EXCAVATIONS AT NEWTON, LLANSTADWELL, PEMBROKESHIRE

DRAFT REPORT

Paratowyd gan Archaeoleg Cambria
Ar gyfer Petroplus
Prepared by Cambria Archaeology
For Petroplus

ARCHAEOLEG CAMBRIA ARCHAEOLOGY

ARCHAEOLEG CAMBRIA ARCHAEOLOGY

RHIF YR ADRODDIAD / REPORT NO. 2004/73
RHIF Y PROSIECT / PROJECT RECORD NO. 46961

Gorfenhaf 2004
July 2004

EXCAVATIONS AT NEWTON, LLANSTADWELL, PEMBROKESHIRE

DRAFT REPORT

Gan / By

Pete Crane BA Hons MIFA

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
Ebost: 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

EXCAVATIONS AT NEWTON, LLANSTADWELL, PEMBROKESHIRE

DRAFT REPORT

RHIF YR ADRODDIAD / REPORT NUMBER 2004/73

Gorfenhaf 2004
July 2004

Paratowyd yr adroddiad hwn gan / This report has been prepared by Pete Crane

Swydd / Position: Senior Archaeologist

Llofnod / Signature .....……..... Dyddiad / Date 20/07/2004

Mae'r adroddiad hwn wedi ei gael yn gywir a derbyn sêl bendith
This report has been checked and approved by

Gwilym Hughes

ar ran Archaeoleg Cambria, Ymddiriedolaeth Archaeolegol Dyfed Cyf.
on behalf of Cambria Archaeology, Dyfed Archaeological Trust Ltd.

Swydd / Position: Trust Director

Llofnod / Signature .....…...……..... Dyddiad / Date 20/07/2004

Yn unol â'n nôd i roddi gwasanaeth o ansawdd uchel, croesawn unrhyw sylwadau sydd gennych ar gynnwys neu strwythur yr adroddiad hwn

As part of our desire to provide a quality service we would welcome any comments you may have on the content or presentation of this report

SUMMARY

Excavations were carried out at several locations at Newton, Llanstadwell, Pembrokeshire, in advance of construction of gas storage tanks adjacent to an old oil refinery. Newton farmstead, probably dating to the early 19th century, had been demolished in the 1960s during construction of the refinery and little survived. However, the excavations uncovered what were probably the remains of the earlier Newton house dating to the 16th century. This rectangular stone building measured c. *22m by 7m. Close by, the foundations of a circular stone-built dovecote, probably contemporary with the house, were excavated. Pottery from the house and dovecote indicated occupation from the 12th-13th century, but no structural evidence for this early date was found. Charred grain from corn driers below the dovecote were radiocarbon dated to the 8th-10th century. A post-ring of a Bronze Age roundhouse* c. *5.8m in diameter was revealed during topsoil stripping. Two radiocarbon dates – 1140-920 BC and 1450-1300 BC – were obtained from charred material from two of its postholes. Sherds of Bronze Age pottery were associated with the house, and further sherds of a similar date were found a little distance away on the crest of a ridge.*

INTRODUCTION

This project was undertaken in response to a proposed extension of two (later increased to three) liquid natural gas storage tanks, at Waterston in the parish of Llanstadwell, Pembrokeshire. Cambria Archaeology were commissioned by Posford Haskoning Limited, acting on behalf of Petroplus, to undertake a desk-based archaeological assessment in July 2002 to form part of an environmental impact statement. This evaluation highlighted a number of locations of archaeological potential. Subsequently Petroplus commissioned Cambria Archaeology to carry out an archaeological evaluation followed by more extensive excavation and a limited watching brief during development.

The proposed development was centred on the demolished farmstead of Newton, and lay between the southern edge of the Petroplus storage facility (formerly the Gulf oil refinery - refining ceased in 1998 when the property was purchased by Petroplus) and the north shore of the Milford Haven waterway (Figs. 1, 2 and 3). The Ordnance Survey grid reference was SM 930049. The location was just outside the Pembrokeshire Coast National Park but within the Milford Haven Waterway landscape on the *Register of Landscapes of Outstanding Historic Interest in Wales* (Cadw 1998).

The solid geology was Devonian Red Marl, overlain by Ridgeway Conglomerates south of a stream crossing the proposed development area. The land-use was pasture, or rough pasture, with some areas of scrub and mature trees. The land was agricultural quality grade 3 (Ordnance Survey 1977) and soils were the typical brown earths of the region (Ordnance Survey 1983). Climatically the classification for the area was slightly cool and slightly moist, exposed, with mild winters and cool summers. (Ordnance Survey 1978).

The northern side of the proposed development area was dominated by the existing storage facility consisting of oil and gas tanks surrounded by an earth bank and a tall fence topped with barbed wire. Two trackways met within the proposed development area. One formed part of the Pembrokeshire Coast Path, adjacent to the northwestern boundary of the storage facility and was of modern metalled construction bounded by scrub and maturing trees. The coast path then continued as a footpath to the east continuing alongside a boundary fence. The other trackway was of some antiquity linking the settlement of Newton to Waterston village 1.2km to the northeast. The construction of the Gulf refinery in the 1960s removed all trace of this route to the north, and only the section running west from Newton survived where it was banked and hedged on both sides with a number of mature or maturing trees.

Newton farmstead was demolished in the 1960s when the Gulf Oil refinery and storage facility was constructed. Although the area of the farmhouse, gardens and ancillary buildings was just outside the refinery it was separately fenced and had become overgrown with trees, scrub, nettles and brambles. The tithe map (field names indicated on Fig. 3) indicates a cottage and garden just to the west of the farmstead, although this location had been covered by a massive earth ramp during the Gulf refinery construction. Immediately to the south of this was a walled and banked enclosure, around a spring, and containing the remains of late post-medieval buildings. Adjacent to the west there was a pond, again indicated on the tithe map. All of these areas were very overgrown. A stream flowed from the west side of the pond into a field known as Pigeon Meadow (Fig. 3).

Pigeon Meadow sloped down to an overgrown stream and was partly scrub covered. At the eastern end of this slope the building remains consisted of a platform and part of a drystone wall lying within mature woodland. This building was considered to be the remains of a circular structure shown on the Ordnance Survey first edition 25inch 1887 (Fig. 2). To the south of the stream there was undulating rough pasture and some scrub. Surface evidence indicated that a former trackway curved round from the pond, to the southwest, through a gateway in the southern boundary, joining the trackway running west from Newton, where there was an adjacent platform. There were also indistinct indications of a trackway continuing east-west across this field.

To the southwest, part of a field known as The West Field straddled the eastern end of a broad ridge. It was under pasture and contained no obvious artificial features. To the west of the proposed development lay the large World War II mine depot complex of RNAD Blackbridge Milford Haven.

White Field and Richard John's Park (field) were under rough pasture. Both fields slope slightly and had small natural looking undulations. The southern part of White Field dropped steeply down towards the Milford Haven waterway where it was formerly known as Hill Field or Fields.

To the east of Richard John's Park was Mount Meadow. This field straddled a low broad ridge running east-west. The higher part of the ridge (approximately 55m above sea level) was at the eastern end of the field. This field was again of rough pasture and there were a number of small undulations across it, all of which were probably natural in origin. At the eastern extent of the field there was an indistinct cropmark, identified from aerial photographs. Topographically this location

would be a suitable site for prehistoric burial mounds or a later defensive site, as the field name suggests.

To the east of Newton Farmstead and Mount Meadow is a field, simply named as 'Field' on the tithe apportionment. It was relatively level with a drop down towards its southern edge. Land-use was pasture. South of this field there was an area of scrub in the vicinity of a former cottage. The scrub was too dense for access but the cottage appeared to have been demolished and destroyed. To the west of the field was the site of a former World War I and/or II searchlight battery.

The field boundaries were all hedge banks, some with stone facing. The hedges on top of these banks had had little or no recent maintenance and were overgrown.

HISTORICAL BACKGROUND

By Ken Murphy

Newton lay at the heart of one of the most heavily Anglicised parts of southwest Wales, within the Lordship of Haverford. The pattern of Anglo-Norman settlement in this part of Wales during the 12th to the 14th century is complex and, owing to the limited quantity and scope of surviving documentation, not easy to disentangle. Therefore it is mainly to later sources that we must turn to obtain at least a partial picture of this part of southwest Wales during the medieval period. Newton seems to have been of minor importance, and is not mentioned until 1407 when a gift of lands in Newton and Walthyson (Waterston) was made by William Russell and his wife Joan to John and Stephen Russell (Pembs Rec Off HDX/1092/2). Of greater use are the Minister's Accounts for the County of Pembroke of 1480-1 where under the Office of the Beedle and Bailiff of the Manor of Castle Walwain (Walwyn's Castle) we learn of: 'divers free tenants who held of Castle Walwin by military service … like rent of such tenants in Newston' (Owen 1918, 170), and later in 1581 to: 'Walwins Castle by knight's service … a messuage and dovecote in Rosse' (Jones 1949, Appendix C). In 1557, Newton was held 'of the Lord of Great Honeyborough by knight's service and rent (Francis Green Collection, 8, 192). This documentation, scant as it is, demonstrates that Newton lay within the manor of Honeyborough, which comprised one knight's fee directly held of the Earls of Pembroke as their share of the Lordship of Haverford, and two and a half carucates held of the Barony of Walwyn's Castle 'by homage' (Owen 1911 and 1918).

Newton has by tradition been linked with the ancient Caradog (or Craddock) family, first recorded in writing by Richard Fenton in 1811 (276): 'Newton was once the residence of the princely family Craddock, lineally descended from Howel Dda, lords of this place, whose descendant Sir Richard married Emma, daughter and co-heiress of Sir Thomas Perrott of Eastington', and uncritically accepted by later authorities (Jones 196, 144-5). While it is correct that Sir Richard (born *c.* 1370, died *c.* 1448) married Emma Perrott, the Dictionary of National Biography (Lee 1894, Vol XL) states that he was the son of John Cradock and Margaret Moythe of Newton (Newtown) in Montgomeryshire, now Powys. Prudence or perhaps necessity seems to have compelled him to assume the name Newton, rather than the Welsh sounding Cradock, following Glyn Dwr's rising. It was perhaps during his time as Justice Iterant in Pembrokeshire in 1426-7 that he met and married Emma Perrott of

Eastingham in Rhoscrowther parish, Pembrokeshire, providing a southwest Wales connection and so giving rise to the Caradog/Newton of Llanstadwell parish tradition.

Surviving physical elements of the historic landscape and 18th and 19th century maps add to and complement the above skeletal historic framework. Examination of two neighbouring hamlets, Great Honeyborough and Waterston, both informs the history of Newton and provides insights into its landscape evolution. The agricultural landscape of both Great Honeyborough and Waterston has suffered over the past 150 years, with the industrial town of Neyland expanding over the former fields and village of Great Honeyborough, and an oil refinery removing a large portion of the fields around Waterston. The pre-industrialisation tithe map of Llanstadwell parish of 1849, however, shows both communities as nucleated hamlets surrounded by long narrow fields, clearly the result of enclosing the strips of an open field system. Strikingly at Honeyborough late 18th century estate maps (National Library of Wales: Picton Castle Estate Vol 1 and the Morgan Richardson Deposit No 1) show an operational open field system. This pattern of nucleated hamlets and villages surrounded by open fields characterised much of the medieval landscape of this part of southwest Wales, and persisted in some locations, as at Honeyborough, almost into the 19th century (Murphy and Ludlow 2002). At Newton, however, it is described below how the accumulation of land into a few hands during the 16th century, and later into the possession of one family, erased the medieval hamlet and open field landscape and replaced it with a single large farm divided into large regular fields – essentially the landscape depicted on the 1849 Llanstadwell parish tithe map.

With the growing acceptance of the notion of the private ownership of land from the late 15th century and the abolition of gavelkind in 1536, individuals and families began to accumulate land into estates, both large and small. Sixteenth century deeds and other manuscripts document this process at Newton. The Voyle family, who settled at Philbeach in Marloes parish, acquired extensive holdings in the west of Pembrokeshire in the early modern period, concentrated in Dale, but also spread across other parishes. The first reference to their holdings in Newton is a 1568 rental when John Voyle held a tenement there in the hands of Richard Wade, with Thomas Clerke and John Howells as subtenants (Jones 1949, Appendix C). John Volye's inquistion post mortem of 1581 (Jones 1949, Appendix B) records 'a messuage and dovecote in Newton', presumably the same holding recorded in 1568. The Bowles family are also recorded as having interests in Newton in the 16th century. Mason (Pembs Rec Off HDX/1554/5), notes that in 1532 the Bowles family were living at Westfield in Llanstadwell parish and that in 1554 (Pembs Rec Off D/RTP/NEW 1) Roger Bowles held land at Newton. In 1579, Roger Bowles sold his Newton holding to Richard Bowlas of Southampton. A dispute concerning: three messuages, 100 acres of land, 4 acres of meadow, 50 acres of pasture, 2 acres of wood and 50 acres of furze and heath was brought by Richard and Thomas Bowlas against Thomas Robert in 1604 (Pembs Rec Off D/RTP/NEW 3), and in another one brought by Thomas Bowlas against John Voyle and his wife Elinor in 1611 concerning: one messuage, one toft, one dovecote, one garden, one orchard, 60 acres of land, 3 acres of meadow, 20 acres of pasture and 10 acres of furze and heath (Pembs Rec Off D/RTP/NEW 5) clearly shows that the Bowlas family were intent on increasing the size of their landholding in and around Newton. It would seem that in 1611 the messuage and dovecote first mentioned in 1581 passed from the Voyle family to the Bowlas family. The Bowlas family did not, however, acquire all the land around Newton, for in 1721

we hear of a messuage of James Bowen in the townred of Newton comprising several pieces of land (Pembs Rec Off D/RTP/NEW 7). This is presumably the same tract of land first recorded in an inquisition post mortem on Mathias Bowen of 1557 which states that he held: '9 bovates of land in Newton in the parish of Llanstadwell … of the Lord of Great Honeyborough by knight's service and rent' (Francis Green Collection, 8, 192). In 1751, Thomas Bowlas purchased this land to add it to his estate (Pembs Rec Off D/RTP/NEW 12). Richard Fenton records in 1811 (p270) that Mr Bowlas passed the Newton estate on to his nephew Lewis Child. By the tithe survey of 1849, and probably by 1751, the Bowlas/Child family had consolidated all the land at Newton in a single holding. At the tithe survey Robert Bowlas is the owner-occupier. The last of the family to live there was Elizabeth Bowlas Child who died in 1861. The estate was rented out and then sold in 1871, at which time it consisted of Newton, part of Newton Noyes and numerous smaller properties in the vicinity. It was sold again in 1900 (Jones 1996, 145).

