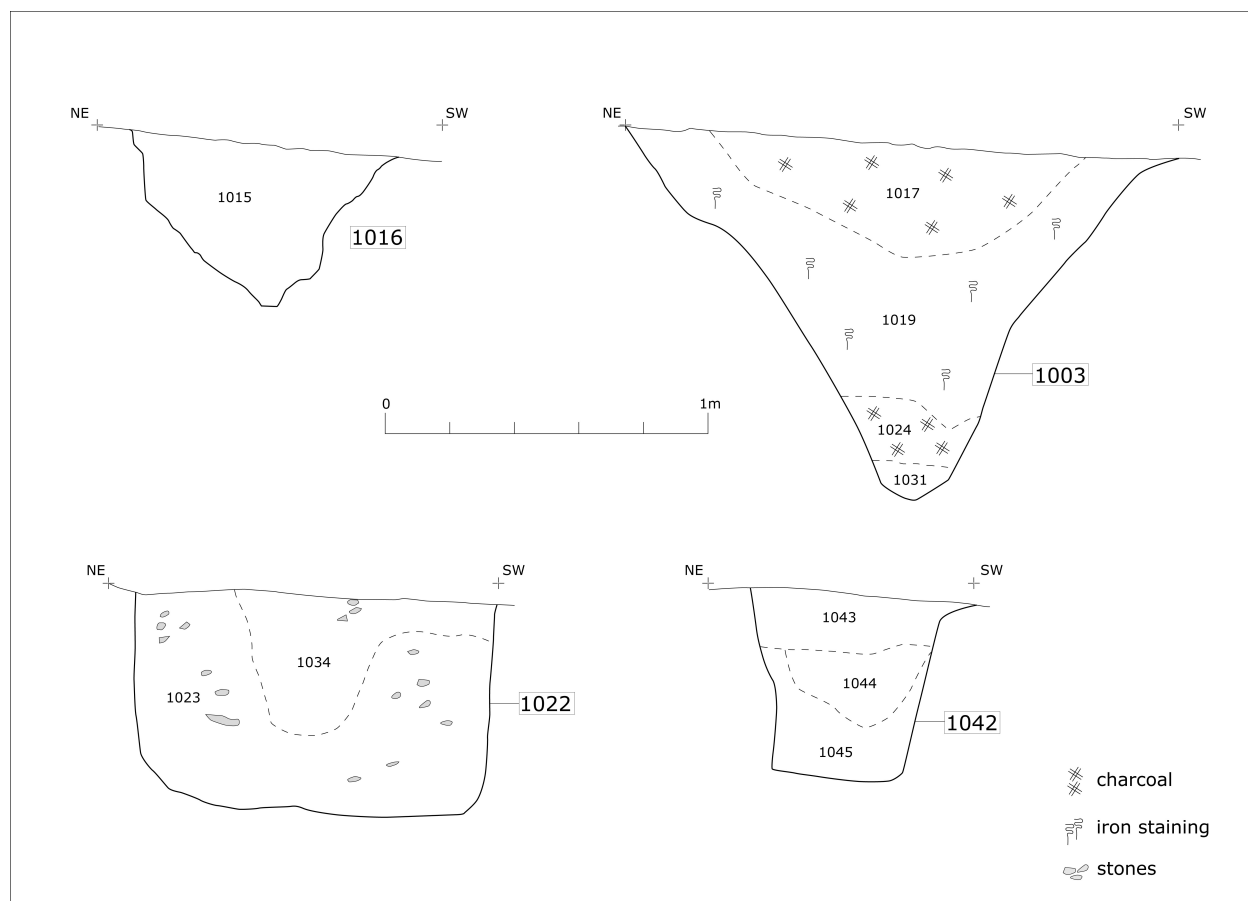


Fig.4 Trench 1: Sections

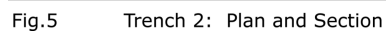


Fig.5 Trench 2: Plan and Section

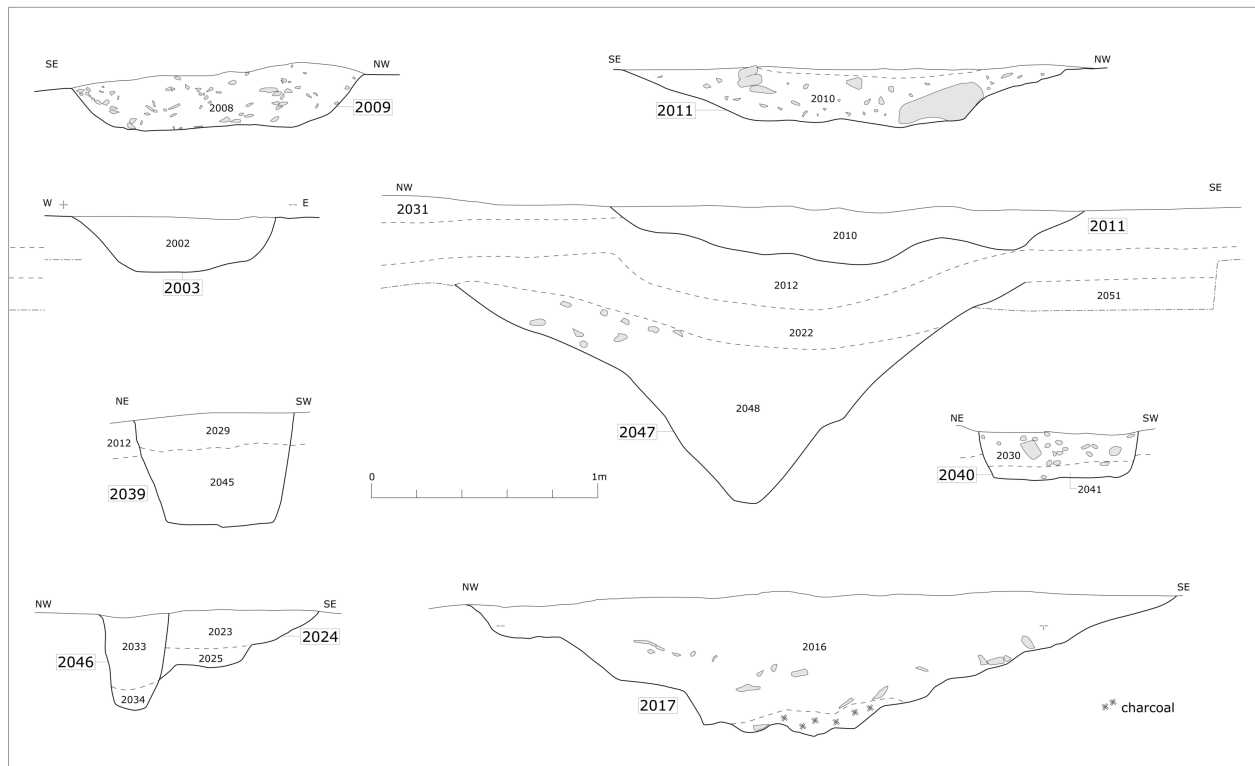


