

HAFOD STABLE COURTYARD WATCHING BRIEF ON NEW SEWERAGE SERVICES

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Report by:

**R RAMSEY
CAMBRIA ARCHAEOLOGY
THE SHIRE HALL
CARMARTHEN STREET
LLANDEILO
CARMARTHENSHIRE
SA19 6DU
cambria@acadat.com**



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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@acadat.com Gwefan: www.acadat.com

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@acadat.com Website: www.acadat.com

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SUMMARY

During groundworks for the installation of a new sewerage pipe and cess pit at the Hafod stables an archaeological watching brief was commissioned to observe and record any exposed archaeological features or deposits. The groundworks revealed well stratified 'made' ground deposits, buried pitched cobble and other former ground surfaces, various drainage features, mains water services, and a probable corner foundation footing of the mansion.

INTRODUCTION

As part of the programme of restoration and conversion of the stables at Hafod a new sewerage system was installed and Forest Enterprise commissioned Cambria Archaeology to carry out an archaeological watching brief during the groundwork excavations for a sewerage pipe and cess pit tank. The potential for well preserved archaeological deposits and features in the vicinity of the stable block was highlighted during the archaeological excavations undertaken by Cambria Archaeology in the stable courtyard in June 2000 (K Murphy & R Ramsey 2000).

This report details the findings of the watching brief. The findings can be seen in a wider context by referring to both the extract below and the results of the June 2000 archaeological excavations.

During 1999 the stable yard and stables were reported on by N Ludlow in 'Hafod Mansion: an archaeological audit', a work commissioned by the Hafod Trust. The following extracts are from that report:

Stable yard

Description: The most easterly of the two service yards north-east of the house site; it occupies an area of 30 square metres.

The southern wall is complete to the level of its flat coping and is 2.7 metres high; it originally formed the north wall of a conservatory. A doorway with a Classical, semicircular-headed surround, in blue engineering brick, was later inserted through the wall, probably under John Waddingham during the 1880s. The remainder of the wall is featureless although an area of random masonry towards the east end of its north face may represent blocking or alteration, and a flue that formerly heated the wall for the conservatory is apparently present, but was not observed in 1999. The wall formed the south wall of a stable and coach-house range shown on the 1855 and 1870 sale plans; these had gone by the 1880s and there is no physical evidence for their internal walls on the north face, but a linear east to west low earthwork bank, 3 metres north of the wall, represents the north wall of the range.

The yard shares its west wall, which formerly represented the west wall of a range of service buildings. These buildings are here called the west range. The north-south wall between the two yards survives to the level of its flat coping and, at 4 metres, is higher than the south wall. It is clear from examination of the 1855 and 1870 sale plans that the wall represents the west wall of a north-south range of service buildings including the dairy and wash-house, and a plethora of blocked openings, including doorways, is visible on its east face. Rather less are visible on the west face, but the central, blocked square-headed doorway with a 'Gibbs surround' is a prominent feature and may be a survival from the pre-1839 wall; there is a blocked doorway with a similar surround at the north end, now forming the end wall of the Bothy. The blockings also include first-floor level windows, some of which are truncated, demonstrating that the wall was lowered and given its present coping after the buildings went out of use, probably under James Waddingham between 1906 and 1932 - the range was still standing in 1906 and is shown on the Ordnance Survey Second Edition.

The east side of the yard is now represented by stable-block.

Stable block

Description: The present stable block was a de novo construction under John Waddingham in 1882, commemorated in a date-stone 'J. W., 1882', on the eastern side of the eastern service yard. The building retained nothing from the earlier range of stables and sheds on the site, which are shown on the sale plans of 1855 and 1870 and had probably been built between 1839 and 1841.

It is an 'L'-shaped block comprising east-west and north-south wings of equal size, with overall measurements of 20 metres from north to south and 23 metres from east to west, and walls averaging 3.5 metres in height. Walls are in shale/slate rubble, with Staffordshire engineering brick quoins and surrounds, and the roofs are slated gables with contemporary louvered ventilators.