Newton farmhouse and farm buildings were destroyed during oil refinery construction in the 1960s and therefore we have to rely solely on documentary sources to establish its character. These are scarce and sometimes contradictory. Fenton in 1811 (276) described it as: 'now the comfortable residence of Lewis Child, Esq. retains nothing of any pristine dignity in point of habitation, but possess, what is infinitely more importance than a few ruined arches to exercise the fancy of the antiquary, a soil of the first quality, which the present proprietor, as a judicious and discerning agriculturist, knows how to appreciate, and cultivates with spirit and success.'. It is unclear from Fenton whether there were ruined arches or not at Newton, but his account conflicts with Samuel Lewis's (1833) description 23 years later: 'Newton, a dilapidated old house on a valuable estate belonging to Lewis Child, Esq.'. The earliest large-scale map is the tithe of 1849. This names the holding as 'Newton Demesne' and shows a cruciform-shaped house with attached outbuildings to the north, ranges of detached buildings to the south, cottages and other buildings a little further to the west all set within a system of small paddocks. The 1862 survey by the Ordnance Survey (Ordnance Survey 1887) shows that some of the outbuildings had been extended, and by the publication of the Second Edition map a new range had been added to the northwest of the house. Mason (Pembs Rec Off HDX/1554/3, 231-7) includes several of his photographs taken at Newton in 1964 in his notes when the house was empty, but before demolition.

METHODOLOGY

The 2002 desk-based archaeological assessment identified several potential sites requiring further investigation. Owing to a *c.* 50m diameter parch mark visible on 1945 aerial photographs and low earthworks in the same field it was decided to undertake a programme of geophysical survey on a site known as 'Mount Meadow' on the 1849 tithe map, the place-name suggesting the former presence of a round barrow or defensive site.

Geophysical survey took place in late December 2002 and the beginning of January 2003. A trial area of 40m by 60m (Stratascan 2002) using both resistivity and magnetometer was followed by magnetometer survey over an area of *c*. 285m by 90m. The results showed a large number of features, the majority of which were

considered either to be due to recent agricultural activity or to be geological/pedological in origin. The sheer number of these features hindered the interpretation of any archaeological remains. Nevertheless, some features were noted as being of possible archaeological origin. There was a possible ditch on the northernmost boundary of the survey associated with an area of magnetic debris. Other possible ditches were observed including a probable relict field boundary and a number of curvilinear anomalies on the east side of the survey area. Trial trenching was carried out in order to characterise this potential archaeology.

Archaeological trenching commenced in January 2003, initially with a team of four experienced archaeologists, later with one additional helper. Local metal detectorists from the Pembrokeshire Prospectors' Society screened all of the test trenches and re-visited on a number of occasions during excavation. The excavations were completed by May. The weather was remarkably dry during the excavation with less than two days lost due to rain, but was very cold, sometimes causing the ground to freeze throughout the day. A general watching brief was kept on groundworks during the excavation period with a few further visits later in the year on additional adjacent areas.

Geophysical anomalies in Mount Meadow were examined in four trial trenches (Fig. 3, Trenches 1-4), with a total length of 337m. All were 1.5m wide and all machine-dug down to the top of the subsoil. Results were at the best indeterminate. However, subsequent topsoil stripping under archaeological supervision within this field revealed an arc of postholes, which on further investigation turned out to be a prehistoric roundhouse.

In the northeast corner of Pigeon Meadow – the site of a suspected dovecote – a small hand dug trench (Trench 5) was initially the only means of investigation owing to access problems and surrounding trees. A wall and apparent doorway and floor of the presumed dovecote were rapidly uncovered, at which point it was decided to excavate the whole building. Overburden was lightly machined off prior to further hand excavation. The excavation area of the dovecote was later enlarged following removal of nearby trees. The final area excavated measured *c.* 14m by 117m maximum. Two machine-dug test pits were located close to the dovecote and three further test trenches (Trenches 14, 15, and 21) were excavated to the south side of a stream, two of these on topographical features.

A detailed archaeological topographic survey, using total station theodolite, was undertaken on the area of the former farmstead of Newton and enclosure around the spring once these had been cleared of vegetation. Seven test trenches (Trenches 6-12) were then machine dug around the former farmstead. Several trenches (Trenches 16 to 20) targeted an area around the spring/well to the west of the farmstead, as it was considered a potential occupation site. Trenches 19 and 20 were extended into a limited area excavation measuring 15m by 30m, to investigate the evidence for the building encountered within the initial small trenches.

Following excavation an intermittent watching brief was undertaken during stripping of the remainder of topsoil.

THE EXCAVATION RESULTS

The Bronze Age Roundhouse and other minor features

Anomalies detected in the geophysical survey were difficult to characterise and, owing to the nature of and variations in the subsoil, not easy to detect in the trial trenches. The major linear features were ditches while the curvilinear anomalies appeared to be natural. The ditched feature on the northern side of the field appeared to be a corner of a boundary that was either double ditched, or re-dug. This produced no dating or other occupational evidence. The magnetic debris within this boundary corner turned out to be modern. One pit encountered in Trench 4 probably was for the burial of a recent animal carcass as the bones were relatively well preserved. Following on from trial trenching, an area (Trench 22) of *c*. 10m by 30m was stripped revealing a large soil-mark arc and a possible pit. The latter was indicated on the geophysical survey. The arc appeared to be geological while the pit was probably the site of a burnt tree bole. Trench 1 was expanded into an area of *c*. 120m by 15m. This revealed a former field boundary and linear marks, probably agricultural in origin, along with a large number of geological features and probable root disturbances. However, a 200 sq m extension uncovered postholes of a roundhouse plus features detected in the geophysical survey.

The Bronze Age roundhouse

The roundhouse was located on the crest of the ridge with extensive views westward down the haven (Fig. 4). It consisted of a *c*. 5.8m diameter circle of postholes (Fig. 5, 1101, 1104, 1108, 1114, 1112, 1132 and 1160). A double posthole (1129 and 1154) and a deeper posthole (1175) in a post pit (1143) probably formed the entrance, approximately 1.4m wide, and possible porch to the house along with a shallow gully (1147) and two shallow postholes (1145 and 1149). One posthole (1136) within the south side of the circle appeared to have been deliberately filled in with a large flat stone. A further posthole (1116), slightly different in form and without packing stones, lay outside the main ring of postholes. There were no obviously artificial features within the post ring. The whole area had, however, been heavily truncated by ploughing, although some post packing remained protruding above the level of the subsoil. Two fragments of prehistoric pottery 540 and 542, and a flint fragment 541, came from hand cleaning down to the subsoil but did not come from features. Another pottery sherd 543 come from the top fill of a posthole (1160). Two samples of charcoal from the possible entrance post pit (1143) and post pipe (1175) were radiocarbon dated to 1450-1300 cal. BC (Beta 182945) and 1140-920 cal. BC (Beta 182944), both to 95% probability.

Bronze Age pottery

Several sherds of prehistoric pottery were discovered on the highest point of the ridge (National Grid Reference SM 9315504700) during a watching brief of topsoil stripping of virtually the whole of The Field and Mount Meadow (Fig. 3). The stripping was undertaken to facilitate construction – this area would not form part of the installation itself – and therefore soil removal was not complete and no deeper construction is planned. Limited archaeological excavation seemed to show that the

pottery was from a shallow pit, possibly a posthole, the fill of which also contained charcoal specks.

It is possible that this pottery is a cinerary urn or a grave good, but given the material from the roundhouse, a domestic context cannot be ruled out.

Other finds from Mount Meadow
One silver penny of Edward II, Canterbury, class 11c, *c.* 1311-14 and a little worn (provisional identification pers. Comm. Edward Beasley, National Museum of Wales) was recovered from the topsoil at the western end of area 1 by metal detecting. Also recovered were one flint flake fragment and a very few sherds of worn medieval and post-medieval pottery. Within the topsoil there were some coal fragments and a few bits of limestone, probably residual from lime treatment of the field in the post-medieval/recent periods.

Roman pottery
A shallow pit containing the foot-ring base sherd with two concentric rouletted bands of a bowl or dish in Oxford red colour-coated ware, copying an East Gaulish Samian form was discovered during topsoil stripping of the eastern part of Pigeon Meadow (Fig. 3).

The Corn Driers

Almost at the completion of the excavation of the dovecote (see below) it became apparent that there were features predating the structure (Fig. 6). Initially these were excavated within the structure area but the excavation was subsequently enlarged to accommodate them. Unfortunately, before the excavation could be extended the area was subjected to some machine damage when the surrounding trees were taken down.

The pre-dovecote features consisted of three pits and a gully (Figs. 7 and 8). The southernmost pit (654) was much shallower and considerably smaller in size than the other two; its full dimensions could not be ascertained due a tree hole on its southern side. The lower fill (661) was very dark and charcoal rich, contained a large amount of carbonised plant remains and was very similar to the lower fills in the other two pits. It was cut by a shallow gully (646), surviving to between 0.5m to 0.7m wide and 120mm deep. Much of the gully lay below the base of the dovecote wall; within the building it had been partially removed. This gully may have joined a similar feature at a right angle 5m to the west of the dovecote. There was no dating evidence for either pit or gully.

The two other pits (642 and 656) to the north were more linear in plan; the larger (642) showed signs of heated sides and contained a large amount of carbonised grain. These two pits are therefore thought to be corn driers. The sequence of the two pits was impossible to determine as they appeared to respect one another. Only near the base of a buried topsoil was there any possibility of detecting a relationship, but here the ground was very root disturbed. However, the surviving evidence suggests that the southern pit (656) may have been totally filled before the filling of the upper part of the northern pit.

The southern, slightly smaller pit (656) had a deeper section towards the east. The sides and base showed signs of having being heated – both slight fire reddening and stone shattering. The basal fill (649) was very dark with a lot of carbonised grain; this was sampled for environmental analysis (see below). The fill above (650) was also very dark and also contained a lot of small stones but no obvious carbonised grain. The fill above (651) was much lighter and more subsoil based. The two uppermost fills (652 and 662) were also quite dark with the lower one (652) containing a large amount of carbonised material. The upper fill (662) was sealed below a layer of buried topsoil (663). The eastern side of this pit was filled by the wall footings for the dovecote.

The northern pit (642) lay nearly parallel to its neighbour. Again the sides and base showed slight signs of being heated, with fire reddening and stone shattering. The basal fill (680) of the deepest part of the pit containing a large amount of carbonised material. This layer was sampled for environmental analysis. Radiocarbon determination provided a date of 720-960 cal. AD, at 95% probability (Beta-182946). Above this layer, on the northern side, a line of very large edging stones (681) were butted by three large flat stones (679), bonded by clay which contained a large amount of carbonised grain. This grain was again sampled for environmental analysis. It is probable that this grain was from the burnt deposit (678) above. A clayish fill (677) capped by a lens (676) of charcoal rich material lay over the stones. Above this there was a deep fill (640) containing many large stones, one of which was half a quern stone (Fig. 9). It is probable that this deep fill (640) represents rapid backfilling from a homogeneous source. Above there were a number of smaller fills (674, 673, 675, 672 671), all containing varying amounts of charcoal. Above these layers there was a final deeper fill (670) on the north side, possibly the last deliberate infilling. Above this on the south side was a layer more akin to topsoil (669), which could be natural infilling of the hollow remaining in the top of the pit. Finally a thick layer of buried topsoil (663) sealed the pit.

Interpretation
Given the evidence of low level of heat affecting the two larger pits and the large concentration of carbonised grain, the most likely interpretation is that these are the lower parts of corn driers. There are very few examples of corn driers from the early medieval period, and most of these have stone-lined flues. Given the similar very dark fill, the smaller southern pit is likely to have been in-filled while the corn drying kilns were in use. The gullies on the south and eastern side may have no association with the corn driers.

The Dovecote (Figs. 9 and 10)

The dovecote appears to have been constructed by removing a circle of topsoil and cutting a level terrace into a slight slope. This levelling uncovered the dark fill of one of the corn drying kiln pits (656). Owing to the soft nature of this fill, the eastern side of the pit was excavated by the dovecote builders and dense mortar and stone footings laid to provide a firm foundation. Nearly all of the northern side of the dovecote wall (304), except for some of the inner edge, had been robbed, along with some of the southern side, particularly the facing stones (Fig. 9). Sufficient survived to show that the inner diameter of the dovecote was 4.1m. The walls were *c.* 1m thick. The dovecote wall was constructed of stones and lime mortar. Some of the massive inner

face stones were slightly shaped to the curvature of the building. The interior of the doorway was also rounded on its inner edges, showing a high quality of construction. Four joining body sherds dated to the 16th or 17th century were found within the base of the wall, with mortar adhering to the old breaks. One other sherd, dating to the 17th –18th century, and a bird skull were recovered from the base of the wall. The bird skull was identified as *Corvus corone,* Carrion Crow (pers. comm. Anne Eastham).

The levelled ground surface within the interior was lower than the wall foundations, indicating, perhaps, some usage of the building before the first surviving pebble floor (629) was laid. There was a large central posthole (632)(Fig. 10a), presumably for supporting the potence (a revolving ladder for access to the nest boxes). The infill (631) of this posthole contained pottery sherds dating to the late 16th to early 17th century. This infill was then capped with stone to form part of the pebble floor (629) (Fig. 10b). Two sherds of pottery, one medieval sherd and one dating to the 16th–17th century, were found on the surface of this primary floor.

Two postholes (634 and 636) cut through the primary floor and into subsoil on the western side of the interior (Figs. 9, 10a and 10b). The post pipes (624) and (625) were rectangular and mostly voided, but did contain the remains of timbers, one of which contained copper tacks.

Above the primary floor (629) there was a thin brown wind-blown soil layer (628, not illustrated), which was overlain or intermixed with some flat stones (627), and had a similar layer of brown soil above (623). Possibly these layers were all part of the same phase. Five pottery sherds dating to the 17th–18th century were found in the upper part of this layer. Above this there was a mortary layer (622) containing a lot of large stones (Fig. 10c), some with mortar adhering, plus the very poor remains of a bone-handled knife. The mortary layer (622) appeared to have been laid around the timbers of the post pipes (624 and 625). The soil west of these post pipes was noticeably different. Sealing the top of the post pipes and covering the mortary layer was a floor (305) made of densely compact sub-angular small stones (Fig. 10d). Cut into this floor were two postholes (609 and 611), which had been probably deliberately backfilled.

Above the floor (305) a thin layer (603) contained masses of roof slate fragments and a few near-complete examples. Above this was a soil, and over the soil a layer of building stone and degraded mortar; this was cut by robber trench (607) of the northern part of the dovecote wall. A low dry stone wall fragment just to the west of the dovecote was probably built from stone discarded during wall robbing, perhaps by the Home Guard during World War II, as a .303 cartridge was found within it.

Interpretation
Both the pottery and documentary sources indicate that the construction of the dovecote dates to the early 1500's. The construction clearly involved considerable time and expense. In common with extant Pembrokeshire dovecotes it probably had a corbelled roof. The doorway lay to the east – frequently these were in view of the major inhabitancy so that a watch could be kept on the valuable commodity within (Hansell 1988, 79). The central posthole for the potence was filled in and levelled, around 1600, possibly when the building's use as a pigeon house ceased. Two postholes containing rectangular posts dug into the west side could be supports for a

stair or ladder opposite the doorway. This may indicate that an upper floor was inserted within the redundant dovecote to provide for storage. These posts were still standing when the primary floor was covered by the stony and mortary layer; this layer may represent the collapse of the corbelled roof. The secondary floor dates to after the 17th–18th centuries and the two postholes either side of the centre are possibly replacements for the rectangular posts to the west. However, they could just as easily be supports for a floor or roof. The roof at this later period was of slate on a timber structure, and given the large amount of slate within the building and none found without, it appears to have collapsed inwards. The unstratified find of a lead seal for seed or fertiliser may indicate the use of this building for storage, probably in the early to mid 19th century. Although the building was not recorded on the tithe map of 1849, when some other outbuildings are indicated, it would appear to have been standing in the 1880s, to some extent at least, as it is recorded on the Ordnance Survey first edition (1887). It is not shown on the Ordnance Survey second edition (1906). A former farm worker visiting the excavations did not remember any standing structure, but did recall digging for stone at this location.