Fig.6 Trench 2: Sections

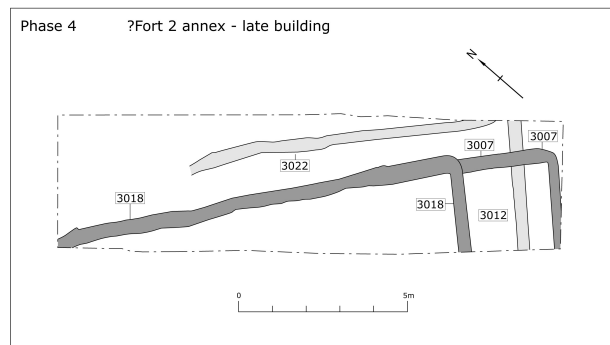
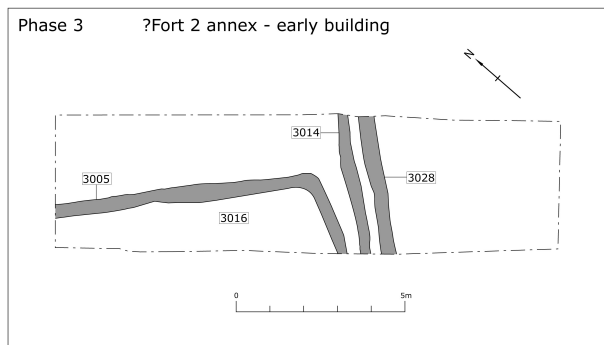
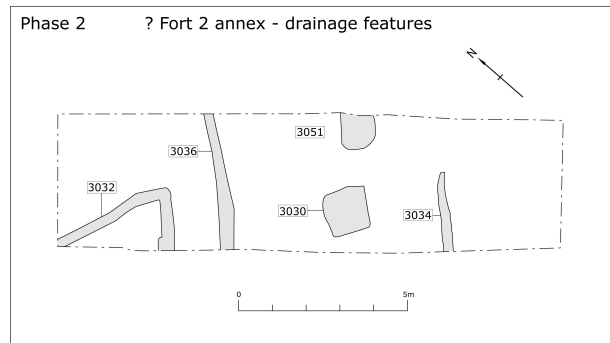