The northern, east-west wing comprises 5 bays alternately pierced by doors and windows in the south wall, all with semicircular heads; the central window is two-light. The north wall is pierced by a similar two-light window in the east bay, and a segmental-headed door in the east bay east wall; this east bay is divided from the remainder of the wing, and from the southern wing, by internal walls. This wing housed the stables themselves, from which the stalls have survived from 1882; they are of good quality with iron columns and rails above timber partitions. The west bay features an inserted fireplace in the north wall.

The southern, north-south wing comprises four bays divided into two equal spaces by an internal wall; the west wall is pierced, from north to south, by a door, a window, and two open arches; all have semicircular heads. The east wall, and the gable end walls, are blind.

DESCRIPTION OF THE GROUNDWORKS

An average 0.15m depth of topsoil was removed by machine from the land adjacent to the north-west and north-east of the stable block prior to the excavation of the trench to contain a new sewerage pipe. The same depth of topsoil was also removed from the land adjacent to the north-west, west and south-west of the building referred to as the Bothy prior to the groundworks for both the sewerage pipe trench and the cess pit tank. This topsoil removal occurred before the commencement of the archaeological watching brief and a combination of heavy rainfall and the passage of vehicles over the stripped area made any observation of potential archaeological features extremely difficult if not impossible at that stage of the works.

The new sewerage pipe trench ran from outside the new toilet in the stable block on the north east side of the building following the building outside its north west side to some 8.0m beyond the Bothy (a distance of some 55.0m) where it turned south east for a further 12.0m before terminating at the cess pit tank excavation. The pipe trench was 0.80m wide throughout its length and varied in depth from 0.75m to 1.10m taking into account the general lie of the land and the required 'fall' of the pipe to allow efficient passage of the waste material to the cess pit tank. The cess pit trench was roughly rectangular at 2.9m by 3.5m and was over 2.5m deep. See **Fig.1** for the location and dimensions of the excavations.

The nature of the groundworks allowed only rapid recording 'in section' of most of the observed archaeological deposits and features, and photographic recording was possible only when the weather and lighting conditions were favourable.

THE WATCHING BRIEF

The location of observed archaeological features or deposits described in this section of the report can be seen by referring to **Fig.1**.

The Pipe Trench

The pipe trench excavations at the north west side of the stable block revealed the vertically cut foundation trench (**A**) of the building to a depth of 0.75m below the present ground surface. The foundation trench was 0.65m wide and filled with a very dark brown silty clay loam matrix containing 80% large, medium and small rounded river washed pebbles. The trench had been dug through a compact natural yellowish brown silty clay subsoil containing 60% shattered shale fragments. The pebbles were probably incorporated into the foundation trench to cope with the effects of the great volume of water likely to drain from the fairly steep slope to the north and west of the stable block. Only slight damage was done to the stone fill of the footing during the pipe trench excavations.

The remainder of the pipe trench excavated on this side of the stable block revealed only undisturbed natural subsoil to a depth of 0.75m throughout and steeply dipping shale bedrock commencing at the relatively shallow depth of 0.30m or so at the northern end of the trench where it returned at a 90 degree angle to follow the north west side of the building.

A modern ceramic drainage pipe (**B**) was revealed at a depth of 0.30m cut into the subsoil. The pipe trench had been back filled with a mixed deposit of building debris and yellowish brown silty clay. It led to a 1m square, iron covered, inspection chamber adjacent to the north-west side of the stable block. The iron drain cover had been revealed during the removal of the topsoil. It was possible to excavate under the pipe and preserve it *in situ*.