The Post-medieval house

These building remains were first located in the western end of Trench 19. The trench area was then enlarged to encompass all of the 22m long by *c*. 7m wide building (Figs. 11 and 12). Surviving walls were lime-bonded local stone with good faces inside and out. The building lay towards the bottom of a shallow valley above a former wet area marking the site of a spring or well. Cattle trampling had disturbed the area of the building down. The north wall of the building lay below a later farmyard boundary wall. On the north side of this there had been considerable deposition of material, probably laid down at the time of the Gulf refinery construction in the 1960s.

A pit (931) predated the north wall of the building (Fig. 11). This pit was sub-rectangular/square in shape, *c*. 1.1m long by 1m wide with rounded corners, steep straight sides and a flat base. The west side of the pit appeared to have slumped soon after digging; this was followed by a silty and stone fill (933), mostly derived from the surrounding subsoil, indicating that the pit was open. This fill produced one medieval sherd of pottery but no suggestion of the pit's use. The upper fill (930) suggested deliberate backfilling and contained 60 sherds of medieval pottery, some dating from the 13th century but with one sherd from the 15th–16th century. The eastern end of the north wall (924) of the building had been constructed over this pit.

A terrace for the building had been constructed by cutting back into the natural stone and gravel subsoil and using spoil from this operation to raise the levels slightly on the south side of the building. This levelling (102) contained a fragment of medieval ridge tile, a pottery sherd dating to the 13th century, but also one sherd from the 17th–18th century, probably from later disturbance. Even with this terracing/levelling, the eastern 4m of the building interior was always *c.* 0.3m higher than the rest, and more roughly surfaced with large pebbles either directly on natural or redeposited subsoil.

The wall to the west of the doorway in the north wall (923) had been heavily robbed before incorporation into the farmyard boundary wall (115). This robbing removed all but slight traces of a footing trench at the northwest corner of the building. The

doorway jambs had also been removed. East of the doorway, the north wall (924) stood up to 1.2m high near the remains of a splayed window (925). There was also a substantial piece of masonry at the northeast corner (156) with slight offset footings.

No eastern wall remained except for the northeast corner (156), although the line could be traced as a raised block of natural or redeposited subsoil. All of the south wall structure had gone except for possibly one small area of unbonded stones (148). However, the line of this wall could be traced as a flattened depression to the east. To the west it survived either as a cut edge or a lip, where redeposited material had been levelled up against the inside edge of the wall. The location of the southwest corner was very low lying and had totally been removed. Only the bottom course of the west wall footing (112) remained, which was soil bonded, but the top of a few stones showed traces of limestone mortar. This footing produced one 13th century pottery sherd and one dating to the 17th–18th century; at the time of excavation this latter sherd was considered to be intrusive.

The fill (147) possibly of a small gully (146) or linear layer within the floor make-up in the southwestern side of the building produced four pottery sherds, probably the product from an unknown local kiln, possibly late medieval. Another pit (175) appeared to pre-date a hearth (174) on the northern side of the interior. The fill (176) produced some medieval pottery including one late medieval sherd of 15th–16th century date. This joins with a sherd from a drain capping contemporary with the first phase of the building. The hearth (174) was constructed in the north wall (924), and consisted of a heat affected stone slab and also fire reddening and shattering of the adjacent wall face.

The earliest drain (907) ran from east to west and was stone lined with some surviving stone capping. The fill (910) of this drain produced one sherd of local medieval pottery. It was superseded by later drains (168) and (114). A clay floor (150), possibly in a corridor, sealed drain (168). Below this floor a deposit of close-packed stones (161) containing a medieval pottery sherd. A 15th–16th century sherd overlay the drain capping stones. The latter sherd joined with one from the pit (175) below hearth (174). Medieval sherds, late-16th or early-17th century sherds, a spindle whorl (Object 518) and a button (Object 517) came from the fill (115) of an uncapped section of drain (114). A pebble floor butted against the capping stones of this drain.

Further west another drain (105) ran from within the building and continued through the line of the west wall. The fill (933) produced a few fragments of 18th century glass and a 13th century pottery sherd.

There were a few clear internal divisions within the building and suggestions of others. A small stub of a north-south mortared wall (922) butted against the west side of the doorway in the north wall. This internal wall may be quite late in the structure of the buildings as it produced 18th or 19th century glass fragments. To the south disturbance had erased the wall. There may have been a parallel wall running from the east side of the doorway, but this was very uncertain. A smaller east-west line of dry-stone footings (113) butted against the west wall.

A very shallow wall trench (944), with a shallow posthole (945) at its southern end, associated with clay floor (150) indicates the line of a corridor. On the eastern side of this clay floor there was a vertical rise of 0.3m, at the northern end of which there

were stone steps. The rest of this rise was partly stone-faced. On the top edge of this rise there was a north-south line of rough material, possibly indicating a former wall line.

On the raised area in the eastern end of the building there was a pebble floor (160) of varying quality. The latest pottery within this was probably late 15th–16th century. A small cannon ball, weighing *c*. four pounds, may have come from this floor or from a small pit dug into it. None of the surviving floor surfaces in the eastern portion of the building were particularly high quality, and they may have been sub-floor levelling, rather than floor surfaces.

A few postholes of unknown date cut into these floor layers and a number of coal dust patches lay on them, possibly suggesting some late reuse of the building. Topsoil with obvious modern disturbance covered the coal patches and the rest of the site. A little of the large amount of pottery from the topsoil was medieval and/or modern, but the majority dated from 16th to 18th century. An 18th century decorative knee buckle also came from topsoil.

To the north of the building (Trench 20) was a worn hollowed trackway, mostly in-filled by a metalling and later pebble patching. This trackway probably continued in use up to the 1960s. To the east of the building there were a number of postholes, which, where dating evidence was obtained, were relatively recent. A recent wall lay immediately to the south of the building, partly on the line of the south wall. After completion of the excavation the area to the south was machine stripped. No significant archaeological structures were identified.

Interpretation
Residual artefacts demonstrate use of the site from the 13th century, with a fragment of glazed ridge tile perhaps indicating a building of some status. However, no structural evidence for such a building at this location was found.

The dating evidence for the excavated house indicates construction in the 15th–16th century. In the western end of the building there was no floor surface, but some levelling remaining on the higher northern side. East of the doorway pebble spreads were either rough floor surfaces or sub-floors. These spreads were very much on the same level as the stone capping of the east-west drains. As the capping did not appear to have been well enough laid for a floor surface, it is likely that any surfaces had been removed. In the razed area at the eastern end the pebble floor would appear to be too uneven for an occupied room and it is more likely to have been a storage area. It is possible that this is a later extension. However, there was nothing to indicate a corner in the north wall to prove an extension, but then very little of the wall survived here.

Internal alterations continued into the 18th–19th century but most of these had again been robbed. The building, or just the stripped remains, appear to then have been used as a store, given the amount of coal fragments and dust. The tithe map of 1849 does not show this building in this location, whereas the barn immediately to the east is illustrated.

The 1800s Farmstead

Richard Fenton in 1811 provides the first, albeit brief, description of the *c*. 1800 farmhouse as 'now the comfortable residence of Lewis Child, Esq.' (Fenton, 276). The date of construction is not known, but photographs taken at Newton in 1964 when the house was empty (Pembs Rec Off HDX/1554/3, 231-7) show a two-storey, three-bay cement rendered house probably mainly dating to the earlier 19th century. The windows appear to all be sash, of six pane form, probably late 19th century. Farm outbuildings are two-storey and substantial, consistent with a farm of Newton's status. Overall, the photographs show a farm compatible with construction by the 'judicious and discerning agriculturist' Lewis Child in the early 19th century.

This part of the site was enclosed by a high chain link fence in the 1960s and had become extremely overgrown with scrub, maturing trees and trees dating back to the farmstead. Consequently there was no access during the assessment although a number of earthworks could be seen.

Once cleared of undergrowth it was immediately obvious that earthworks did not relate to former buildings and that rubble had been bulldozed into mounds following demolition. Nevertheless, trial trenches were targeted to cross former buildings and a walled garden. It rapidly became clear that the whole of the farmstead was heavily disturbed. What survived showed that the buildings were stone-built with later brick additions. No other work other than the machine excavation of Trenches 6-11 was undertaken.

RADIOCARBON DATES

Two samples, Beta 182944 and 182945, were taken from sorted charcoal (not oak), and one, Beta 182946, from carbonised grain. All samples were analysed by standard radiometric techniques. Samples 182944 and 182945 were from charcoal from postholes from the prehistoric roundhouse. 182946 was from one of the corn drying kilns beneath the post-medieval dovecote.

Table 1 Radiocarbon dates

Lab No	Context No fill/cut	Results BP	Intercept date	Calibrated range at 1 sigma 68% probability	Calibrated range at 2 sigma 95% probability
Beta 182944	1144/1145	2870±40 BP	1020 BC	1100-990 BC	1140-920 BC
Beta 182945	1159/1175	3120±40 BP	1400 BC	1420-1380 BC	1450-1300 BC
Beta 182946	680/642	1190±40 BP	870 AD	780-890 AD	720-740 AD and 760 to 960 AD

THE PREHISTORIC POTTERY

By Ann Woodward

*****1st Draft to be edited when petrology results received where CAPITAL text used*****

A total of 20 sherds, weighing 119g, were recovered from two adjoining fields: Mount Meadow and The Field. All the pottery appears to be Bronze Age in date.

Mount Meadow

Three sherds were found in association with the excavated round house.

1. SF 542. Simple flat-topped rim sherd from a small vessel. No decoration. Weight: 2g. Thickness: 6mm. Pink-brown surfaces and dark grey core. Unabraded. (Fig. 13)
2. SF 540. A larger sherd representing a broken base angle, apparently from a larger vessel with an approximate base diameter of 180mm (7% surviving). No decoration. Weight: 19g. Thickness: 10mm. Grey exterior, dark grey core and light grey interior surface, the latter possibly lined with a pale clay slip. Abraded. (Fig.13) PETROLOGY
3. SF 543. Plain wall sherd. Weight: 5g. Thickness: 9mm. Pink-brown surfaces and dark grey core. Very abraded. PETROLOGY

The fabrics of all three sherds were similar, with two types of inclusion: sparse large, angular, ill-sorted rock fragments (some sparkling) and a moderate density of ill-sorted small white (?calcareous) inclusions. REVISE AFTER PETROLOGY

The three sherds are all very similar in colour, fabric and hardness, and items 1 (rim) and 3 (wall) may belong to the same vessel. It is probable that all three were of the same tradition and that they were deposited contemporaneously. The wall sherd (SF 543) was found in the top filling of a posthole (1160), whilst the other two sherds, were found during cleaning in locations just inside (SF 540) and outside (SF 542) (see Fig.00).

The Field

Seventeen sherds of pottery found in two separate features derived from a single vessel.

1. SF 1167. Thirteen plain wall sherds. Weight: 38g. Unabraded.
2. SF 1168. Plain base angle, with slightly indented profile, from a large vessel of approximate base diameter 240mm (6% represented). Weight: 26g. Unabraded. DRAW
3. SF 1168. Three plain wall sherds. Weight: 29g. Unabraded. PETROLOGY

The fabric of all sherds was hard and sandy, with a moderate scatter of ill-sorted medium-sized rock inclusions (including ?quartz and ‘spotty’ black) and occasional large fragments of grog. REVISE AFTER PETROLOGY

All sherds displayed similar colour characteristics: orange exterior and a grey-black core and interior surface, although the thickness of the grey colouring varied slightly from sherd to sherd. The average sherd thickness was 9mm. Considering the large diameter of the base, this sizeable vessel would therefore have been relatively thin-walled. The sherds were all found in a single vicinity, those labelled SF 1168 from a possible posthole (1169) and the SF 1169 items from an adjacent probably natural root hole.

Dating and discussion

On the grounds of the rim and base angle forms, degree of hardness and fabrics, it can be suggested that the pottery from both fields dates from the Late Bronze Age period. In Mount Meadow the sherds were associated with the timber round house and the fact that one of the entrance postholes of the round house was dated by the C14 method, giving a result of 1140-920 cal BC, at 95% probability (Beta-182944) would concur with a Late Bronze Age date for the pottery. The other radiocarbon date would suggest however activity in the earliest part of the Late Bronze Age period.

Pottery of this date rarely occurs in south Wales, and these finds are therefore of considerable importance. The nearest assemblage of such ceramics was excavated at Stackpole Warren, Dyfed (Darvill 1990). In Site G, such pottery was associated with deposits which yielded radiocarbon dates of 1107-803 cal. BC and 1036-780 cal. BC noth at 95% probability (Benson 1990, 204). The forms of the Petroplus feature sherds may be matched in that assemblage. The rim (Mount Meadow SF 542) compares well with other simple, flat rims, albeit from rather larger vessels, from Stackpole Warren (*ibid* 220, e.g. Fig. 38, 104), and the indented base angle (The Field SF 1168) is similar to examples from the same assemblage (*ibid* Fig. 38, 100 and 115). Stackpole warren base 100 is from a large vessel (diameter 200mm, *ibid*, 221), although not quite as large as the one represented in The Field. As at Stackpole Warren the vessel forms represented at Petroplus would have been bucket- or barrel-shaped jars.

The Stackpole Warren Later Bronze Age assemblage was characterised by distinctive rock-tempered fabrics which were hard and well fired (*ibid* 219-220). The key fabrics were

(SEE TABLE 2, DARVILL PAGE 210)

18	Large dolerite	dominant, possibly non-local
19	Spherulitic rhyolite	possibly non-local
20	Heavy rhyolite	could be local

As Darvill noted (*ibid* 221-2), these simple jar forms with flattened rims bear some resemblance to vessels in the assemblages from Lesser Garth Cave, Radyr and Culverhole, Llangennith, Glamorgan (Savory 1980, Fig. 72, 505.2 and 88). However, these sometimes carry incised decoration, and are more likely to be of Middle Bronze Age tradition, along with the more recently excavated assemblage from Chapeltump II, Magor, Monmouthshire, where plain and incised jars were associated with vessels decorated with rows of fingertip impressions (Woodward 2000) BUT NB CHAPELTUMP II C14 DATES RUN ON INTO LBA. Late Bronze Age plain ware assemblages are much more common across the Severn, for instance in north Somerset at Brean Down (Woodward 1990, Figs. 93-95) and Combe Hay (Price and Watts 1980, Fig. 24), and it is to this wider tradition of Post-Deverel-Rimbury pottery that the Petroplus finds can best be related.