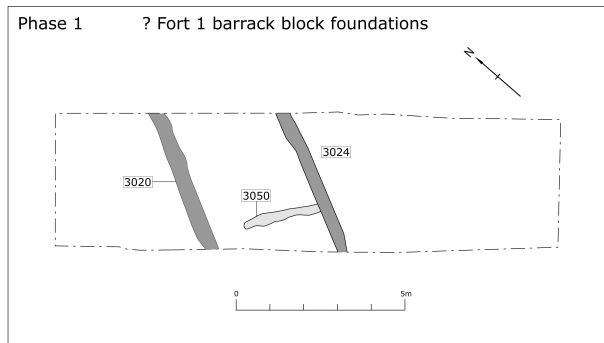
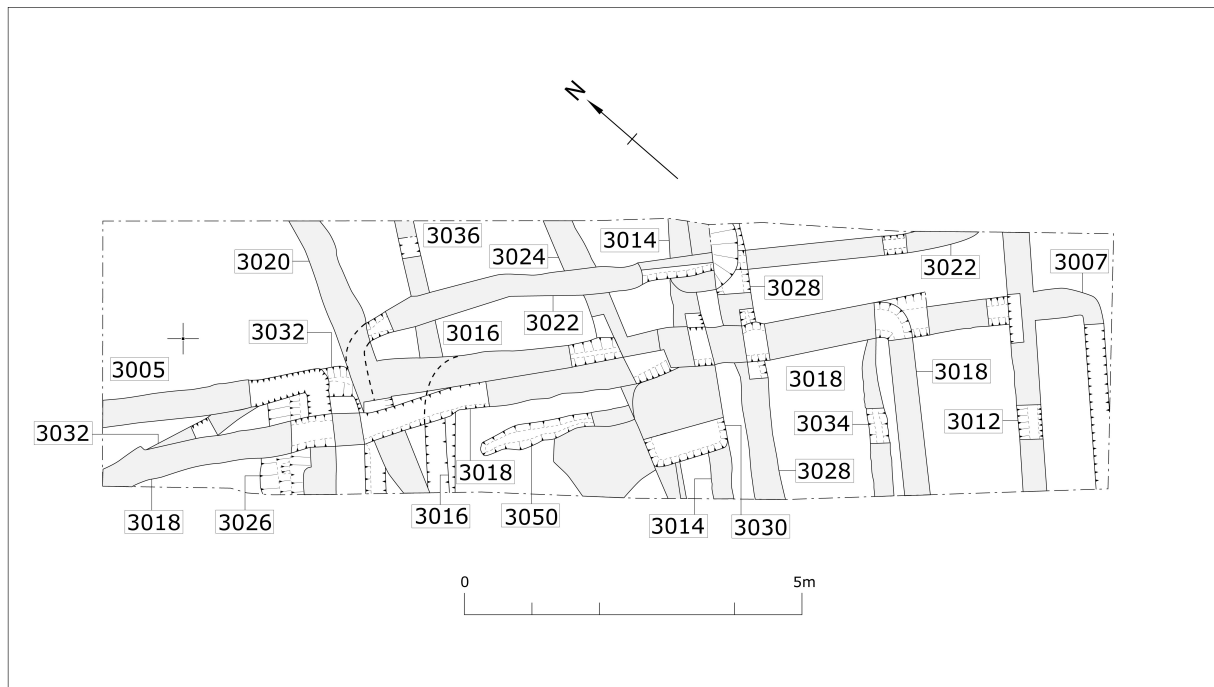


Fig.7 Trench 3: Plan and suggested phasing. (Dark grey Group 1 gutter; light grey Group 2 gullies).