The natural stratigraphic sequence of topsoil, subsoil and bedrock was seen to change quite markedly along the revealed pipe trench section to the south-west beyond **B**. The stripped topsoil in this area revealed a 0.05m deep layer of small and medium angular stone chippings or fragments overlying a very mixed 0.30m depth of dumped building debris consisting of shattered white fragments of mortar, red brick fragments and shattered blue and purple roof slate fragments within a matrix of yellowish brown silty clay. This make-up layer rested upon undisturbed natural subsoil and sealed a well built drain (**C**) which was aligned roughly east to west diagonally across the excavated trench. The drain consisted of a shale base with yellowish oolite stone sides and was capped with shale slabs. Internally the drain measured 0.30m in width and 0.20m in depth whilst its overall external dimensions were 0.40m wide by 0.30m deep. The capping slabs were 0.40m below the present ground surface and the drain was cut into the subsoil, it was very difficult to observe whether there was any foundation cut present in the trench section because the section had collapsed around the drain. It was possible to observe, however, that the drain was sloping down in the direction of the stable block building and was still functioning up to the time it was damaged during the pipe trench excavations.

For a distance of some 12m or so to the south-west beyond **C** the 0.75m deep pipe trench section revealed a 0.05m deep layer of small and angular stone chippings sealing various layers of mixed redeposited/dumped building debris to a depth of 0.35m or so and overlying what appeared to be undisturbed natural subsoil. It was raining quite heavily during this phase of the work and true analysis of the deposits was very difficult.

Where the pipe trench crossed in front of the stable courtyard entrance and the Bothy building, a distance of some 30m or so, the section revealed well stratified mixed horizontal deposits of made ground to an average depth of 0.60m. These deposits, again, consisted of building demolition debris. The upper 0.30m layer consisted of a compacted mortar rich greyish brown silty clay containing a high percentage of shattered roof slate fragments. This layer sealed a very compact 0.20m deep horizontal layer of building debris the upper limit of which appeared to represent a former ground surface. Beneath this layer was another roof-slate rich layer 0.10m deep which overlay what appeared to be a yellowish brown shattered shale rich natural subsoil. This layer probably represented a make-up sub-base for the former ground surface.

Another well built drain (**D**) was encountered at a depth of 0.30m below the present ground surface adjacent to the north-west entrance of the Bothy. The drain was aligned east to west and consisted of a shale base with shale slab sides and capping stones, and had the same internal measurements as **C**. This feature was securely sealed within the building debris make up layers, and the capping stones lay just below the former ground surface. The drain was dry at the time of excavation but showed a definite slope down towards the Bothy.

A white 5 inch diameter ceramic pipe (**E**) was encountered at right angles to the excavation trench at a depth of 0.50m below the present ground surface but this did not appear in the opposite, south-west, section. The pipe was within the lower building debris layers and had not been cut through the buried former ground surface.

A small diameter (not measured) iron water main was encountered leading to a red brick built inspection chamber (**F**) with a stop tap. The chamber was 0.25m square and the top was some 0.35m below the present ground surface. The various deposited layers seen in the excavation trench in the vicinity of **F** were very disturbed and did not exhibit the neat horizontal sequence seen elsewhere. The deposits were still rich in building debris but there was a high percentage of medium and large rounded river pebbles present. The speed with which the excavations proceeded and were back filled in this area combined with the disturbed nature of the deposits make the stratigraphic record here somewhat confused. It was not possible, therefore, to establish a relative date for the water main and inspection chamber within the previously observed stratigraphic sequence.

The sewerage pipe excavation trench turned to the south at approximately the position of **F** and some 2m or so to the south of this feature it was again possible to observe clearly the stratified deposits. The average depth of the trench was now 0.95m which reflected the increased fall required as it approached the cess pit area.

Three different water main pipes (**G, H and I**) were uncovered all running in approximately the same direction, north-west to south-east, towards the mansion site. A 40mm diameter lead pipe (**G**) was set within a very compact grey silty clay containing 60% shattered shale fragments, frequent mortar fragments and other building debris at a depth of 0.35m. The presence of a thin layer of very dark brown humic soil sealing this layer probably indicates the presence of a former ground surface. An iron pipe (**H**), 40mm diameter, at a depth of 0.25m was set within an orange brown silty clay soil containing 60% shattered shale fragments which appeared to be a sub-base, 0.20m thick, for a grey angular stone chippings layer which forms the current ground surface. A small black plastic pipe (**I**) was uncovered at a depth of 0.09m within the current stone chip ground surface.