QUERN STONE

by Mark Redknap & Jana Horak

Description

Fig. 14
Upper stone from a rotary quern, with central perforation (46961; SF 523). Diameter 31cm+. Maximum thickness 92mm. This was recovered from the upper part of the fill (640) of the corn drier (642)(Fig. 8).

This quern stone is composed of a pale-grey, slightly darker grey weathering and faintly red tinged conglomerate. The conglomerate contains a matrix of grains approximately 2mm in diameter, but also contains pebbles up to 40 mm in diameter. The pebbles range in shape from subrounded to more angular and are composed of milky vein quartz, quartzite, rarer dark volcanic clasts (basalt), and slightly smaller fine-grained acid volcanic rock (maximum size 30mm diameter). The erosion of clasts has produced a slightly cavernous texture to the rock. The finer grained component of the rock although quartose, also includes white grains which are interpreted as altered feldspar.

Several features of this conglomerate, show similarities to those described from the Skrinkle Sandstone, of the Upper Old Red Sandstone sequence, in particular the clast composition, particularly the presence of milky vein quartz and igneous pebbles. Although a provenance for the quern cannot not be firmly ascribed without further study, the Skrinkle Sandstone, outcropping to the south of Milford Haven, is considered a possible candidate and would therefore present a relatively local derivation for the source material.

Discussion

The quernstone was found in the top fill of a corn drier, a layer at the base of which has provided a radiocarbon date of cal. AD 720-960, at 95% probability (Beta-182946). The corn drier is thought to have filled up long before construction of the medieval dovecote.

The form of the quernstone is consistent with the radiocarbon date from the lower horizon, or a lightly later, early medieval, date. It is closely paralleled by a large number of early medieval quernstones from the early medieval enclosed settlement at Llanbedrgoch, Isle of Anglesey, where they have occurred in 8th-10th century contexts (Redknap 2000, Fig. 115). The Llanbedrgoch quernstones occur in a range of sizes, some similar to the diameter and thickness of the Newton example, and are also characterized by a lack of radial grooves on the grinding face. In contrast, fragments of quernstone found at the princely fortified site of Dinas Powys, near Cardiff, and at the royal *llys* of Llangors crannog, near Brecon, have radial grooves typical of Roman quernstones, and are similarly distinguished from the Irish and Scottish series (Alcock 1963, 168, Fig. 36 no. 1; Redknap and Lane 1999, 381).

MEDIEVAL AND LATER POTTERY, CERAMIC ROOFING MATERIAL, CLAY PIPES AND GLASS

By Dee Brennan

Medieval and Later Pottery

This report is a discussion of a total of 744 pottery sherds recovered from the excavation. A detailed list of fabric types by context and a catalogue of forms are housed with the site archive. Information in this report is collated from the archive and presented in tabular form (Table 2) with a short note on each fabric present. Table 2 shows the pottery divided into seventeen broad fabric groups with further sub-divisions listed below. The absolute minimum number of vessels is 110 when only rim and other quantifiable sherds are counted (Table 3).

Table 2 Total number of sherds by fabric in complete assemblage

Area 1 is in Mount Meadow. Area 5 is from around the dovecote. Areas 6 and 7 are from around the 1800s farmstead. Areas 19 and 20 are from the post-medieval house.

Fabrics

Area	Context	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
1	**1164**	12	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	**18**
1	**1165**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
5	**301**	1	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	2	**8**
5	**302**	-	-	-	-	-	1	1	-	-	3	-	-	-	-	-	-	1	**6**
5	**304**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
5	**522**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
5	**601**	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	**3**
5	**604**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
5	**606**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
5	**615**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
5	**623**	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	**3**
5	**629**	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**2**
5	**631**	-	-	-	-	-	1	-	-	-	61	-	-	-	-	-	-	-	**62**
5	**639**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
6	**307**	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	**2**
6	**311**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	**1**
6	**313**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	**1**
6	**314**	-	-	-	-	-	2	-	-	-	1	-	-	-	1	2	-	6	**12**
6	**317**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
6	**318**	-	-	-	-	-	1	-	-	-	2	-	-	-	-	1	-	3	**7**
6	**320**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
6	**398**	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**
7	**335/336?**	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**2**
19	**101**	3	3	3	-	-	-	7	5	-	235	3	1	4	38	23	-	24	**349**
19	**102**	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**2**
19	**104**	-	1	-	-	-	-	1	-	3	50	-	-	-	-	1	-	1	**57**
19	**107**	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
19	**112**	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**2**
19	**115**	-	2	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	**3**
19	**138**	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	**2**
19	**144**	-	-	-	-	-	-	1	-	-	2	-	-	-	-	-	-	-	**3**
19	**147**	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**4**
19	**148**	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	**4**
19	**158**	-	-	-	-	-	-	-	-	-	2	-	-	1	1	-	4	1	**9**
19	**160**	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	**3**

Area	Context	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
19	**161**	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	**2**
19	**164**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
19	**176**	1	-	3	-	1	-	1	-	-	-	-	-	-	-	-	-	-	**6**
19	**181**	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	**3**
19	**183**	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	**3**
19	**190**	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	4	**11**
19	**904**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
19	**906**	-	1	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	**3**
19	**910**	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
19	**922**	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
19	**926**	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	**1**
19	**928**	-	-	-	-	-	-	-	2	-	13	-	-	-	-	-	-	-	**16**
19	**930**	16	40	-	4	-	-	1	-	-	-	-	-	-	-	-	-	1	**62**
19	**931**	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
19	**933**	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1**
19	**935**	-	1	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	**5**
19	**937**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
20	**118**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
20	**151**	-	-	-	-	-	-	-	-	-	15	-	-	-	1	-	-	-	**16**
20	**152**	-	-	-	-	-	-	-	-	-	28	-	-	-	-	-	-	-	**28**
20	**154**	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
Total		**46**	**55**	**11**	**7**	**2**	**6**	**15**	**8**	**3**	**460**	**5**	**1**	**5**	**43**	**29**	**4**	**44**	**744**

Table 3 Minimum number of vessels by fabric in complete assemblage

Fabrics	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Total
Vessels	4	5	2	5	5	4	2	4	1	23	5	1	3	8	7	1	30	**110**

Types Present with approximate dates

Medieval, local

1. Local cooking pots. Dyfed gravel-tempered ware (O'Mahoney 1985a, 20-24), 12th? to 15th century or later.

2. Local glazed vessels, mainly jugs, few jars and at least one dish. Dyfed gravel-tempered ware, 13th to 15th century or later.

3. Local (estuarine?) 'Llanstephan-type' vessels, jugs and one dish. Compare Carmarthen Greyfriars Type fabrics B9 and B12 (O'Mahoney 1995, 18-19), mid/late 13th century with uncertain terminal date.

Medieval, non-local English and continental imports

4. Ham Green wares. Bristol (after Barton, 1963a and Vince, 1983)

A. Cooking pots, 12th to early 13th century.
B. Glazed jugs, late 12th to mid-13th century.

5. Saintonge ware. South-west France, mottled green-glazed jugs, mid 13th to mid 14th century.

Medieval/late medieval, unclassified
6. Unsourced, uncertain medieval/late medieval.

A. Wheel-thrown vessel, hard-fired granular fabric, buff-orange throughout, tempered with numerous small sands, few reddish-brown gravels and occasional small white inclusions. A white slip covers the exterior surface. Area 5, contexts: [302] and [631].

B. Wheel-thrown jar, very hard-fired, red with a grey core, tempered with few quartz sands. A thin shiny wash covers the interior surface. Area 6, contexts: [314] and [318].

C. Wheel-thrown vessel, hard-fired and fully oxidised, fine sand temper with frequent small red grog inclusions. Self-coloured unglazed surfaces. Area 6, context: [314].

D. Jug, hard-fired and fully oxidised, tempered with frequent small grey and red gravels and occasional quartz sands. Thin yellowish-green glaze over a white slip on the interior surface, splashes of green glaze on exterior. Context: [115].

7. Possibly South Somerset ?, wheel-thrown jugs, glazed-red earthenware, late-15th to 16th century ?.

Post-medieval, local, non-local and continental imports
8. Local/North Devon ware?, jars, late-15th to 17th century or later ?.

9. Cistercian-type ware cup, unsourced, 16th to early-17th century.

10. North Devon wares, late-15th/16th to 18th century.

A. Calcareous and gravel-free wares, jars, and jugs, late-15th/16th to 17th century.

B. Gravel-tempered ware, mainly large bowls and jars, 17th to 18th century.

C. Sgraffito ware, dish, 17th to 18th century.

D. Plain slipware, jugs or jars, 17th to mid-18th century.

11. Bristol/Staffordshire wares, slipped and mottled fine wares, late-17th to first half of 18th century.

12. Westerwald stoneware, Rhineland, chamber pot or jug, late-17th to early-18th century.

13. English tin-glazed earthenware, plates and chamber pot. 17th to mid-18th century.

14. Redwares, jugs, jars, chamber pot. Most sherds are glazed but some are unglazed. Probably from various local and non-local sources. 17th 18th and 19th centuries.

15. Black-glazed redwares, mostly jars. Probably from various local and non-local sources. 17th, 18th and 19th centuries.

16. Staffordshire salt-glazed ware, mug, 18th century.

17. Mass-produced wares: Developed whiteware, porcelain, china and some stoneware. 19th century.

Discussion

The medieval pottery from the site with known sources of origin derives from unidentified local pottery-producing centres in west Wales, the Ham Green area of Bristol and the Saintonge area of southwest France. There are very few contexts producing exclusively medieval pottery but as with other site assemblages in the region, the locally produced medieval wares are found in association with non-local 12th and 13th century pottery.

Locally produced medieval pottery consists of unglazed hand-made cooking pots and glazed vessels, mainly jugs, in gravel-tempered fabrics (types 1 and 2). A visual analysis of these two fabrics indicates more than one production centre. Another locally produced glazed ware (type 3) is a calcareous fabric similar to Llanstephan-type ware. Recovered sherds in this fabric include a dish and several jug sherds. These are probably the products of one or more unidentified kiln sites possibly located on the Carmarthen estuary.

Ham Green wares from Bristol (type 4) consist of unglazed cooking pots and glazed jugs. Medieval continental imports (type 5) comprise just two body sherds from wheel-thrown jugs made in the Saintonge area of southwest France. A handful of unclassified sherds (type 6) of medieval or later date are individually described above (see: fabric types).

Pottery of probable late fifteenth to sixteenth century date comprises sherds in a brown glazed redware (type 7) thought to be from south Somerset but not positively identified. The few diagnostic sherds recovered in this fabric are from jugs or jars. Vessels of 16th–17th century or later date are represented by a handful of sherds in a fabric (type 8) that has similarities with both North Devon and local (Dyfed) gravel-tempered wares. Part of the body of a thin-walled cup in Cistercian-type ware (type 9) is late-16th to early-17th century date.

The majority of examined sherds of 17th to 18th century date are from the north Devon potteries (type 10 A-D). For the range of wares see Allan (1984). The earliest of these are vessels in calcareous and gravel-free fabrics. Gravel-tempered forms account for the majority of later 17th to 18th century products but also present are a sgraffito ware dish, and one plain slipware vessel.

The remaining pottery of 17th to 18th century date comprises the usual range of wares for the period. These are very often represented by only a single sherd and include vessels of Staffordshire/Bristol type (type 11), one German import (type 12), English tin-glazed wares (type 13) and Staffordshire salt-glazed ware (type 16). The redwares, mostly glazed (type 14), and black-glazed ware (type 15) consist of vessels from more

than one production centre and cover a period from the seventeenth through to the nineteenth centuries.

All other nineteenth century material (type 17) is mass-produced, arriving from the industrialised potteries. Types include developed whitewares as well as some china, porcelain and stoneware.

Ceramic Roofing Material

Twelve fragments of roofing tile were found on the site. The only medieval tile represented, a single fragment from a disturbed floor make up layer (102) in the post-medieval house, is a glazed ridge tile of probable north Devon manufacture. The type is comparable with Carmarthen Greyfriars Type B ridge tiles (O'Mahoney 1995, 71). Two fragments of a 17th–18th century unglazed ridge tile, from the fill (355) of a ditch just east of the 1800s farmstead, are also from north Devon. The remainder are probably locally made eighteenth/nineteenth century roof tiles in a hard-fired and fully oxidised fabric, from topsoil (101) and a disturbed layer (158), both from around the post-medieval house.

Clay Pipes

Five clay pipe fragments from 18th–19th century pipes were found. All are plain stem fragments and none can be closely dated.

Glass

The excavation produced a total of seventy-five pieces of glass, of which fifty-five fragments are from bottles, twelve are vessel glass and eight are window glass. Most of the bottle glass is from free-blown cylindrical wine bottles of 18th century date and probably of Bristol manufacture. One 19th century Bristol-made wine bottle is from post 1960s fill (314) above the trackway to the east of the 1800s farmhouse. Two fragments from a late-19th or early-20th century soft drinks bottle are from post 1960's fill (151) above the trackway to the north of the post-medieval house. The vessel fragments, all from the stub of a dividing wall (922) within the post-medieval house, are from a fine blown bowl in blue-coloured glass with vertical moulded ribs, and of 19th century date. An 18th century date would seem appropriate for most of the window glass but a couple of later 19th to 20th century fragments are present.

METALWORK

By Dee Brennan

A full report on the metalwork is included in the site archive. All of the finds below are from topsoil or otherwise unstratified and mostly located by metal detecting. Twenty-eight metal objects and two copper coins were recovered from the site. The collection mostly comprises domestic and agricultural items, all of which are typical finds from an 18th–19th century rural setting. Among the copper alloy objects there are a number of dress accessories comprising five 18th–19th century buttons, and a decorative shoe buckle of 18th century type. Identifiable domestic items include three

or four decorative fittings, a late 19th century barrel-tap, and two 19th century lead cloth seals.

Agricultural items include three variously complete copper alloy harness buckles. An iron harness fitting, a horseshoe, a lead net weight, and three lead musket balls. Five fragments of scrap lead were also recovered.

The two copper coins are certainly late post-medieval but neither are closely dated due to surface corrosion and wear.

One cannon ball, approximately four pounds in weight, was recovered from a pebble floor in the post-medieval house. Another cannon ball of around thirty pounds was found in the remains of the 1800s farmstead by a machine driver.

PALAEOENVIRONMENTAL ANALYSIS

By Astrid E.Caseldine and Catherine J. Griffiths

Charred plant remains have been investigated from contexts associated with a roundhouse dated to the later Bronze Age and from two corn driers and a pit dated to the early medieval period. The aim of the investigation was to gain information about crop husbandry practices during these two periods. Charcoal was also identified and provides some limited information about the woodland being exploited.

Processing

Cambria Archaeology processed all the roundhouse samples and one of the corn drier samples, but the remaining corn drier samples were processed at the University of Wales, Lampeter. All the samples were processed using manual flotation. The finest sieve used was 250 microns.

Plant macrofossil analysis

Methods

The samples were examined using a Wild M5 stereomicroscope. Identification was based on standard criteria and by comparison with modern reference material. The results are presented in Tables 4 and 5. Nomenclature follows Stace (1991).