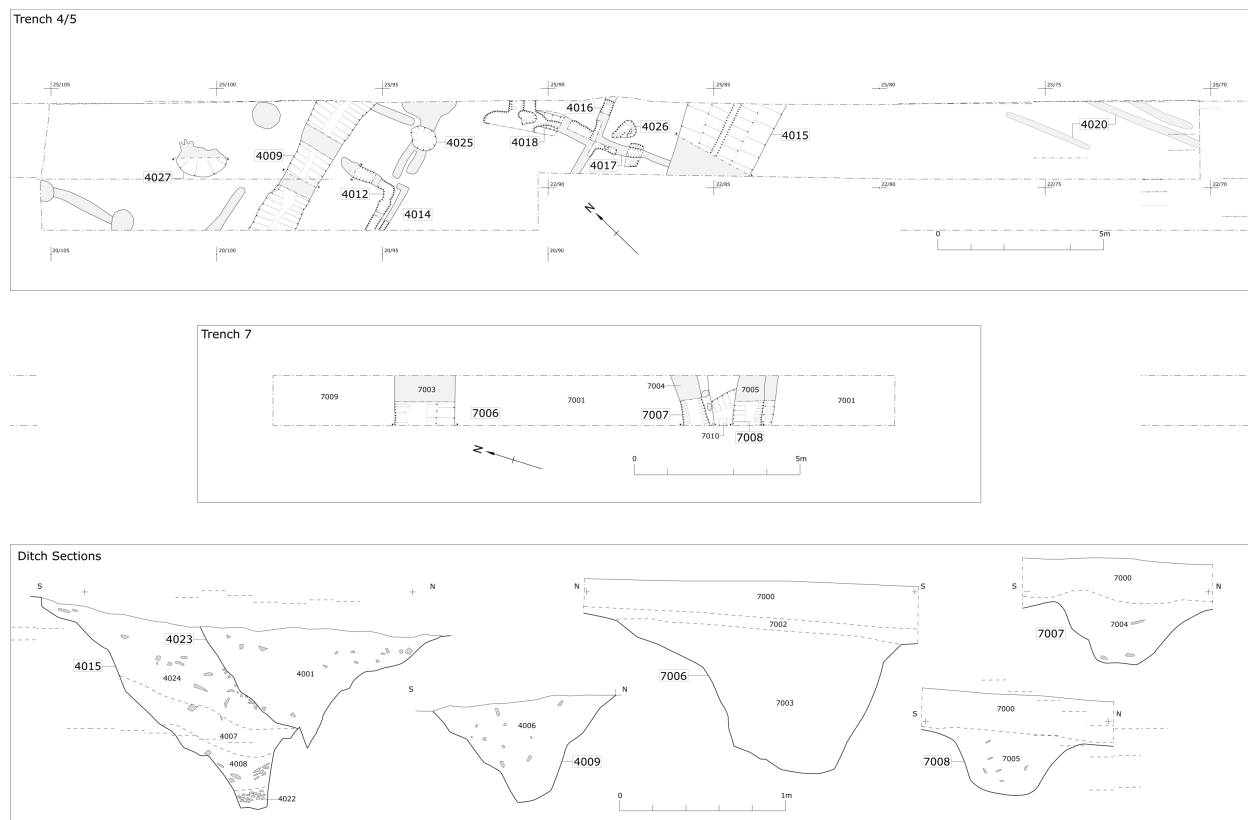


Fig.8 Trenches 4/5 and 7: Plans and Sections

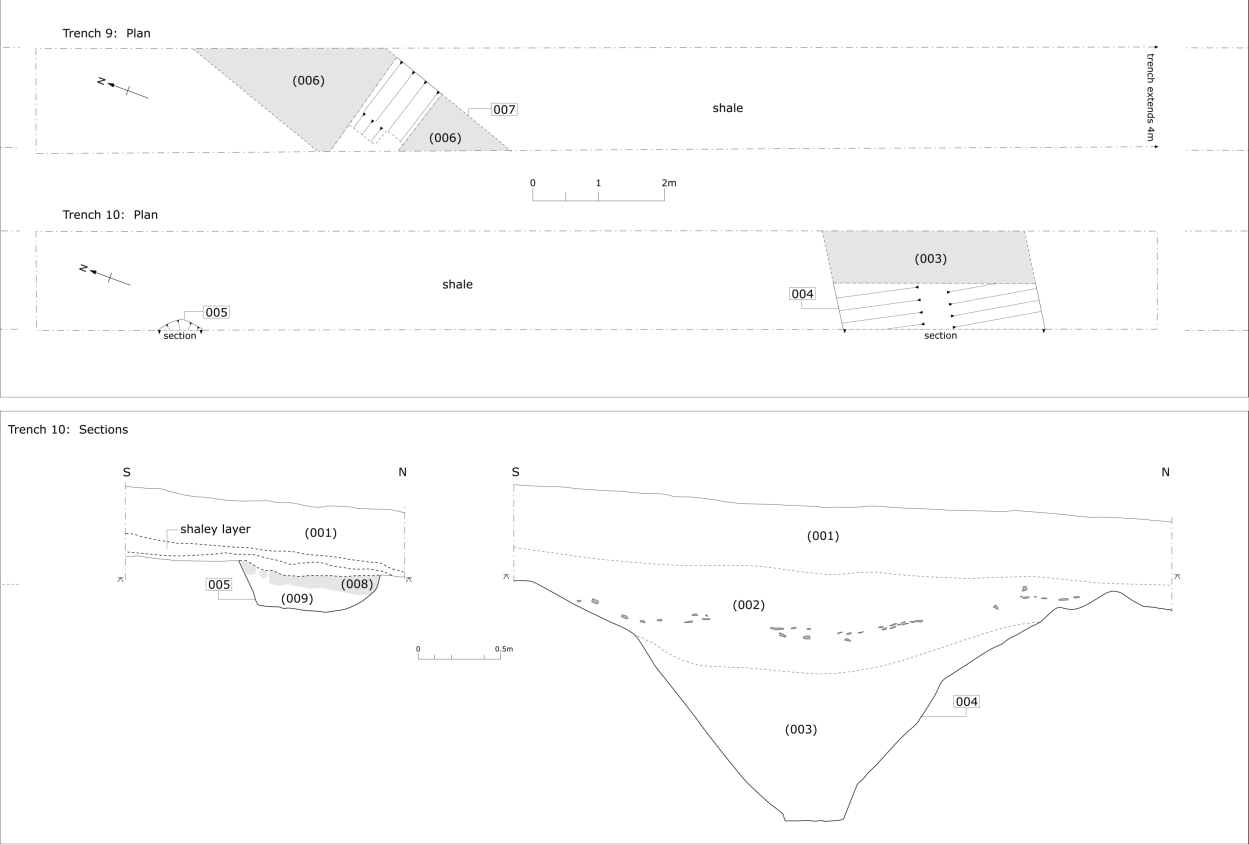


Fig.9

Plates



Plate 1: Trench 1 - the inner defensive ditch (1003) with charred seeds in the primary fill, looking north



Plate 2: Trench 1 – General view following excavation looking southeast



Plate 3: Trench 2 – The Malvernian Ware pot (2003) being excavated, looking northwest



Plate 4: Trench 2 – the early ditch (2047) looking north.



Plate 5: Trench 2 – Post excavation



Plate 6: Trench 3 – Volunteers at work



Plate 7: Trench 3 – post-excitation



Plate 8: Trench 4/5 – Cadw visitors being shown the excavation in progress



Plate 9: Trench 4/5 – the pottery packed feature (4026)



Plate 10: Trench 4/5 – the ditch (4015)



Plate 11: Trench 4/5 – post excavation



Plate 12: Trench 6 – showing area of brick