A discrete 2.2m length of pitched stone cobbling (**J**) was revealed in the west facing section of the pipe trench at a depth of 0.42m below the present ground surface. The rounded river washed pebbles averaged 0.10m x 0.10m in size and were set in a matrix of homogeneous greyish brown silty sand, the combined depth of the pebbles and sand averaged 0.22m. This pitched stone metalling exhibited a very gradual slope down from north to south and its upper surface was 0.45m below the present ground surface. The section also showed that the

previously mentioned buried ground surface lay 0.12m above the pitched stone cobbling. The cobbles were not represented in the opposite section of the pipe trench although the rest of the stratigraphic sequence appeared very similar, suggesting perhaps that the excavations destroyed a possible border edge of this feature.

The Cess Pit Trench

A drain (**K**) was encountered at the interface between the pipe trench and cess pit groundworks. The drain was aligned north-west to south-east, and a 3.4m or so length was destroyed by the groundworks leaving evidence only in the east facing pipe trench section and the west facing section at the south east corner of the cess pit excavation. The top of the drain was some 0.59m below the present ground surface and consisted of a shale base upon which rested two mortared courses of red brick which formed the side walls. The drain was capped with shale slabs but at least one of the capping stones was a finely worked coping stone which was retrieved (by R Crompton). Internally the drain measured 0.20m wide and 0.17m deep and exhibited a noticeable fall to the south east between its two exposed sections. The interior was blocked with an homogeneous black fine silty sandy soil. The drain was cut into the subsoil to a depth of around 0.10m with a foundation cut for it clearly visible and backfilled with a dark brown silty clay soil containing much building debris in the form of shattered slate fragments and mortar. A white 5 inch diameter ceramic pipe (**L**) (the same type as **E** above) entered the drain at an angle from the western side, it could not be established whether this was a later addition to the drainage arrangements or not, but it is likely that it was.

A continuous length of pitched stone cobbling (**M**) of the same dimensions and quality as **J** was observed throughout the west facing section of the cess pit trench. The surface of the cobbling lay 0.70m below the present ground surface and the section showed that drain **K** had been cut through this feature. It seems likely that the pitched cobbling **M** is a continuation of **J** although this could not be conclusively demonstrated by the observations made during the watching brief. The stratigraphic sequence exhibited in the section was the same as that where the pitched cobbling **J** was observed, again showing the buried ground surface some 0.10m to 0.15m above the cobbles. The top of drain **K** appeared to be at the same level as the buried ground surface indicating that it may originally have been exposed at the surface, this could account for the use of the relatively ornate coping stones as capping for the drain.

The corner of a possible building foundation for the mansion (**N**) was exposed in the south west corner of the cess pit trench, and showed clearly in the north facing section. This feature comprised three courses of lime mortared stone measuring 0.60m in height and 0.70m wide continuing into the east facing section of the cess pit trench. The coursed stonework, which was level, protruded at an angle of 90 degrees from the north facing section for some 0.40m and exhibited a right angle return as it continued to the west beyond the edge of the excavations. The top of the stonework lay 0.60m below the present ground surface, and was sealed by a 0.20m deep compact grey silty clay soil containing 70% small angular gravel fragments. This layer was topped by a thin layer of buried humic soil which again represented a soil horizon build-up on the buried ground surface make-up layers noted previously as lying

on the pitched cobble layers **J** and **M**. A near vertical foundation cut for **N** was seen to cut into the natural orange brown silty clay subsoil to a depth of 0.40m and the space between it and the footing was filled with a mortar rich silty clay soil. The stonework suffered a little damage during the groundworks but it was possible to leave the feature *in situ* and largely untouched.

The deposits lying up against the northern side of **N** consisted of very mixed building debris comprising large amounts of shattered mortar and tumbled sections of mortared wall fabric, with occasional red brick fragments and shattered roof slate. It was not possible to establish whether any of this material was *in situ* tumble from the building represented by the wall footing.