Results

Very few charred plant remains other than wood charcoal were recovered from the later Bronze Age roundhouse samples. The richest sample, although only a few grains, was 1105/1107 and was dominated by hulled barley (*Hordeum* sp.). The presence of twisted grain indicated it was six-rowed barley but two-rowed barley could be present. Oat (*Avena* sp.) was also present but the absence of chaff meant it could not be determined whether it was wild or cultivated. Barley and oat were also recorded from other samples and wheat (*Triticum* sp.) was present in one sample. A few weed seeds comprising docks (*Rumex crispus* type), orache (*Atriplex* spp.) and grass (Poaceae) were recorded.

The samples associated with the possible corn driers were generally rich in cereal remains, apart from sample 679 which was relatively poor compared to the others.

The cereal remains included oat, barley and wheat. Oat dominated the assemblages from contexts 680, 679 and 649 but barley was also abundant in context 680. In contrast bread wheat (*Triticum aestivum*) dominated the assemblage from 661, but barley was again very frequent. Oat was present in 661 but proportionally in much smaller amounts than in the other samples. A relatively large amount of grain in 661 was poorly preserved and indeterminable.

The oat grain in the samples could represent either wild or cultivated oat but the presence of a few lemma bases suggest it was cultivated oat, either common oat (*Avena sativa*) or bristle oat (*Avena strigosa*). The barley had the angular appearance of hulled barley and included twisted as well as straight grains, suggesting the presence of six-rowed barley. However, the high proportion of straight grains compared to twisted grains indicates that two-rowed barley could also be present.

The weed assemblage from three of the samples, 649, 679 and 680, was very similar. Oraches (*Atriplix* spp.), stinking chamomile (*Anthemis cotula*) and docks (*Rumex* spp.) were the most frequently occurring species but a number of other taxa were also recorded. The weed assemblage from 661 was much more restricted and was dominated by wild radish (*Raphanus raphanistrum*).

Discussion
The evidence from the later Bronze Age roundhouse is sparse but is in keeping with that from many other Bronze Age sites in Wales (Caseldine 1990, in prep.) where barley is either dominant or at least present. However, whereas the barley from the Early Bronze Age roundhouse deposits at Stackpole Warren (Caseldine 1990) and the vast majority of the barley from the Middle Bronze Age roundhouse at Glanfeinion (Britnell *et al* 1997) was naked, the barley from Newton is hulled. A small amount of barley from the Middle Bronze Age settlement at Mellteyrn Uchaf was also hulled (Caseldine 2001), but a few grains of barley from a Late Bronze Age finds scatter, Chapel Tump II, in the Severn Estuary possibly included both hulled and naked barley (Milles 2000). Most of the other Bronze Age evidence is from funerary and ritual sites. In southwest Wales the barley from Pantymenyn pit circle also included possible hulled and naked barley (Caseldine in Kirk and Williams 2000).

The radiocarbon date of cal AD 720-960, at 95% probability (Beta 182496) on oat from context 680, the basal fill of one of the possible corn driers (642), indicates this represents early medieval activity. Corn driers have a number of possible uses (Monk 1981, Hillman 1982, Veen 1989). These include the drying of whole ears or sheaves after a wet summer, parching, drying prior to storage or prior to milling, and the roasting of germinated grain in the malting process. Interpretation of corn drier samples, however, is often complicated by material from the drying floor becoming mixed with fuel and because of differential preservation of different cereal components.

The predominance of oat and barley grain, relatively low amounts of weed seeds, almost complete absence of chaff, and only a small quantity of wood charcoal in the sample (680) from the basal fill of corn drier 642 suggest that this could represent a mixed crop of oat and barley that had been at least partially processed and was accidentally burnt whilst being dried prior to storage. It was common practice in medieval Wales to undertake mixed cropping, either barley and oats (*drage*) or wheat

and rye (*maslin*), as a safeguard to ensure reasonable yields. The assemblage from context 649, the bottom fill of corn drier 656, was dominated by oat grains and again the reasonably low incidence of weed seeds, chaff and wood charcoal suggest that this represents a crop, in this instance oat, that was being dried. This corn drier is thought to have possibly been filled up with the debris from corn drier 642. The assemblage from context 679 from corn drier 642 is too small to draw any firm conclusions about it.

An alternative interpretation for the corn drier samples is that the oat was present as a weed, probably of a barley crop, rather than a crop itself, or was tail grain from a crop of common oat and that the samples represent waste from crop processing that was used as fuel, but the small amounts of charcoal suggest this interpretation is less likely.

The assemblage from pit 661 contained grain which was more or less fully processed. The only weeds present in any quantity were fruits of wild radish which would have had to be removed by hand. It seems likely that the grain represents crops of bread wheat, barley and perhaps oat, although this could be a contaminant of either of the other crops, which were accidentally burnt in one of the corn driers while being dried and the remains thrown into the pit.

The evidence suggests that oats, barley and wheat were being grown in the area and being dried at the site. Much of the oat was comparatively small suggesting that it could be bristle oat. Bristle oat has commonly been grown in Wales, particularly in areas where conditions are unfavourable for common oat. Most of the weed seeds present are typical of cornfields and include orache, stinking chamomile, wild radish, corn spurrey (*Spergula arvensis*) and black bindweed (*Fallopia convolvulus*). The presence of blinks (*Montia fontana)*, pale persicaria (*Persicaria lapathifolia*) and amphibious bistort (*Persicaria amphibia*) suggest that the cultivated ground included or was close to damp ground.

Comparisons with other sites
The evidence from Newton is consistent with evidence from both documentary and archaeological sources. Documentary records indicate that oat was the commonest crop in most of medieval Wales, although wheat, barley and rye were also grown (Davies 1991). It was particularly useful as it provided both fodder for animals and food for humans. Oat is also frequent in the early medieval and medieval archaeobotanical records from Wales but barley, wheat and rye are important at some sites (Caseldine 1990, in prep.). Oat and barley dominated the assemblage from early medieval deposits in the churchyard at Capel Maelog (Caseldine 1990) and contexts associated with the first phase of activity at Llanelen (Schlesinger and Walls 1995, Kissock 1996). However, at the 9th and 10th century crannog at Llangorse wheat was most common, although barley was also present as well as small amounts of rye and oat (Redknap and Lane 1999). The assemblage from a possible corn drier dated to cal AD 1001-1208 cal. AD, at 95% probability(CAR-1498) at the Atlantic Trading Estate mainly comprised barley and bread wheat, although again oat was represented (Caseldine forthcoming). The plant remains from a pit at Wiston were also considered to represent material from a drying kiln (Caseldine 1995). Wood charcoal gave a date of cal AD 693-1018 cal, at 95% probability (CAR-1411) which, if from mature wood, was compatible with the pottery evidence which suggested usage of the kiln in the

12th to 14th century Oat dominated the assemblage and the chaff demonstrated the presence of both cultivated and wild oat. Other medieval sites in south Wales where oat was important include Loughor Castle (Carruthers 1993) and Rumney Castle (Williams 1992), although other cereals were also present.

Charcoal identification

Methods

The samples were examined using a Leitz binocular microscope with an incident light source. The charcoal was fractured to produce three sections, i.e. transverse, transverse longitudinal and radial longitudinal, for identification purposes. Identification was by reference to Schweingruber (1978) and by comparison with modern reference material. The results are given in Tables 6 and 7.

Discussion

The charcoal fragments were relatively scarce and small from the Bronze Age contexts and only a small number have been identified. The charcoal gives some indication of the local woodland but, as different species may have been selected for particular purposes, it does not necessarily accurately reflect the composition of the woodland, either the true proportions of the different species or the full range. The most frequent species are oak (*Quercus* spp.), birch (*Betula* spp.), and hazel (*Corylus avellana*) but alder (*Alnus glutinosa*) and cherry/blackthorn (*Prunus* spp.) are also represented. The evidence tentatively suggests that, primarily, oak woodland and hazel and birch scrub were being exploited.

The evidence from the early medieval contexts is even scarcer and suggests the continued presence of oak, hazel and cherry/blackthorn in the area. However, there is insufficient evidence to say whether the absence of birch and alder indicates a change in the composition of the local woodland.

Table 4 The charred plant remains from the Later Bronze Age roundhouse

Context no.		**1105/ 1107**	**1130**	**1155**	**1159**	**1161/ 1162**	**1162**
Triticum sp (wheat)	grain	-	1	-	-	-	-
Hordeum sp. (Hulled)	straight grain	7	-	1	-	-	-
(barley)	twisted grain	2	-	-	-	-	-
Avena sp. (oats)	grain	1	-	-	1	-	-
Cereal indet.		-	1	-	-	-	-
cf. Cereal indet.	frags.	-	-	-	-	4	5
Atriplex spp. (orache)		4	-	-	-	-	-
Rumex crispus type (curled dock)		3	-	-	-	-	-
Poaceae (grasses)		-	-	-	-	1	-
Monocot. stem	frags.	-	-	-	1	-	-

Table 5 The charred plant remains from the corn driers and pit

Context no.		**649**	**661**	**679**	**680**
Triticum aestivum (bread wheat)	grain	1	614	-	5
Triticum sp.	grain	-	3	-	-
Hordeum sp. (Hulled)	straight grain	27	418	-	208
(barley)	twisted grain	17	35	-	41
	indet.	17	83	-	21
Hordeum sp.	rachis	1	-	-	-
Hordeum/*Triticum* indet		1	-	-	-
Avena sativum/strigosa (oat)	grain + lemma base	-	-	-	2
Avena sativum/strigosa	lemma bases	-	1	2	3
Avena sp.	grain	249	58	38	338
Avena sp.	grain semi-charred	-	-	-	13
Avena/Poaceae (oat/grass)		-	-	-	2
Cereal indet.		29	448	-	3
Ranunculus. flammula type (lesser spearwort)		-	-	-	1
Chenopodium album L. (fat-hen)		2	-	8	-
Atriplex spp. (orache)		20	-	30	33
Chenopodiaceae (goosefoot)		1	-	-	5
Montia fomtana L. (blinks)		-	-	-	1
Cerastium sp. (chickweed)		-	-	-	1
Spergula arvensis L. (corn spurrey)		-	6	2	-
Persicaria amphibian (L.) Gray (amphibious bistort)		-	-	-	2
Persicaria maculosa Gray (redshank)		-	-	-	1
Persicaria lapathifolia (L.) Gray (pale persicaria)		-	-	-	3
Persicaria minor (Hudson) Opiz (small water-pepper)		-	1	-	-
Persicaria spp. (knotgrasses)		-	-	2	2
Fallopia convolvus (L.) A.Love (black-bindweed)		-	26	-	-
Rumex acetosella agg (sheep's sorrel)		1	-	2	1
Rumex spp. (dock)		2	6	1	5
Raphanus raphanistrum L. (wild radish)	fruit	1	71	-	2
Raphanus raphanistrum L..		-	2	-	-
Vicia/ Lathyrus (vetches/peas)		1	-	-	1
Ulex spp. (gorse)	spines	6	-	-	14
Plantago lanceolata L. (ribwort plantain)		-	2	-	3
Anthemis cotula L.		35	-	7	22

(stinking chamomile)				
Tripleurospermum inodorum (L.) Schultz-Bip (scentless mayweed)	1	1	-	-
Luzula sp. (wood-rushes)	1	1	-	-
Bromus sp. (bromes)	-	2	-	-
Poaceae (grasses)	1	5	1	3
Pteridium aquilinum (L.) Kuhn frags. (bracken)	1	-	-	10

Table 6 Charcoal identifications for the Later Bronze Age roundhouse

Context no.	**1105/ 1107**	**1144**	**1155**	**1159**	**1161/ 1162**	**1162**
Quercus spp.. (oak)	4	5	6	2	2	5
Betula spp. (birch)	-	5	2	5	2	4
Alnus glutinosa (L.) Gaertner (alder)	-	-	-	1	-	-
*Corylus avellan*a L. (hazel)	7	-	2	2	3	-
Prunus spp. (cherry/blackthorn)	-	-	-	-	3	-
Total	11	10	10	10	10	9

Table 7 Charcoal identifications for the corn driers and pit

Context no.	**649**	**661**	**680**
Quercus spp. (oak)	4	-	6
*Corylus avellan*a L. (hazel)	-	2	4
Prunus spp. (cherry/blackthorn)	4	-	1
Total	8	2	11

DISCUSSION

The Bronze Age Roundhouse

Because of the apparent simple and truncated remains it is difficult to draw any detailed conclusions regarding the roundhouse, and the nature of its discovery, during a watching brief rather than in a controlled excavation, could lead one to speculate that more ephemeral features than the excavated postholes could have escaped detection. It is likely, however, that ditches, pits and comparable sized postholes would have been seen. The relationship, if any, between the house and the pottery found on the crest of the ridge 180m to the east is unknown. There was insufficient evidence to conclude whether this latter site was funerary or domestic.

The two radiocarbon dates from carbonised material from postholes of this round-house do not overlap when calibrated at 95% probability (1140-920 BC and 1450-1300 BC), giving a date range from the Middle Bronze Age into the Late Bronze Age. The lack of compliance between these dates cannot be explained by the use of old timber as non-oak was used in the samples to avoid this predicament. This dating anomaly would be a problem if precise comparability were to be sought. However, the rarity of settlements in Wales within the very general broad period indicated by the radiocarbon dates and the virtual absence of structural evidence such as roundhouses means that there are very few sites with which to draw parallels. The best preserved roundhouse of this period in Wales, excavated at Stackpole Warren, some 12km south of Newton, dates to the Early Bronze Age – radiocarbon dates of 1872-1455 cal. BC and 2135-1695 cal. BC (calibrated at 2 sigma using CALIB 4.4.2) were obtained from destruction deposits (Benson *et al*. 1990, 185-89). This structure measured approximately 5m in diameter, a little smaller than the Newton example, with an entrance porch facing northeast. It owes its remarkable preservation to a later accumulation of wind-blown sand and the later erection of a standing stone immediately adjacent to it. Indeed the later erection of the standing stone and the presence of burnt human bone in the destruction layer led the excavator to conclude that the Stackpole house was not domestic. A Middle Bronze Age round house at Glanfeinion, Powys (Britnell *et al*. 1997) seems to have a domestic context and provides a reasonably close parallel in form and date to the Newton example. Two radiocarbon dates from the house calibrate to 1420 – 1160 cal. BC and 1390 – 1020 cal. BC at 95% probability. It consists of a 7.1m ring of postholes, with an entrance to the southeast, surrounded by a shallow ring-ditch. Both the size and layout – southeast facing porch – of the Glanfeinion and Newton buildings can be paralleled elsewhere in Britain (Musson 1970). In southwest Wales further evidence for Bronze Age settlement has been discovered beneath the ramparts of Iron Age defended enclosures such as at Woodside Camp (Williams and Mytum 1998, 16-17) where a short length of gully and associated pits have been interpreted as a roundhouse, probably non-domestic, dating to 2028-1624 cal. BC at 95% probability, and at Pilcornswell Camp where pre-rampart activity was dated to 1726-1410 cal. BC at 95% probability (Williams and Mytum 1998, 70). Both these sites are in the Llawhaden group of small Iron Age enclosures.