The Stable Courtyard

During topsoil clearance and preparation for the construction/laying of the stone apron in the stable courtyard a pitched cobble surface (**O**) was revealed. The cobbling was very well preserved and had been protected by a thin layer of concrete. As a result of this find the location of the stone apron was changed to a position which would leave the cobbling unaffected.

Pitched stone cobbling was also located at (**P**), just below the topsoil and 0.60m from the wall, but this was not seen during the watching brief, and was backfilled before it could be recorded by the watching archaeologist.

CONCLUSIONS

The observations made during the course of the watching brief show clearly that well preserved archaeological features and deposits survive beneath layers of re-deposited building debris and other made ground deposits.

Only limited observations could be made due to the nature of the groundworks but it was possible to gain an insight into the various phases of archaeological activity on the site. Valuable evidence was recorded, for example, of the location of substantive features such as the pitched cobble surfaces and the probable foundation footing for part of the Hafod mansion building. Knowledge of the presence of such features, even though the evidence uncovered is only a tantalising glimpse, will help to inform management decisions with regard to excavation, in whatever form that may be, in the future.

APPENDIX 1 ARCHIVE DEPOSITION

The watching brief archive has been deposited with the National Monuments Record, housed with RCAHMW, Aberystwyth.

The following categories of material are present in the archive:

- A.1 Final Report
- B.4 Field Notes
- C.2 Site Drawings
- D.2 Colour Slides

REFERENCES

Murphy, K & Ramsey, R., 2000 'An Archaeological Investigation of the Stable Courtyard at Hafod, Ceredigion' (unpublished Cambria Archaeology client report; copy held with Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

Ludlow, N., 1999 'Hafod Mansion: an archaeological audit' (unpublished Cambria Archaeology client report; copy held with Sites and Monuments Record for Carmarthenshire, Ceredigion and Pembrokeshire).

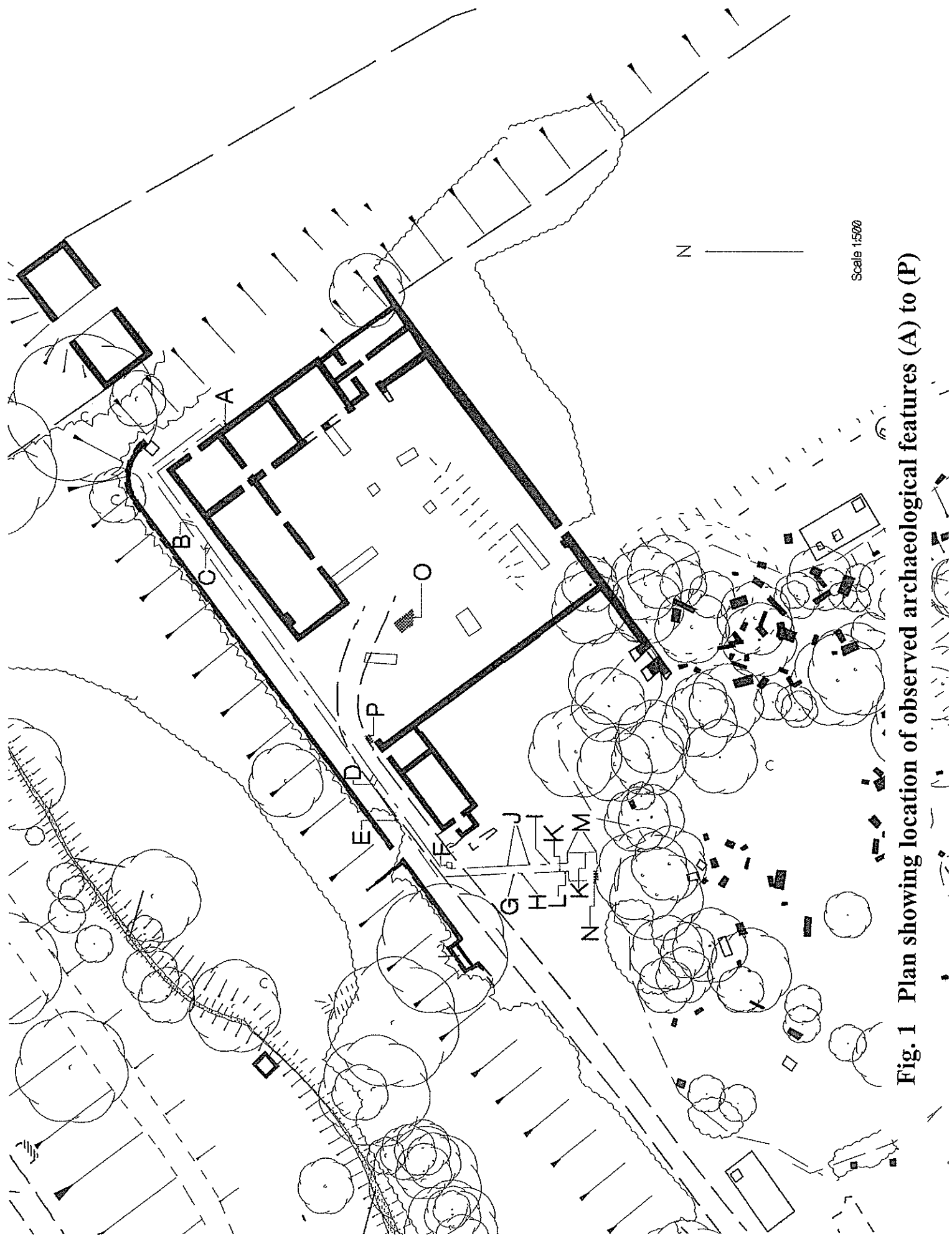
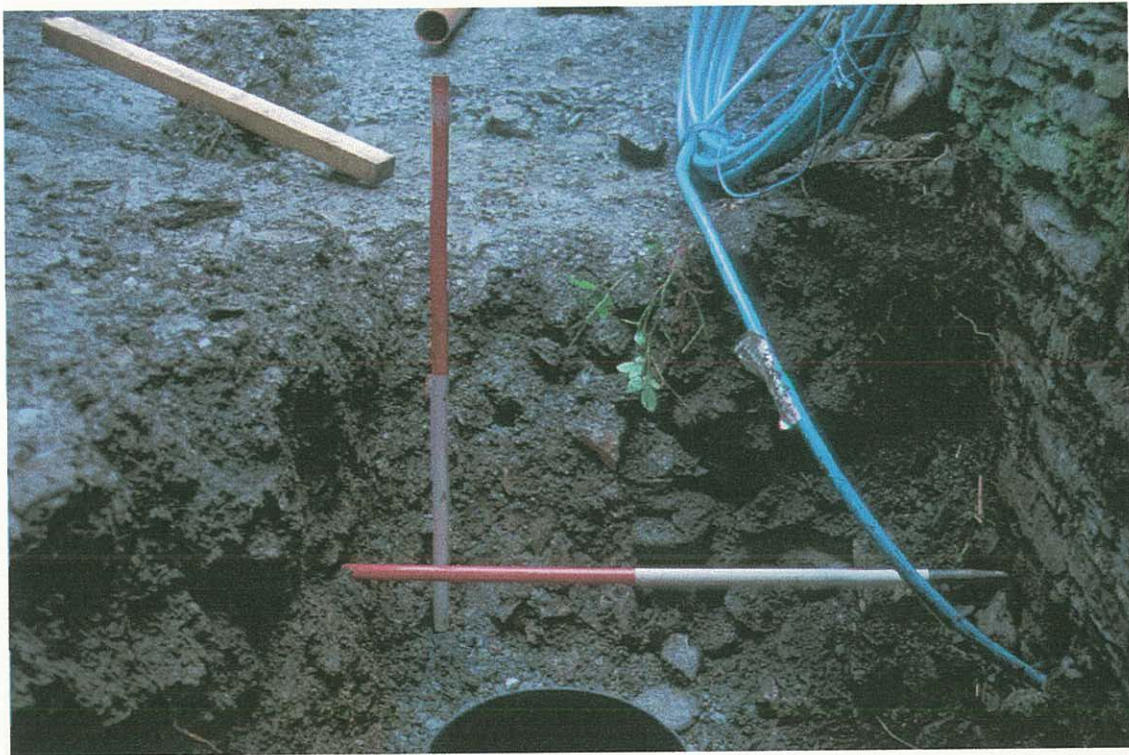