Corn driers

Apart from the centuries immediately following Roman occupation, the early medieval period in Wales is aceramic and other artefacts are rare. Therefore assigning

excavated features to this period is largely dependent on radiocarbon dates. At Newton without the radiocarbon date of AD 720 to 960 it would have been assumed that the corn driers predated the dovecote by years or decades.

It would seem that the driers were used for low temperature drying, with the grain placed on wickerwork trays, as suggested by Kelly (1997, 241). This would allow grain to fall through and become charred, as found at Newton. Any superstructure at the Newton driers has been lost to the later dovecote, and therefore the way in which they functioned is speculation.

There is no local or regional settlement context for these driers, and parallels are rare. At Killederdadrum, County Tipperary, Ireland, a drier with a stone-lined flue was constructed *c*. AD 1000 (Manning 1984, 242), and at Greanog, Gwynedd, a similar drier with well built stone-lined flue and bowl was dated to 9th to 12th century (Kelly 1997, 132). The closest resemblance is that of Poundbury Kiln 2 with a simple stoke hole and drying chamber (Monk 1981 220). Superstructures, if indeed there were any, were absent, and therefore as Monk (1981) has pointed out comparison of form and function is difficult. Grain must be dry before being put into store, and therefore driers were undoubtedly an essential component of the agricultural economy in the west of Britain where wet autumns were, and are, not uncommon.

The post-medieval farmstead – house and dovecote

The pottery assemblage contains a considerable number of medieval sherds (142 out of a total of 744) indicating occupation from at least the 12th–13th century. No structural evidence for this occupation was recognised during the excavation.

Artefacts from the house and dovecote suggest a 16th century date for their construction. This is in accordance with the mention in 1581 of a messuage (house) and dovecote in Rosse, although it cannot be absolutely certain that this is the house referred to. During the latter part of this century documentary records demonstrate that the Voyle family were actively increasing their holdings in south Pembrokeshire, and had become the major landowners in Newton. They were not the only landowners; the Bowles family also had considerable interests, but contemporary documentation clearly states that it was the Volye's who had possession of the dovecote. Therefore it would seem highly probably that they were responsible for the construction of the new house, together with a dovecote and, it is assumed, other buildings commensurate with a substantial farm of the period. Indeed, ditches indicated on the geophysical survey in Mount Meadow are on a similar alignment to this house suggesting a field system of contemporary date. Dovecotes are only found in conjunction with high status houses, usually manorial – a law of 1587 permitted only lords of manors and parish priests to build dovecotes (MaCann 2000 27, 31). The Newton example can be seen as one of the means by which the Voyle family were beginning to establish themselves into the emerging landowning classes of the time. As the Voyle family lost a dispute with Thomas Bowles in 1611 concerning land, including the dovecote, it is likely that the dovecote ceased to function as such at this date. This would coincide with the date of the backfilled central posthole and the loss of the potence.

There are very few dovecotes in southwest Wales. There are none recorded in Ceredigion, except for one of late post-medieval date. Carmarthenshire has five that could be medieval and the discovery of this dovecote at Newton has raised the number in Pembrokeshire to ten. Unfortunately none of the Pembrokeshire dovecotes attributed to the medieval or early post-medieval periods are securely dated. The dovecote at Newton is of similar diameter to others, such as at Manorbier PRN 4212, Angle PRN 3089 and probably Monkton Priory PRN 3274, (although there are no dimensions recorded for the latter), all of which are likely to be of medieval date. The Newton example is slightly larger than those at known at Great Nash Farm PRN 2376 and the Cathedral Close St David's PRN 2650, and much larger than that at Rosemarket PRN 3192 (Primary Record Numbers, Sites and Monument Record, Dyfed Archaeological Trust).

The remains of the house indicate a building of some presence for this period in south Pembrokeshire. There are, however, are no excavated parallels, but standing buildings provide some comparative information. The building tradition in Pembrokeshire was exceptionally conservative with first floor halls over vaulted undercrofts continuing in use well into the post-medieval period, as recorded by George Owen in 1609 who stated that 'most houses of any accompt were builded with vaults verye stronglye and substancially wrought' (Owen 1892, 77). In some parts of the county they seemed to have been the chief rural building type and survived in large numbers until relatively recently as Fenton (1811) records that the Lydstep area 'was formerly thickly studded with such houses, above the rank of such as farmers might have been supposed to inhabit, most of them being surrounded with a court entered by an arched gateway, and many built on arches'. The surviving examples are notoriously difficult to date, most are assigned to the late 14th to the early 16th century on account of architectural traits shared with local churches (Ludlow 1996, Part 1, 12). One such house, Lydstep Palace, has a footprint virtually identical in size to the Newton house. George Owen's house at Henllys, north Pembrokeshire, is the only excavated comparable example. Here continuing excavations under the direction of Harold Mytum (2002) of the University of York have revealed the ground plan, which is of similar dimensions to the Newton house, as it was in the early 19th century, but it is too early to ascertain whether the late 16th–early 17th century house was vaulted or not. Unfortunately at Newton later disturbance renders precise interpretation impossible, and while it is possible that it was a hall-house over vaulted undercrofts, this cannot be conclusively demonstrated.

ACKNOWLEDGEMENTS

All stages of the archaeological work was funded by Petroplus Ltd. Many thanks are due to their representative, Robert Griffiths, who with friendly efficiency ensured that the smooth running of the archaeological project. Pete Crane directed the archaeological excavations with the assistance of Gwilym Bere, Sally Goodyear, Tom Jamieson and Rokeena Young and with occasional help from other staff of Cambria Archaeology, notably Hubert Wilson who undertook the entire site surveying and produced the publication drawings. Ken Murphy for historical research and assistance with editing. The help of the Pembrokeshire Prospectors, particularly Adrian Young, is also acknowledged. Ann Eastham kindly identified the bird bone and Edward Beasly of the National Museums and Galleries of Wales examined the coin from the site.

SOURCES

Alcock, L. 1963, *Dinas Powys. An Iron Age, Dark Age and Early Medieval Settlement in Glamorgan*: Cardiff

Allan J P 1984 *Medieval and Post-Medieval Finds from Exeter 1971-1980*, Exeter Archaeological Reports: 3. Exeter University Press

Barton K J 1963 'A Medieval Pottery Kiln at Ham Green, Bristol', *Trans of the Bristol and Gloucestershire Archaeological Soc* 82, 95-126

Benson D G, Evans J G, Williams G H, Darvill, and David A 1990 'Excavations at Stakpole Warren. Dyfed' *Proc of the Prehist Soc* Vol 56 179-246

Bell, M 1990. *Brean Down Excavations 1983-1987*. London: English Heritage Archaeological Report 15.

Brennan D and Murphy K 1996 'The Pottery From Excavations In Three Burgage Plots In The Town Of Newport, Dyfed, 1991', *Medieval and Later Pottery in Wales, 14*, 1-8

Brennan D 1999 'Pottery' in Crane P *et al*. 'Iron Age Promontory Fort to Medieval Castle? Excavations at Great Castle Head, Dale, Pembrokeshire 1999', *Archaeol Cambrensis*, 148, 115-117

Britnell W J, Silvester R J, Gibson A M, Caseldine A E, Hunter K L, Johnson S, Hamlton-Dyer S and Vince A 1997 'A Middle Bronze Age round-house at Glanfeinion, near Llandinam, Powys' *Proc Prehistoric Soc* 63, 179-197

Carruthers W 1993 'Charred plant remains', in Lewis J M 'Excavations at Loughor Castle, West Glamorgan1969-73' *Archaeol Cambrensis,* 142, 173-177

Caseldine A 1990 *Environmental Archaeology in Wales*. Lampeter, St. David's University College

Caseldine A E 1990 'Carbonized plant remains' in Benson D G, Evans J G, Williams G H, Darvill T and David A 'Excavations at Stackpole Warren, Dyfed' *Proc Prehistoric Soc* 56, 229

Caseldine A E 1990 'The charred plant remains from Capel Maelog' in Britnell W J 'Capel Maelog, Llandrindod Wells, Powys: Excavations 1984-87', *Medieval Archaeology* 34, 2.16

Caseldine A E 1995 'The charred plant remains from layer 63, pit 49' in Murphy K 'The castle and borough of Wiston, Pembrokeshire', *Archaeol Cambrensis* 144, 71-102

Caseldine A E 2001 'The environmental evidence' in Ward M and Smith G 'The Llyn crop marks project' *Studia Celtica* 35, 25-32

Caseldine A E (forthcoming) 'The charred plant remains from a possible corn drier at Atlantic Trading Estate' in Newman C and Newman R 'A late and post-Roman cemetery at Atlantic Trading Estate, Barry, Vale of Glamorgan' *Studia Celtica*

Davies R R 1991 *The Age of Conquest Wales 1063-1415*. Oxford: Oxford University Press

Darvill, T 1990. Neolithic and Bronze Age pottery. In Benson *et al* 1990, 208-222

Evans D 1979 'Gravel-tempered Ware: A Survey of Published Forms', *Medieval and Later Pottery in Wales,* 12, 18-29

Fenton R 1811 *A Historical Tour through Pembrokeshire*. London

Jones F 1949 'Some records of a sixteenth-century Pembrokeshire estate', *Bull Board Celtic Stud,* 13, 92-104

Jones F 1996 *Historic Homes of Pembrokeshire and their Families*. Pembrokeshire

Hillman G 1982 'Evidence for spelting malt' in Leech R (ed.) *Excavations at Catsgore 1970-73. A Romano-British Village,* Western Archaeological Trust Excavation Monograph 2, 137-141

Kelly F 1997 *Early Irish Farming,* Early Irish Law Series Volume IV. Dublin: Dublin Institute for Advanced Studies

Kirk T and Williams G 2000 'Glandy Cross: a later prehistoric monumental complex in Carmarthenshire, Wales', *Proc Prehistoric Soc, 66,* 257-295

Kissock J. 1996 'Grain' in Schlesinger A and Walls C 'An early church and medieval farmstead site: excavations at Llanelen, Gower' *Archaeological Journal* 153, 125

Hansell P and Hansell J 1988 *Doves and Dovecotes.* Bath: Millstream Books

Lee S (ed) 1894 *Dictionary of National Biography*. London

Locock, M, Trett, R and Lawler, M 2000. Further late prehistoric features on the foreshore at Chapeltump, Magor, Monmouthshire: Chapeltump II and Upton Trackway, *Studia Celtica* 34, 17-48

Ludlow N D 1996 'Lydstep Palace: archaeological recording and structural analysis June 1996', unpublished report by Cambria Archaeology

Manning C 1984 'The Excavation of the early Christian Enclosure of Killederdadrum in Lackenavorna, Co. Tipperary', *Proc of the Royal Irish Academy,* Vol 84 C, Number 7

McCann J 2000 'Dovecote and Pigeons in English Law', *Trans of Ancient Monument Society*, 44, 25-50

Milles A 2000 'Plant remains (Chapeltump II)', in Locock M Trett R and Lawler M 'Further late prehistoric features on the foreshore at Chapeltump, Magor, Monmouthshire: Chapeltump II and the Upton trackway', *Studia Celtica, 34*, 34-36

Monk M 1981 'Post-Roman drying kilns and the problem of function: a preliminary statement', in D O Corrain (ed.) *Irish Antiquity: Essays and Studies Presented to Professor M.J. O'Kelly.* Cork, 216-230

Musson C 1970 'House-plans and prehistory', *Current Archaeology* 2(10), 267-75

Murphy K and Ludlow N 2002 'Historic Landscape Characterisation: Characterisation of the Milford Haven Waterway', unpublished report by Cambria Archaeology

Mytum H 2002 'Henllys Farm, note on excavations', *Archaeol in Wales,* 42, 169

National Library of Wales, Llanstadwell parish tithe map, 1849

National Library of Wales, Picton Castle Estate Vol 1

National Library of Wales, Morgan Richardson Deposit No 1

O'Mahoney C 1985a 'West Wales fabrics - an interim note', *Medieval and Later Pottery in Wales,* 8, 20-24

O'Mahoney C 1985c 'Pottery', in Murphy, K., 'Excavation and survey at Cardigan Castle', *Ceredigion, 10*, 189-218

O'Mahoney, C., 1995 'Pottery, ridge tile and ceramic water pipe' in T. James (ed.), *Excavations at Carmarthen Greyfriars 1983-1990* (Dyfed Archaeological Trust Occasional Papers Number 2)

Ordnance Survey 1887 First Edition 25" *Pembrokeshire XXXIX.2*

Ordnance Survey 1887 First Edition 6" *Pembrokeshire XXXIX.NE*

Ordnance Survey 1909 Second Edition 6" *Pembrokeshire XXXIX.NE*

Owen H (ed.) 1892 *The Description of Pembrokeshire by George Owen*, Vol. I

Owen H 1918 *A Calendar of the Public Records Relating to Pembrokeshire,* Vol III, Cymmrodorion Record Series VII

Pembrokeshire Record Office D/RTP/NEW, Papers relating to the Child Family of Newton

Pembrokeshire Record Office HDX/1092/2 – photocopy of a deed in the PRO

Pembrokeshire Record Office HDX/1554, Roy Mason's research notes and other records on the history of Llanstadwell parish

Price, R and Watts, L 1980. Rescue excavations at Combe Hay, Somerset, 1968-1973, *Somerset Archaeology and Natural History* 124, 1-49.

Redknap M and Lane A 1999 'The archaeological importance of Llangorse Lake: an environmental perspective', *Aquatic Conservation: Marine and Freshwater Ecosystems*, 9, 377-390

Redknap, M. 2000, *Vikings in Wales. An Archaeological Quest*: Cardiff

Savory, H N 1980. *Guide Catalogue of the Bronze Age Collections.* Cardiff: National Museum of Wales

Schlesinger A and Walls C 1995 'Excavations at Llanelen, Llanrhidian: An early church and medieval farmstead site', *Gower*, 46, 58-79

Schweingruber F 1978 *Microscopic Woood Anatomy*

Stace C 1991 *New Flora of the British Isles*. Cambridge: Cambridge University Press

Stratascan 2002 'Geophysical survey carried out at Petroplus, Milford Haven Pembrokeshire', unpublished report held by Cambria Archaeology

Young C J 1977 *The Roman Pottery Industry of the Oxford Region.* Oxford: BAR British Series, 43

Veen M.van der 1989 'Charred grain assemblages from Roman-period corn driers in Britain' *Archaeological Journal*, 146, 302-319

Vince A G 1983 'The Medieval Ceramic Industry of the Severn Valley', unpublished PhD thesis, University of Southampton

Williams D 1992 'Plant macrofossil remains', in Lightfoot K W B 'Rumney Castle, a ringwork and manorial centre in South Glamorgan', *Medieval Archaeol*, 36, 155-156

Williams G and Mytum H 1998 *Llawhaden, Dyfed. Excavations on a group of small defended enclosures, 1980-4.* Oxford. BAR British Series 275