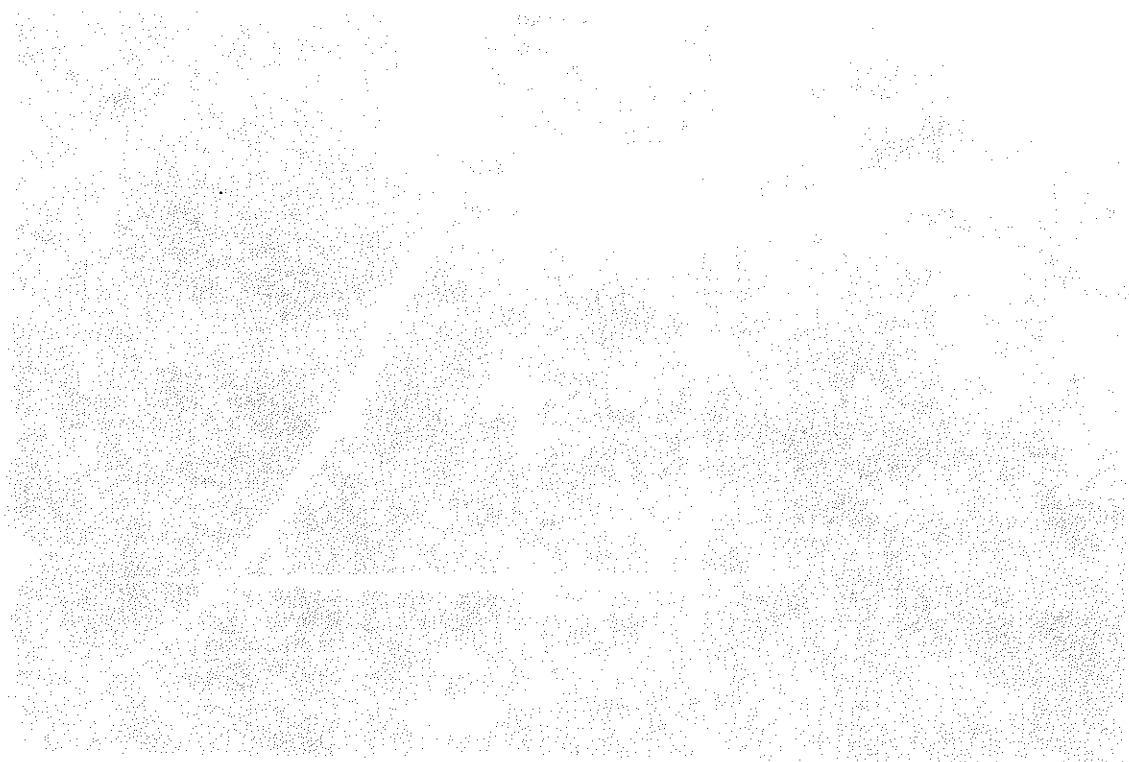


Fig. 1 Plan showing location of observed archaeological features (A) to (P)

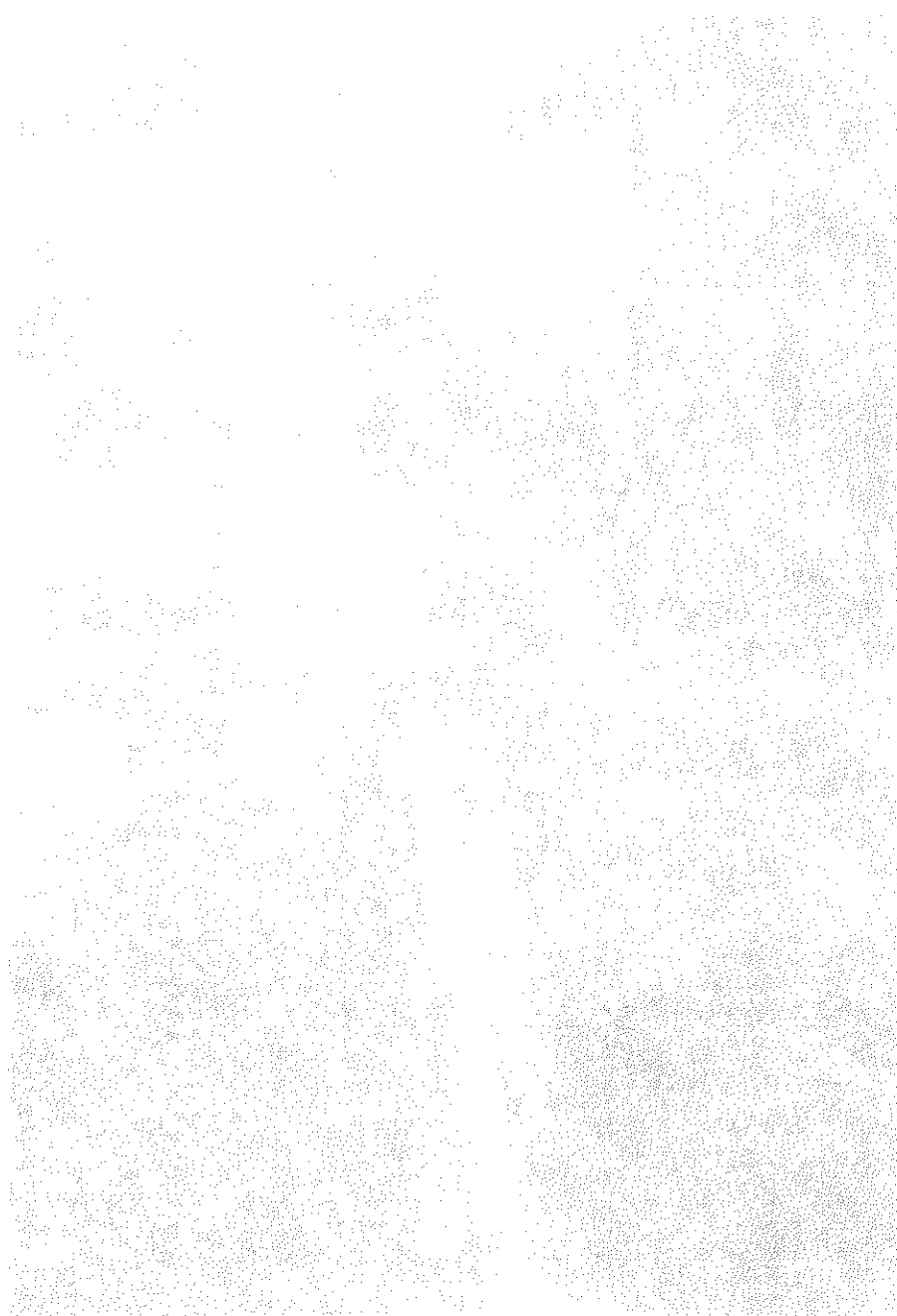


Photograph 1. Pipe trench excavations showing river washed pebbles filling stable foundation trench (A).





Photograph 2. Working shot during excavation of sewerage pipe trench on north-west side of stable block.





Photograph 3. View of west facing section showing pitched cobbling (J).



Photograph 4. Probable foundation footing (N) of mansion.





Photograph 5. View of pitched cobbling (O) uncovered in stable courtyard.



Photograph 6. View of stable courtyard looking north during laying of stone apron. Pitched cobbling (O) in foreground.

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SERVICES**

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This report has been prepared by R. Ramsey

Position Archaeologist

Signature R. S. Ramsey Date .. 1st October, 2001

This report has been checked and approved by K. Murphy on behalf of Cambria Archaeology,
Dyfed Archaeological Trust Ltd.

Position Principal Archaeological Officer

Signature [Signature] Date.. 1st October, 2001

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on the content or presentation of this report