Woodward, A, 1990. Chapter 11. The Bronze Age pottery. In Bell 1990, 121-145

Woodward, A, 2000. The pottery. In Locock *et al* 2000, 24-31

FIGURES

Contents

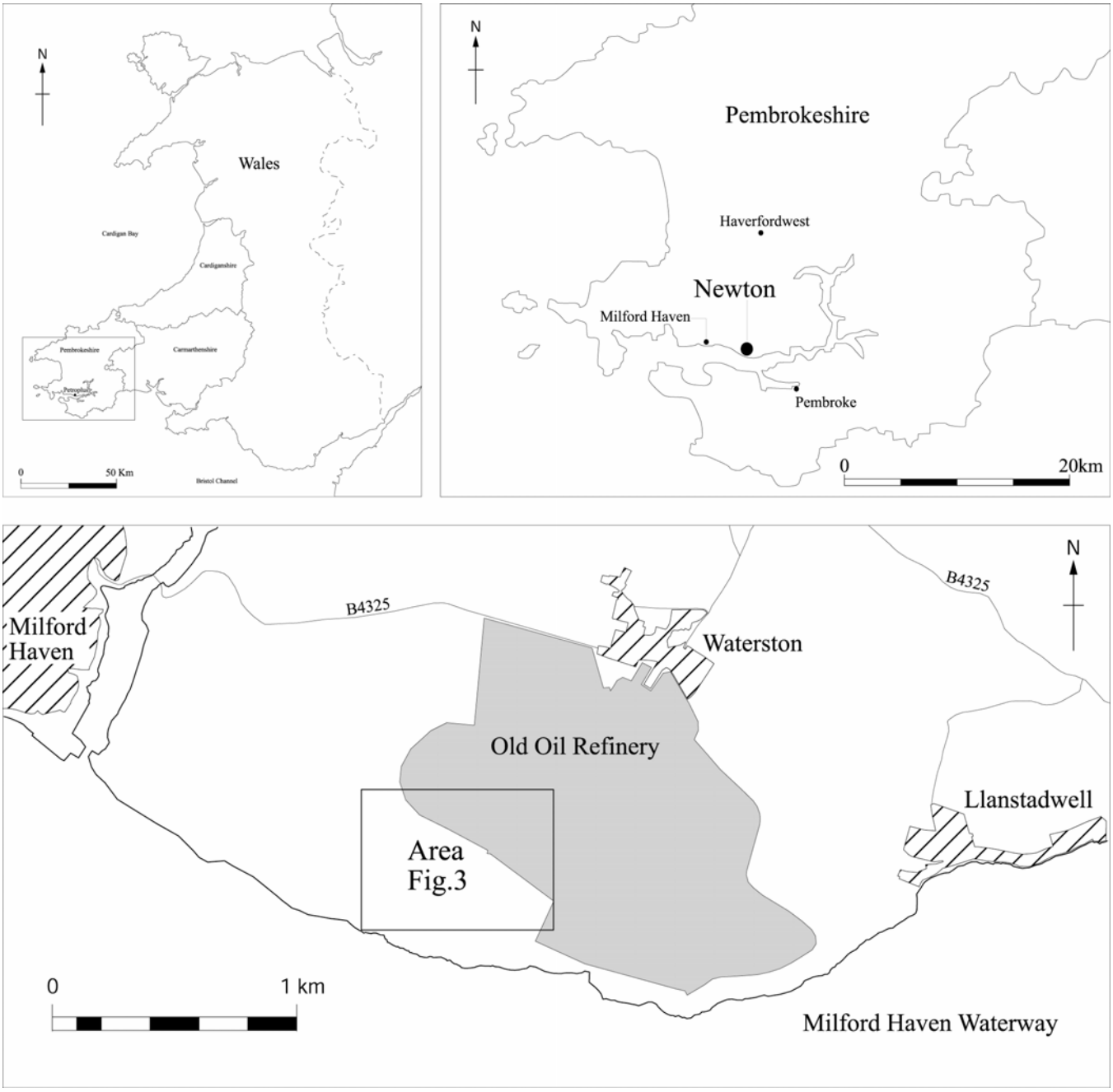


Fig. 1. General Location

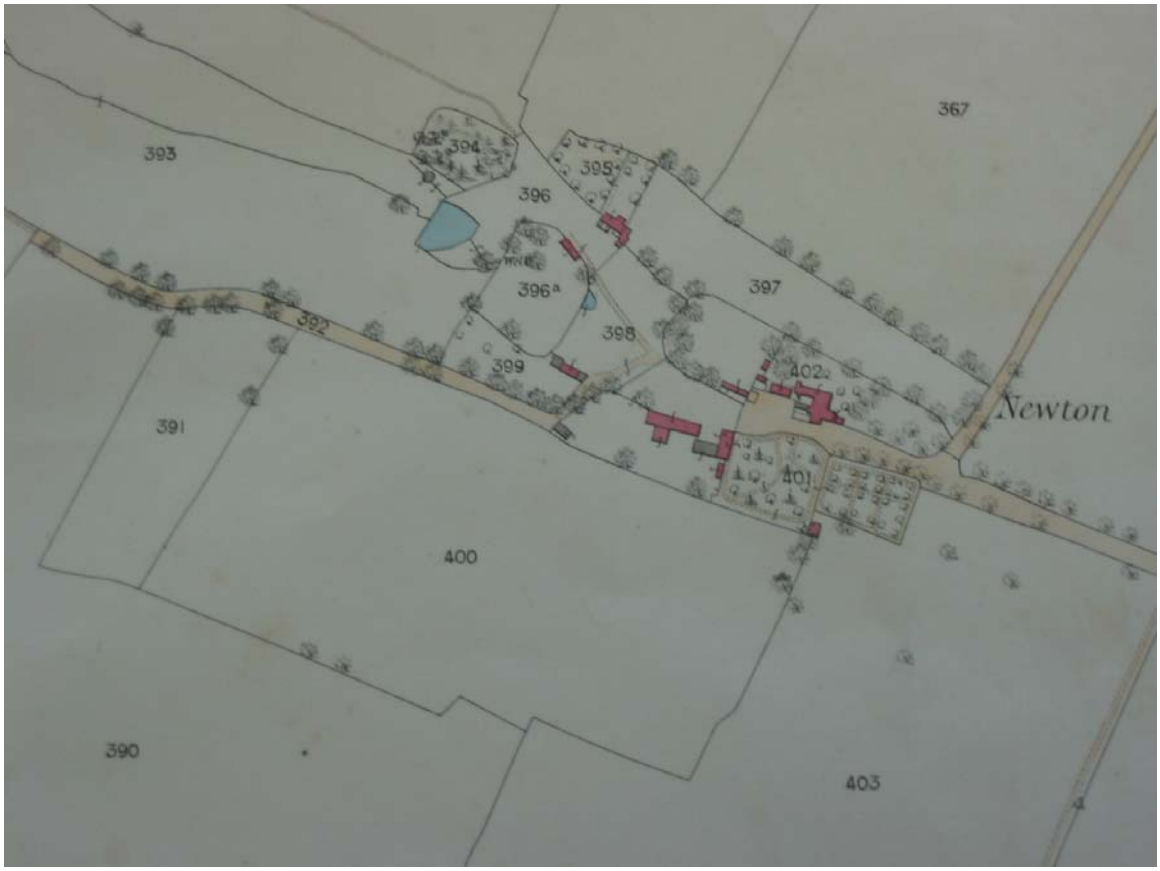


Fig. 2. Extract of the 1887 Ordnance Survey 1:2500 map

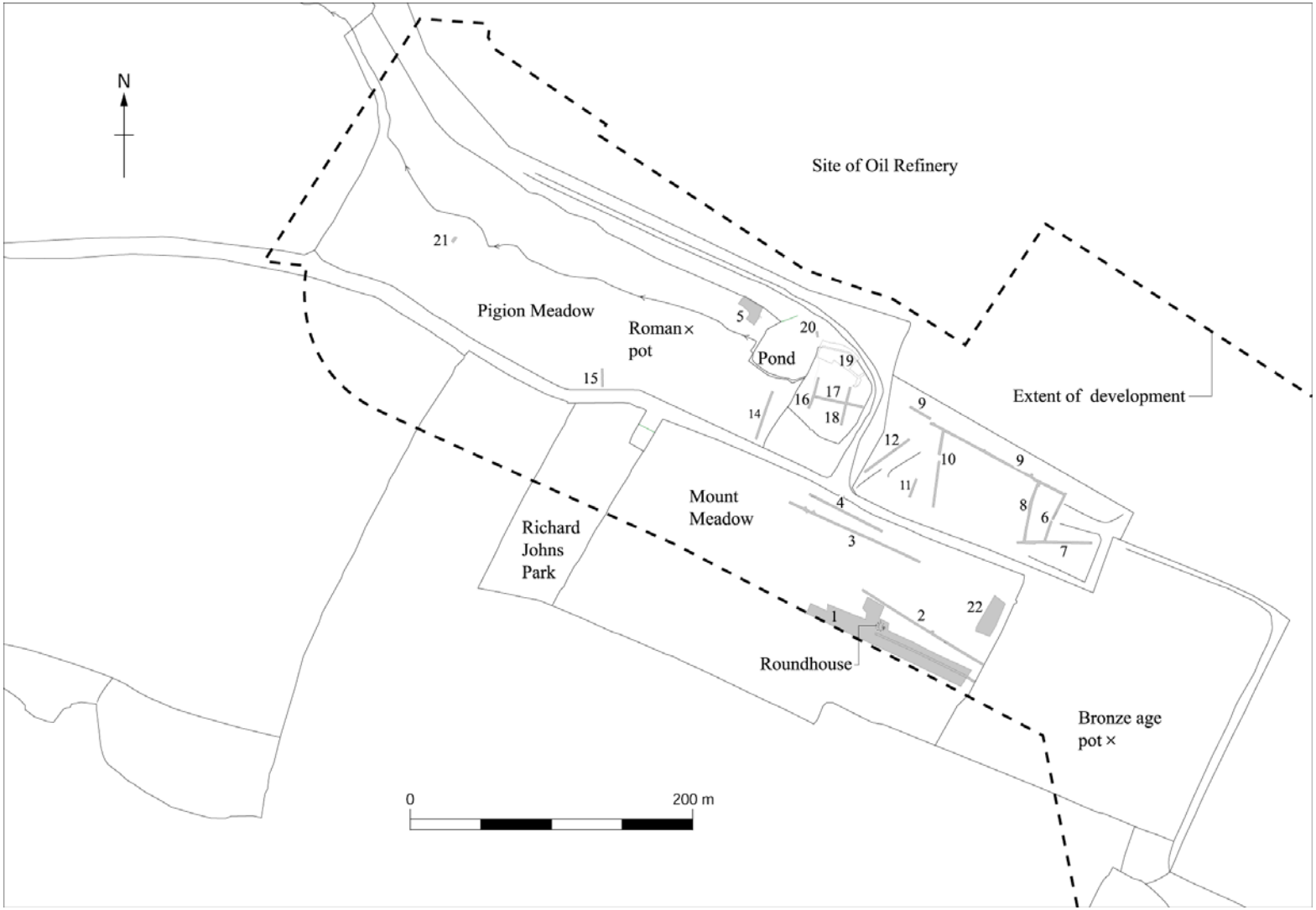


Fig. 3. Location of excavation trenches and field names

Fig. 4. Roundhouse, view SW, scales 1m

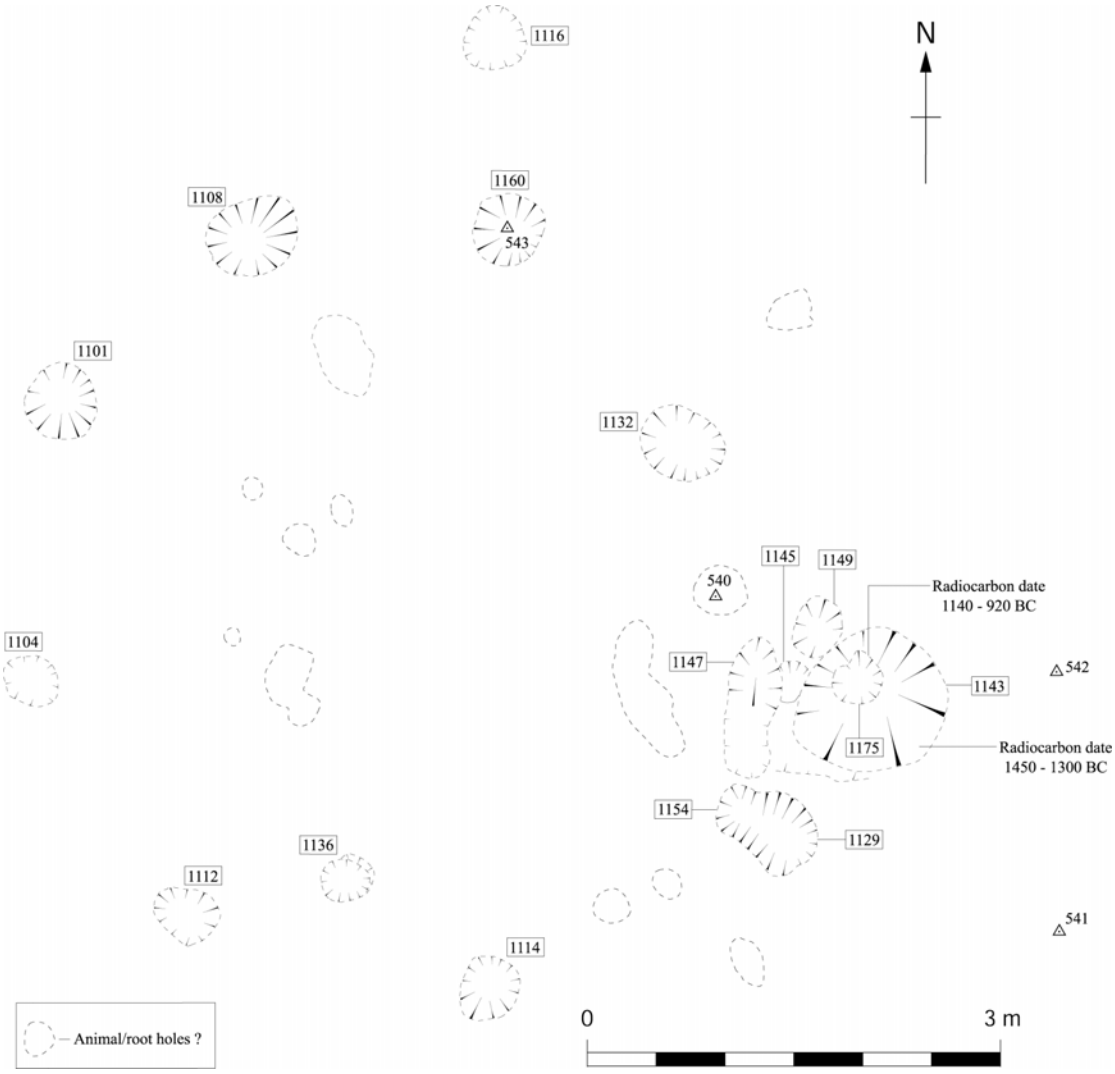


Fig. 5. Plan of the Bronze Age roundhouse

Fig. 6. Dovecote excavated with corn driers sectioned, view SW, scales 1m

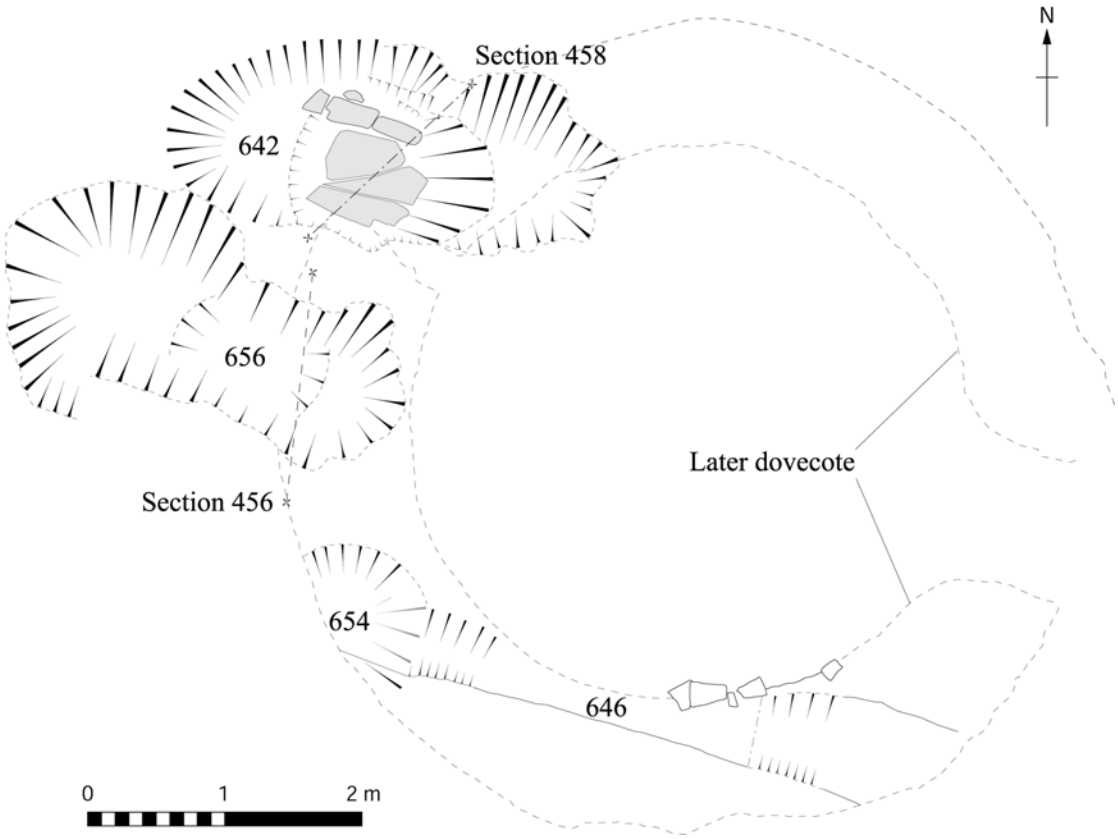


Fig. 7 Plan of corn driers

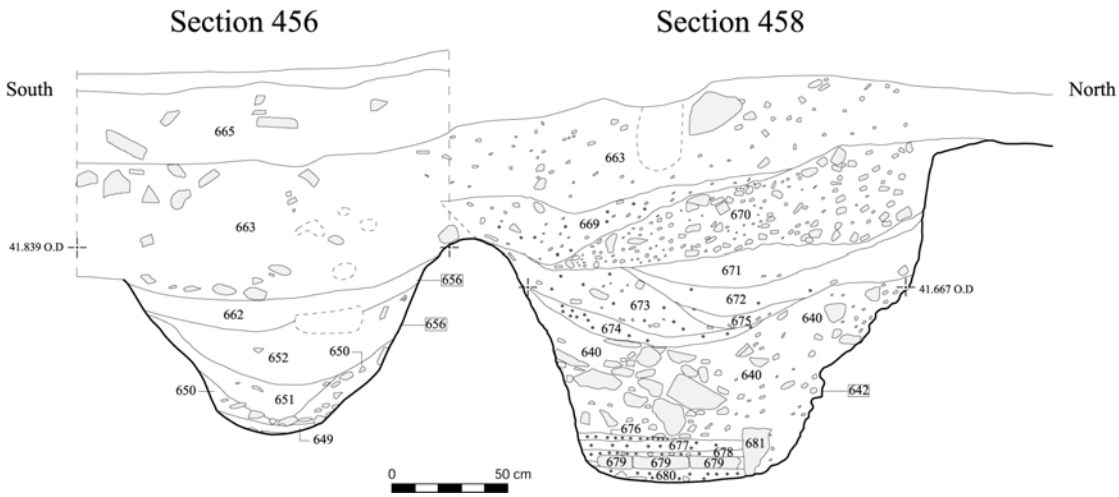


Fig. 8. Section of corn driers

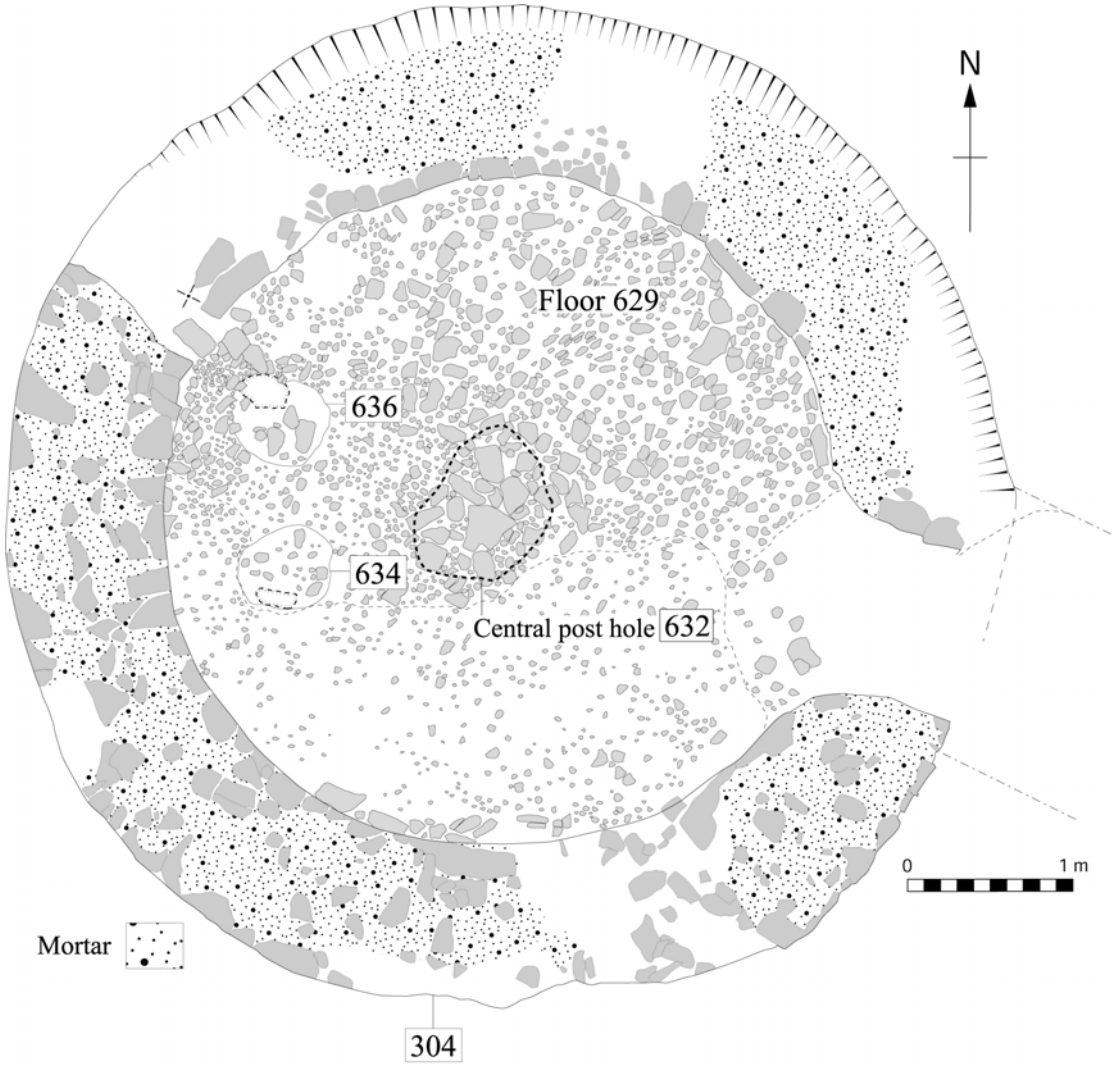


Fig. 9. Plan of dovecote

10a

10b

10c

10d

Fig. 10a. Dovecote, primary floor (629) and central posthole (632), view NE, scale 1m

Fig. 10b. Dovecote, primary floor (629) and central posthole (632) filled (631), view NE, scale 1m

Fig. 10c. Dovecote, stone layer (622) and post pipes (624 and 625), view NE, scales 0.5 and 1m

Fig. 10d. Dovecote, floor (305) and post holes (609 and 611), view NE, scales 0.5 and 1m

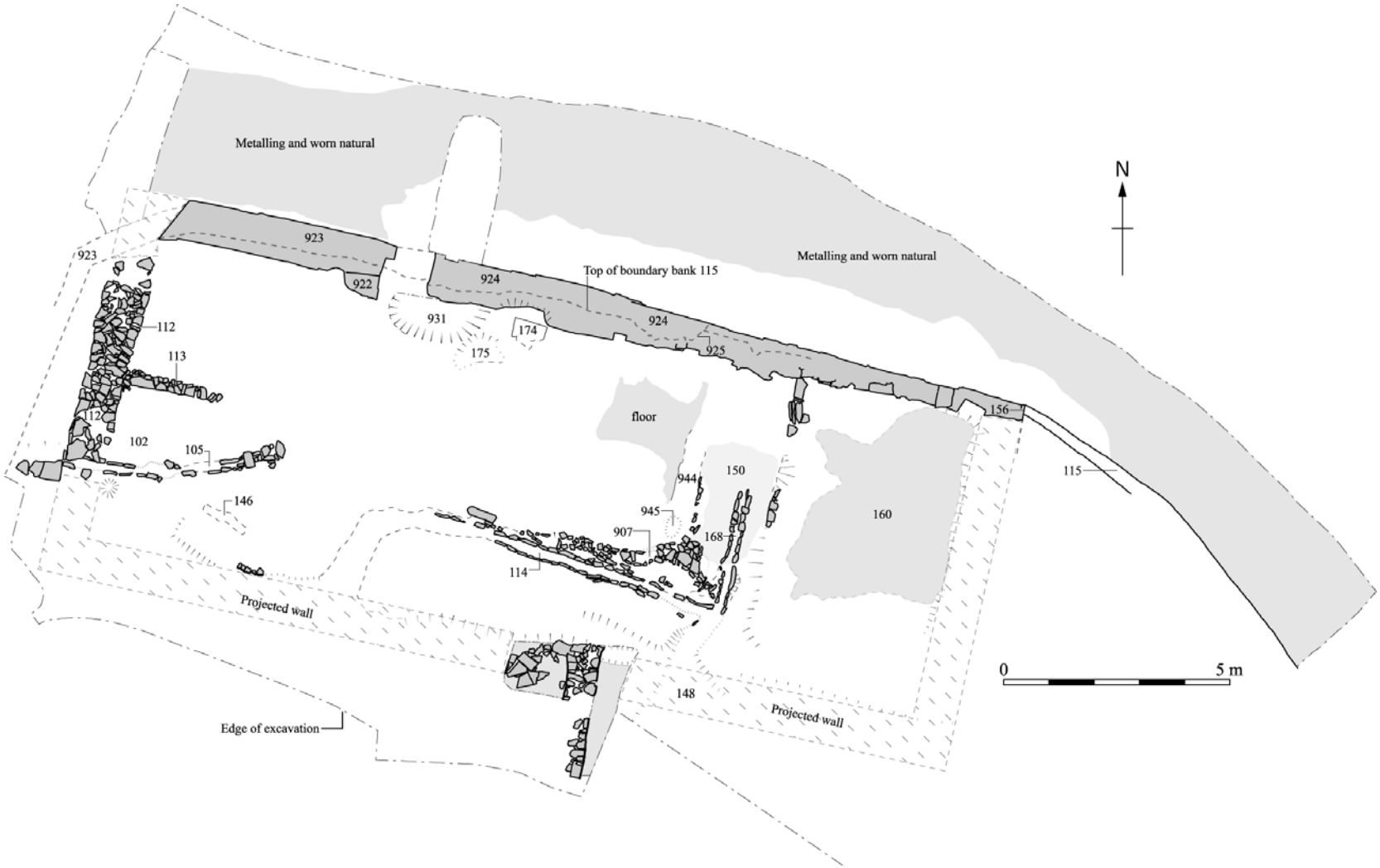
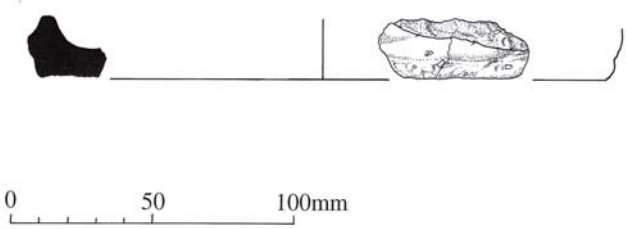
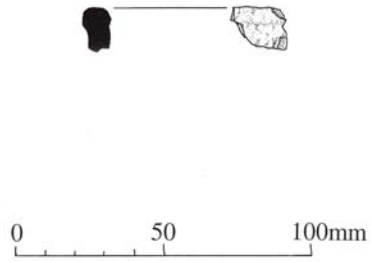


Fig. 11. Plan of the post-medieval house

Fig 12. Post-medieval house, view E, scales 1 and 2m



540



542

Fig. 13. Pre-historic pottery

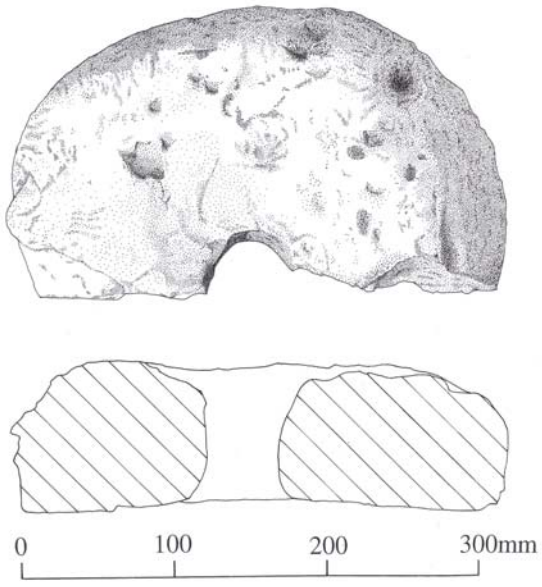


Fig. 14. Quern stone 523